

Financial reporting developments

*A comprehensive guide*

# Fair value measurement

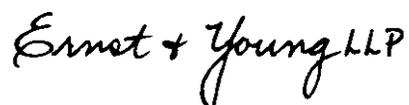
September 2023

# To our clients and other friends

Fair value measurements and disclosures continue to be topics of interest in financial reporting. While the Financial Accounting Standards Board (FASB or Board) has not made significant amendments to Accounting Standards Codification (ASC or Codification) 820 since its joint project with the International Accounting Standards Board (IASB) to substantially converge US GAAP and IFRS in this area, standard setters, regulators, auditors and preparers continue to discuss the standard's application. In addition, the Securities and Exchange Commission (SEC) staff continues to ask registrants for additional information and disclosures about fair value measurements. This publication is designed to assist you in interpreting ASC 820's principles-based framework and includes excerpts from, and references to, the FASB's Codification, interpretive guidance and examples, and industry-specific considerations.

This publication has been updated to reflect the requirements of Accounting Standards Update (ASU) 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*, which the FASB issued in June 2022. The ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing a contractual sale restriction as a separate unit of account is also not permitted. Entities that hold equity securities subject to contractual sale restrictions are required to make additional disclosures. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted.

We recognize that applying the fair value measurement guidance can be challenging. EY professionals are prepared to help you identify and understand the issues related to fair value measurement.

The logo for Ernst & Young LLP, featuring the company name in a stylized, cursive script font.

September 2023

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**Notice to readers:**

This publication includes excerpts from and references to the Financial Accounting Standards Board (FASB or Board) Accounting Standards Codification (Codification or ASC). The Codification uses a hierarchy that includes Topics, Subtopics, Sections and Paragraphs. Each Topic includes an Overall Subtopic that generally includes pervasive guidance for the Topic and additional Subtopics, as needed, with incremental or unique guidance. Each Subtopic includes Sections that in turn include numbered Paragraphs. Thus, a Codification reference includes the Topic (XXX), Subtopic (YY), Section (ZZ) and Paragraph (PP).

Throughout this publication references to guidance in the Codification are shown using these reference numbers. References are also made to certain pre-Codification standards (and specific sections or paragraphs of pre-Codification standards) in situations in which the content being discussed is excluded from the Codification.

This publication has been carefully prepared, but it necessarily contains information in summary form and is therefore intended for general guidance only; it is not intended to be a substitute for detailed research or the exercise of professional judgment. The information presented in this publication should not be construed as legal, tax, accounting, or any other professional advice or service. Ernst & Young LLP can accept no responsibility for loss occasioned to any person acting or refraining from action as a result of any material in this publication. You should consult with Ernst & Young LLP or other professional advisors familiar with your particular factual situation for advice concerning specific audit, tax or other matters before making any decisions.

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# 1 Introduction and overview

## 1.1 Introduction

ASC 820 has a principles-based framework for measuring fair value in US GAAP. This framework is based on a number of key concepts including unit of account, exit price, valuation premise, highest and best use, principal market, market participant assumptions and the fair value hierarchy. Although we recognize that different views may exist, we believe the guidance in this publication is consistent with the fundamental principles in ASC 820. However, readers should closely monitor developments with respect to fair value measurements, as the FASB has historically issued clarifying guidance to address application issues that come to its attention.

## 1.2 Overview of ASC 820

ASC 820's principles are intended to increase the consistency and comparability of fair value measurements in financial reporting. This guidance applies to all fair value measurements in US GAAP, except for the measurement of share-based payments and certain lease transactions. ASC 820 does not apply to Topics that require (or permit) measurements that are similar to, but are not intended to represent, fair value.

ASC 820 includes a single definition of fair value that should be used for financial reporting purposes, provides a framework for applying this definition, and requires numerous disclosures about the use of fair value measurements in the financial statements. The guidance incorporates financial theory and valuation techniques but is focused solely on how these concepts should be applied when determining fair value for financial reporting purposes.

ASC 820 does not address the issue of "what" to measure at fair value. The FASB separately considers issues surrounding "what" to measure at fair value and "when" to measure items at fair value on a project-by-project basis. The principles in ASC 820 provide the FASB with a consistent definition for determining whether fair value is the appropriate measurement to be used in any given project.

The definition of fair value in ASC 820 is based on an exit price notion, which incorporates the following key concepts:

- ▶ Fair value is the price to sell an asset or transfer a liability, and therefore represents an exit price, not an entry price.
- ▶ The exit price for an asset or liability is conceptually different from its transaction price (an entry price). While exit and entry price may be identical in many situations, the transaction price is not presumed to represent the fair value of an asset or liability on its initial recognition.
- ▶ Fair value is an exit price in the principal market (or in the absence of a principal market, the most advantageous market) in which the reporting entity would transact.
- ▶ Fair value is a market-based measurement, not an entity-specific measurement.
- ▶ Fair value measurements should not be adjusted for transaction costs.

## 1.3 Convergence with IFRS (updated September 2022)



### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities. See section 5.2.1A for further discussion.

Consistent with ASC 820, IFRS 13 defines how fair value measurements should be determined wherever required or permitted by IFRS and requires numerous disclosures about the use of fair value measurements in the financial statements. IFRS 13 eliminated specific fair value measurement guidance that was scattered throughout IFRS, and like US GAAP, has a principles-based framework to support a single definition of fair value.

Although the fair value measurement guidance in US GAAP and IFRS is substantially converged, some differences between US GAAP and IFRS exist, including:

- ▶ IFRS restricts the recognition of gains and losses at inception on financial instruments when fair value is determined using unobservable inputs.
- ▶ IFRS 13 does not include a practical expedient for measuring certain alternative investments at net asset value.
- ▶ IFRS 13 requires a quantitative sensitivity analysis disclosure for Level 3 financial instruments.
- ▶ IFRS 13 disclosures are not required for retirement benefit plan investments measured at fair value in accordance with International Accounting Standard (IAS) 26 and assets for which the recoverable amount is fair value less costs of disposal in accordance with IAS 36.
- ▶ IFRS 13 does not permit derivative assets and liabilities to be presented on a net basis in the Level 3 rollforward.
- ▶ Nonpublic entities are excluded from certain disclosures under ASC 820. While no similar exception is provided in IFRS 13, nonpublic entities reporting under IFRS for Small and Medium-sized Entities are subject to less stringent presentation and disclosure requirements.
- ▶ IFRS 13 does not require excluding a contractual restriction on the sale of an equity security from the unit of account of the equity security when measuring its fair value, which is required by ASC 820 (after the adoption of ASU 2022-03).

# 2

## Objectives

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Overview and Background*

##### **820-10-05-1**

This Topic contains only the Overall Subtopic. This Topic does all of the following:

- a. Defines **fair value**
- b. Sets out in a single Topic a framework for measuring fair value
- c. Requires disclosures about fair value measurements.

##### **820-10-05-1A**

This Topic explains how to measure fair value for financial reporting. It does not require fair value measurements in addition to those already required or permitted by other Topics and is not intended to establish valuation standards or affect valuation practices outside of financial reporting.

##### **820-10-05-1B**

Fair value is a market-based measurement, not an entity-specific measurement. For some assets and liabilities, observable market transactions or market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. However, the objective of a fair value measurement in both cases is the same—to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (that is, an **exit price** at the measurement date from the perspective of a market participant that holds the asset or owes the liability).

##### **820-10-05-1C**

When a price for an identical asset or liability is not observable, a reporting entity measures fair value using another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. As a result, a reporting entity's intention to hold an asset or to settle or otherwise fulfill a liability is not relevant when measuring fair value.

##### **820-10-05-1D**

The definition of fair value focuses on assets and liabilities because they are a primary subject of accounting measurement. In addition, this Topic shall be applied to instruments measured at fair value that are classified in shareholders' equity.

ASC 820 defines the term “fair value” and provides conceptual guidance on how to determine fair value for financial reporting purposes. This guidance is primarily principles-based and generally does not provide specific rules or detailed “how-to” guidance. Given the broad use of fair value measurements in accounting for various kinds of assets and liabilities (both financial and nonfinancial), providing detailed

valuation guidance was not deemed practical. As such, the application of ASC 820 requires significant judgment; but this judgment is applied using the core concepts of ASC 820's principles-based framework for fair value measurements.

A primary goal of ASC 820 is to increase the consistency and comparability of fair value measurements used in financial reporting. ASC 820 provides a common objective whenever US GAAP requires (or permits) a fair value measurement, irrespective of the type of asset or liability being measured or the entity that holds it.

***The objective of a fair value measurement is to determine the price at which an orderly transaction would take place between market participants under the market conditions that exist at the measurement date.***

By highlighting that fair value considers market conditions that exist at the measurement date, the FASB is emphasizing that the intent of the measurement is to convey the current value of the asset or liability at the measurement date, and not its potential value at some future date. A fair value measurement should reflect conditions as of the measurement date. However, events or transactions occurring after the measurement date (which might not be a balance sheet date) may provide valuable insight into the assumptions used in estimating fair value as of the measurement date (e.g., a transaction occurring after the measurement date may provide insight into the assumptions used to measure a Level 3 asset as of the measurement date). In this regard, entities should consider information obtained from their evaluation of events or transactions occurring after the balance sheet date but before the financial statements are issued (or are available to be issued) in accordance with ASC 855, *Subsequent Events*.

A fair value measurement does not consider management's intent to sell the asset or transfer the liability at the measurement date. Instead, it represents a market-based measurement that contemplates a hypothetical transaction between market participants at the measurement date. See section 6 for additional discussion of these concepts.

ASC 820 makes clear that the objective of a fair value measurement remains the same, regardless of the reason for the fair value measurement (e.g., impairment versus a recurring measurement) or the extent of observable information available to support the measurement. While the guidance requires that the inputs used to measure fair value be prioritized based on their relative reliability (see section 14), the nature of the inputs does not affect the objective of the measurement. That is, the requirement to determine an exit price under current market conditions is not relaxed because the reporting entity cannot observe similar assets or liabilities being transacted at the measurement date.

Even when fair value is estimated using significant unobservable inputs (because observable inputs do not exist), the goal is to determine an exit price based on the assumptions that market participants would consider when transacting for the asset or liability on the measurement date, including assumptions about risk. This might require the inclusion of a risk premium in the measurement to compensate market participants for the uncertainty inherent in the expected cash flows of the asset or liability being measured.

# 3 Scope and practicability exceptions

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Scope and Scope Exceptions*

#### *Overall Guidance*

#### **820-10-15-1**

The Scope Section of the Overall Subtopic establishes the scope for the Fair Value Measurement Topic. Except as noted below, this Topic applies when another Topic requires or permits **fair value** measurements or disclosures about fair value measurements (and measurements, such as fair value less costs to sell, based on fair value or disclosures about those measurements).

#### *Other Considerations*

#### *Topics and Subtopics Not within Scope*

#### **820-10-15-2**

The Fair Value Measurement Topic does not apply as follows:

- a. To accounting principles that address share-based payment transactions (this includes all Subtopics in Topic 718 except for 718-40, which is within the scope of Topic 820)
- b. To Sections, Subtopics, or Topics that require or permit measurements that are similar to fair value but that are not intended to measure fair value, including both of the following:
  1. Sections, Subtopics, or Topics that permit measurements that are determined on the basis of, or otherwise use, **standalone selling price**
  2. Topic 330.
- c. Subparagraph superseded by Accounting Standards Update No. 2016-02.
- d. To the recognition and measurement of **revenue** from **contracts** with **customers** in accordance with Topic 606
- e. To the recognition and measurement of gains and losses upon the derecognition of nonfinancial assets in accordance with Subtopic 610-20.

## 3.1 Scope

The guidance in ASC 820 applies to all Topics that require (or permit) the use of fair value, except for (1) share-based payment transactions addressed under ASC 718 (excluding ASC 718-40) and (2) certain lease transactions. Further, the guidance in ASC 820 does not apply to measurement objectives under US GAAP that may be similar to fair value but are not intended to represent a fair value measurement, including a number of measurement objectives related to revenue recognition.

### 3.1.1 Share-based payments

The measurement of certain equity-based payment arrangements under ASC 718 are “fair value-based” measurements, the objective of which is not consistent with ASC 820’s exit price notion. For example, these measurements exclude the effects of the following items that would be included in an ASC 820 fair value measurement:

- ▶ Service conditions, performance conditions and other restrictions that apply before the award vests
- ▶ Reload features
- ▶ Contingent features that may require the grantee to return the equity instruments

Rather than distinguishing between fair value and “fair value-based” measurements in these Topics, the FASB made a practical decision to exclude from the scope of ASC 820 all share-based payment transactions accounted for under ASC 718, except for the guidance in ASC 718-40<sup>1</sup> regarding stock compensation through employee stock ownership plans.<sup>2</sup>

### 3.1.2 Lease transactions

Lessees and lessors determine the fair value of the underlying asset in a lease arrangement for purposes of lease classification and measurement under ASC 842 using the definition of fair value in ASC 820.

As an exception, lessors that are not manufacturers or dealers calculate the fair value of the underlying asset at lease commencement at their cost, less any volume or trade discounts that may apply, for purposes of lease classification and measurement. However, if there is a significant amount of time between the acquisition of the underlying asset and lease commencement, a lessor would have to measure the fair value using the guidance in ASC 820.

Refer to section 2.8 of our Financial reporting developments (FRD) publication, *Lease accounting – Accounting Standards Codification 842, Leases*, for more information.

### 3.1.3 Similar measurements to fair value

The provisions of ASC 820 are not applicable to measurement objectives under US GAAP that are similar to fair value but are not intended to represent a fair value measurement. As such, inventory pricing under ASC 330 and the measurement of standalone selling price and the amount of consideration under ASC 606 and ASC 610-20 are outside the scope of ASC 820.

In order to determine whether the measurement objective for a particular asset or liability is within the scope of ASC 820, companies should understand whether that measurement objective is intended to be fair value. In many instances, if the accounting guidance uses a term other than “fair value” to describe the measurement objective, the item will not be in the scope of ASC 820. (See Questions 3.1-1 through 3.1-3.)

## 3.2 Present value techniques

ASC 820 provides guidance for using present value techniques, such as a discounted cash flow (DCF) analysis, to measure fair value (see section 21 for additional discussion on the application of present value techniques). However, the use of present value techniques in measuring an asset or liability does not always result in a fair value measurement. Various Topics use present value techniques to measure

<sup>1</sup> The guidance in ASC 718-40 is within the scope of ASC 820 because the pre-Codification source for this guidance was SOP 93-6, not Statement 123(R). When issued, Statement 157’s scope exception was limited to the stock compensation guidance in Statement 123(R). This clarification to the scope of ASC 820 was made as part of the technical corrections included in ASU 2012-04.

<sup>2</sup> The AICPA Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, provides non-authoritative guidance related to the accounting for, valuation of, and disclosures related to, privately held company equity securities issued as compensation. Refer to our FRD, *Share-based payment*, for further discussion on the valuation of these instruments.

assets and liabilities at amounts that are not intended to represent a fair value measurement. Consideration must be given to the objective of the measurement, with reference to the specific inputs required by US GAAP to determine the present value measure. (See Questions 3.2-1 through 3.2-3.)

### 3.3

### Practicability exceptions

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Scope and Scope Exceptions*

##### *Other Considerations*

##### *Practicability Exceptions to This Topic*

##### **820-10-15-3**

The Fair Value Measurement Topic does not eliminate the practicability exceptions to fair value measurements within the scope of this Topic. Those practicability exceptions to fair value measurements in specified circumstances include, among others, those stated in the following:

- a. The use of a transaction price (an **entry price**) to measure fair value (an **exit price**) at initial recognition, including the following:
  1. Guarantees in accordance with Topic 460
  2. Subparagraph superseded by Accounting Standards Update No. 2009-16.
- b. Subparagraph superseded by Accounting Standards Update No. 2016-01.
  1. Subparagraph superseded by Accounting Standards Update No. 2016-01.
  2. Subparagraph superseded by Accounting Standards Update No. 2009-16.
- c. An exemption to the requirement to measure fair value if fair value is not reasonably determinable, such as all of the following:
  1. Nonmonetary assets in accordance with Topic 845 and Sections 605-20-25 and 605-20-50
  2. Asset retirement obligations in accordance with Subtopic 410-20 and Sections 440-10-50 and 440-10-55
  3. Restructuring obligations in accordance with Topic 420
  4. Participation rights in accordance with Subtopics 715-30 and 715-60.
- d. Subparagraph superseded by Accounting Standards Update No. 2015-10.
- e. The use of particular measurement methods referred to in paragraph 805-20-30-10 that allow measurements other than fair value for specified assets acquired and liabilities assumed in a business combination.
- ee. Financial assets or financial liabilities of a consolidated variable interest entity that is a **collateralized financing entity** when the financial assets or financial liabilities are measured using the measurement alternative in paragraphs 810-10-30-10 through 30-15 and 810-10-35-6 through 35-8.
- f. An exemption to the requirement to measure fair value if fair value cannot be reasonably estimated, such as the following:
  1. Noncash consideration promised in a contract in accordance with the guidance in paragraphs 606-10-32-21 through 32-24.

### 3.3.1 Practicability exceptions in other ASC Topics

The FASB did not intend for ASC 820 to expand the use of fair value measurements in US GAAP. Accordingly, ASC 820 does not eliminate the practicability exceptions that exist in various Topics that require fair value measurements in accordance with the principles of ASC 820. However, the decision to retain these practicability exceptions limits the applicability of ASC 820 in certain situations and perpetuates certain inconsistencies with respect to fair value measurements.<sup>3</sup>

ASC 820-10-15-3 identifies Topics that permit practicability exceptions to fair value measurements. These practicability exceptions, which are applicable only if specified in a given Topic, generally fall into the following categories:

- ▶ The use of transaction price (an entry price) to measure fair value (an exit price) at initial recognition (ASC 460-10)
- ▶ An exemption if fair value is not reasonably determinable (e.g., ASC 410-20) or reasonably estimable (ASC 606-10)
- ▶ Certain exceptions to the requirement in ASC 805 that an acquirer measure the identifiable assets acquired and liabilities assumed in a business combination at their acquisition-date fair values

ASC 460-10-30-2, for example, states that, for a guarantee issued in a standalone arm's-length transaction with an unrelated party, the liability recognized at the inception of the guarantee should be the premium received or receivable by the guarantor (i.e., an entry price, not an exit price).

The impracticability exception to the fair value requirement focuses primarily on whether a reporting entity would incur excessive cost if it had to estimate fair value. This is a dynamic concept and, as such, the determination of what is excessive may differ from one reporting entity to another. The consideration of cost differs from the exceptions in the second item noted above, which focus primarily on the level of uncertainty in the measurement. In many instances, guidance that allows this type of exception defers the fair value measurement requirement until the level of uncertainty in such a measurement is reduced to an acceptable level. While the individual Topics provide guidance as to when the exception should be applied, significant judgment is required in making this determination.

As noted above, ASC 805 provides certain exceptions to the general requirement that identifiable assets acquired and liabilities assumed in a business combination be initially recorded at their acquisition-date fair value. Items excluded from the fair value measurement requirement include income taxes, employee benefit obligations, assets held for sale, leases,<sup>4</sup> indemnification assets, reacquired rights, share-based payment awards, goodwill/bargain purchase, purchased financial assets with credit deterioration,<sup>5</sup> contract assets and contract liabilities,<sup>6</sup> and certain assets and liabilities arising from contingencies. Refer to our FRD, ***Business combinations***, for further guidance on the measurement of these items.

ASC 810 also provides a measurement alternative to ASC 820 for reporting entities that consolidate qualifying collateralized financing entities (CFEs). Under the alternative, an entity may elect to measure both the CFE's financial assets and financial liabilities using the fair value of either the CFE's financial assets or financial liabilities, whichever is more observable. This measurement alternative is intended to

<sup>3</sup> While similar considerations exist under certain IFRSs, in these cases the measurement objective is often explicitly changed by the standard from fair value to another objective (e.g., cost).

<sup>4</sup> Accounting for leases in a business combination is an exception to the measurement principle of ASC 805.

<sup>5</sup> Accounting for purchased financial assets with credit deterioration is an exception to the measurement principle of ASC 805 only after the adoption of ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*.

<sup>6</sup> Accounting for contract assets and contract liabilities in a business combination is an exception to the measurement principle of ASC 805 only after the adoption of ASU 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*.

eliminate the measurement difference that sometimes arises when a CFE's financial assets and financial liabilities are independently measured at fair value under ASC 820. Refer to our FRD, ***Consolidation***, for further guidance on this measurement exception.

Importantly, although ASC 820 does not eliminate the practicability exceptions or alternatives discussed above, to the extent that fair value measurement concepts in ASC 820 are applied, ASC 820 requires that a risk premium be included in a fair value measurement if market participants would include one in pricing the asset or liability, even if the adjustment is difficult to determine. ASC 820-10-35-54E states that the exclusion of a risk premium when a market participant would assume one results in a measure that does not faithfully represent fair value. The degree of difficulty in determining a risk adjustment is not a basis to exclude such an adjustment from a fair value measurement. (See sections 13 and 21 for further discussion of risk premiums.)

### 3.3.2 Practical expedients within ASC 820

In addition to maintaining the various practicability exceptions that existed in other Topics, ASC 820 provides its own practical expedients for applying the fair value framework in certain instances. These practical expedients, each of which will be discussed separately in this publication, include the following:

- ▶ Use of mid-market pricing within a bid-ask spread (see section 13)
- ▶ Use of net asset value to estimate the fair value of certain alternative investments (see section 18)

### 3.4 Measurement exception to the fair value principles for financial instruments (updated September 2023)

As part of converging its fair value guidance with IFRS, the FASB clarified that the concepts of “highest and best use” and “valuation premise” apply only to the measurement of nonfinancial assets. This clarification could have significantly changed the valuation of over-the-counter (OTC) derivatives, which are generally measured on a portfolio basis. That is, reporting entities typically determine valuation adjustments related to bid-ask spreads and credit risk for OTC derivative contracts considering the net exposure of a portfolio of contracts to a particular market risk or credit risk. To address this concern, ASC 820 provides an exception to the principles of fair value when measuring financial instruments with offsetting risks, if certain criteria are met.

The exception allows a company to estimate the fair value of a portfolio of financial instruments based on the sale or transfer of its net position for a particular market risk exposure (as opposed to the individual instruments in the portfolio). The portfolio exception can be applied to measure the fair value of a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or a combination of these items that otherwise meet the criteria. This allows entities to measure fair value on a net basis for those portfolios in which financial assets and financial liabilities and nonfinancial instruments are managed and valued together. The exception also enables a company to consider its credit exposure to a particular counterparty on a net basis, provided there is an arrangement in place that mitigates credit risk upon default (e.g., a master netting agreement).

Refer to section 10 for additional discussion on measuring the fair value of financial instruments and nonfinancial items accounted for as derivatives.

## Questions and interpretive responses

**Question 3.1-1** Is “market value” as used in a lower of cost or market (LOCOM) measurement objective different from fair value as defined in ASC 820?

We believe the terms market value and fair value may have different meanings, as evidenced by the scope of ASC 820 and its corresponding amendments to other Topics.

For example, the subsequent measurement of inventory at LOCOM under ASC 330 is excluded from the scope of ASC 820 to distinguish “market value” used in a LOCOM measurement from a fair value measurement. The glossary in ASC 330 states that “[a]s used in the phrase lower of cost or market, the term market means current replacement cost (by purchase or by reproduction, as the case may be) provided that it meets both of the following conditions: (a) market shall not exceed the net realizable value and (b) market shall not be less than net realizable value reduced by an allowance for an approximately normal profit margin.”<sup>7</sup>

In contrast, the measurement objective for loans held for sale under ASC 948 was amended from LOCOM to the lower of cost or fair value. In this instance, it is clear that the FASB intended market value to represent fair value.

**Question 3.1-2 Are items hedged by a qualifying fair value hedge under ASC 815 in the scope of ASC 820 (thereby requiring all of the associated disclosures)?**

In situations where a company is hedging only a specific risk associated with an asset or liability (e.g., benchmark interest rate), the hedged item is not carried at its fair value and would not fall under the scope of ASC 820.<sup>8</sup> When only a specific risk is being hedged, the carrying value of the hedged item is not intended to equal its fair value, as the carrying value is adjusted only for changes in the fair value of the hedged item specifically attributable to the hedged risk.

However, if a company chooses to hedge the risk of changes in the overall fair value of the asset or liability, and the asset or liability was designated as the hedged item at its initial recognition, the hedged item would be carried at its fair value and the disclosure requirements of ASC 820 would apply. When an entity is hedging the risk in the overall fair value of the hedged item, but the hedge was not put in place at the initial recognition of the hedged item, the carrying amount of the hedged item will not equal its fair value. That is, the carrying value of the hedged item will include only changes in the fair value of the item from the date the asset or liability was designated as a hedge. In this case, the disclosure requirements of ASC 820 would not be specifically required for the hedged item, but the determination of the change in fair value of the hedged item should be measured consistent with the principles of ASC 820.

**Question 3.1-3 Are assets and liabilities associated with Plan D deferred compensation arrangements accounted for pursuant to ASC 710-10 in the scope of ASC 820?**

Some companies provide compensation arrangements that allow employees to defer receipt of some or all of their earned compensation (e.g., salary or bonus). ASC 710-10 addresses the accounting for deferred compensation arrangements where amounts earned by an employee are invested in the stock of the employer and placed in a rabbi trust.<sup>9</sup> Certain deferred compensation plans, subsequent to the compensation deferral, allow the employee to diversify into non-employer securities. ASC 710-10 describes arrangements in which employees elect to diversify into non-employer securities as “Plan D.” ASC 710-10-25-18 and 35-4 state the following:

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<sup>7</sup> ASC 330’s glossary defines net realizable value as the “[e]stimated selling prices in the ordinary course of business less reasonably predictable costs of completion, disposal, and transportation.”

<sup>8</sup> ASC 815-20-25-12(f) permits an entity to hedge certain specific risks of financial assets or liabilities, such as interest rate, foreign exchange and credit risk, as opposed to the risks inherent in the entire instrument.

<sup>9</sup> A rabbi trust is a grantor trust generally set up to fund compensation for a select group of management or highly paid executives. To qualify as a rabbi trust for income tax purposes, the terms of the trust agreement must explicitly state that the assets of the trust are available to satisfy the claims of general creditors in the event of bankruptcy of the employer.

## Excerpt from Accounting Standards Codification

### Compensation – General – Overall

#### *General*

#### **710-10-25-18**

For Plan D, assets held by the rabbi trust shall be accounted for in accordance with generally accepted accounting principles (GAAP) for the particular asset (for example, if the diversified asset is an equity security, that security would be accounted for in accordance with Subtopic 321-10). The deferred compensation obligation shall be classified as a liability. At acquisition, debt securities held by the rabbi trust may be classified as trading.

#### *Subsequent Measurement*

#### **710-10-35-4**

The deferred compensation obligation shall be adjusted, with a corresponding charge (or credit) to compensation cost, to reflect changes in the fair value of the amount owed to the employee.

ASC 710-10 is clear that any assets held by a rabbi trust should be accounted for in accordance with other Topics. The measurement attribute defined in those Topics determines whether these assets should be measured at fair value and thus included in the scope of ASC 820.

Determining whether the deferred compensation obligation accounted for pursuant to ASC 710-10 is a fair value measurement (and in the scope of ASC 820) is less clear. On the one hand, employee compensation obligations are generally not fair value measurements. These obligations are specifically excluded from the fair value disclosure requirements for financial instruments under ASC 825 and are not eligible for the fair value option.

On the other hand, ASC 710-10 states that the deferred compensation obligation should be adjusted to reflect changes in the fair value of the amount owed to the employee. A fair value measurement in accordance with ASC 820 would incorporate both the amount due (as measured by the value of the underlying assets) and the entity's risk of nonperformance associated with the obligation to the employee.

Based on our discussions with the FASB staff, we believe the intent of ASC 710-10 was for the liability to be recognized based on changes in the value of assets held in the rabbi trust, not the exit price for the liability as required by ASC 820. This intent is consistent with the transition guidance that was provided in EITF 97-14, which stated, in part, "[f]or Plan D, the diversified assets held by the rabbi trust should be recorded at fair value at September 30, 1998 with a corresponding amount recorded as a deferred compensation liability." That is, upon the initial application of EITF 97-14, the liability was intended to be recorded at an amount equal to the fair value of the assets to which the obligation relates.

Some have questioned whether the deferred compensation obligation under Plan D contains an embedded derivative (a written call option) that requires bifurcation pursuant to ASC 815. While ASC 815-15-25-1(b) notes that bifurcation of an embedded derivative is not required when the hybrid instrument that embodies the feature is remeasured at fair value through earnings under other Topics, the deferred compensation obligation is not considered to be a fair value measurement under ASC 820.

However, in order to be bifurcated, the embedded derivative must be accounted for as a derivative if freestanding. Share-based payment arrangements subject to ASC 718 are excluded from the derivative accounting requirement of ASC 815 in accordance with ASC 815-10-15-74(b). In addition, some believe ASC 710-10 sufficiently addresses the accounting for these deferred compensation arrangements. Based on these factors and our discussions with the FASB staff, we believe that deferred compensation obligations under Plan D in ASC 710-10 do not require bifurcation of an embedded derivative. However, this view should not be applied by analogy to other situations.

**Question 3.2-1 Are impaired loans accounted for pursuant to ASC 310-10 or ASC 326-20 in the scope of ASC 820? (updated September 2023)**

Before the adoption of ASU 2016-13, the provisions of ASC 820 (including the disclosure requirements) apply only to impaired loans measured using the practical expedients permitted under ASC 310-10-35-22. That is, the provisions of ASC 820 apply to impaired loans measured at either an observable market price (if available) or the fair value of the loan's collateral (if the loan is collateral-dependent).<sup>10</sup>

After the adoption of ASU 2016-13, the provisions of ASC 820 (including the disclosure requirements) apply only to loans measured using the practical expedient permitted under ASC 326-20-35-5 through 35-6 when the loan is collateral-dependent or a financial asset is secured by a collateral maintenance provision.

When the practical expedients are not used, the measurement of an impaired loan accounted for under ASC 310-10 or ASC 326-20 is not meant to represent the loan's fair value. Instead, a creditor is required to determine impairment based on the present value of the loan's expected future cash flows discounted at the loan's effective interest rate, not the market rate of interest, as would be required under a fair value measurement. Therefore, loans for which impairment is measured based on their effective interest rates are not in the scope of ASC 820.<sup>11</sup>

**Question 3.2-2 How do the principles of ASC 820 affect the accounting for an asset retirement obligation (ARO)?**

ASC 410-20 requires companies to recognize the fair value of an ARO liability in the period in which the obligation is incurred, and therefore the principles of ASC 820 should be applied to these measurements.<sup>12</sup> However, because AROs are not subsequently measured at fair value, AROs would not be subject to the disclosure requirements of ASC 820.

As described in ASC 410-20-35, changes in the value of an ARO resulting only from (1) the passage of time and (2) revisions to either the timing or the amount of the original estimate of undiscounted cash flows are subsequently recognized. Changes in the carrying value of the liability due to the passage of time are considered by applying the interest method, using the credit-adjusted risk-free interest rate that existed when the liability, or portion thereof, was initially measured. Similarly, for downward revisions to expected cash flows, ASC 410-20-35-8 requires that the undiscounted cash flows be discounted at the credit-adjusted risk-free interest rate that existed at the time the ARO was initially measured. As such, this measurement objective does not take into account current market interest rates and credit spreads and, therefore, would not be deemed a fair value measurement.

For upward revisions to expected cash flows, because ASC 410-20-35-8 specifies that only the incremental cash flows over the initial projections (and not all of the expected cash flows) are to be discounted using a current credit-adjusted risk-free interest rate, the revised carrying value of the ARO is not a fair value measurement. (See section 9.1.2 for an illustrative example on measuring the fair value of an ARO. Also refer to our FRD, *Asset retirement obligations*, for additional considerations when measuring AROs.)

<sup>10</sup> ASC 310-10-35-22 states that "when a loan is impaired (see paragraphs 310-10-35-16 through 35-17), a creditor shall measure impairment based on the present value of expected future cash flows discounted at the loan's effective interest rate, except that as a practical expedient, a creditor may measure impairment based on a loan's observable market price, or the fair value of the collateral if the loan is a collateral-dependent loan. If that practical expedient is used, Topic 820 shall apply."

<sup>11</sup> While impaired loans measured using an effective interest rate are outside the scope of ASC 820, required disclosures of the fair value of these and other loans pursuant to ASC 825 are in the scope of ASC 820. As such, the fair values disclosed in accordance with the requirements of ASC 825 should be determined in a manner consistent with the principles of ASC 820.

<sup>12</sup> It should be noted that ASC 820 does not remove the practicability exception in ASC 410-20-25-4 which states that "if a reasonable estimate of fair value cannot be made in the period the asset retirement obligation is incurred, the liability shall be recognized when a reasonable estimate of fair value can be made." (Refer to section 3.3 for additional discussion on practicability exceptions in Topics that require or permit fair value measurements.) However, the framework in ASC 820 should assist entities in determining fair value even when observable information may not be available.

## Question 3.2-3

**Is a loss contingency recognized under the provisions of ASC 450-20 intended to represent a fair value measurement in accordance with ASC 820?**

The measurement objective for a loss contingency recorded under ASC 450-20 is not fair value. This distinction is evidenced in various Topics. For example, the guidance on accounting for guarantees in ASC 460 clearly highlights the difference between these measurement objectives. ASC 460-10-30-3 requires that in the event that, at the inception of the guarantee, the guarantor is required to recognize a liability under ASC 450-20 for the related contingent loss, the liability to be initially recognized shall be the greater of (1) the amount that satisfies the fair value objective or (2) the contingent liability required to be recognized under ASC 450-20.

Some incorrectly believe that the only difference between the measurement objective under ASC 450-20 and a fair value measurement relates to the time value of money. In many cases, accruals recorded under ASC 450-20 are not adjusted for the time value of when payments will be made (i.e., the expected cash flows are not discounted). However, even in situations where other Topics allow for these liabilities to be discounted, the measurement objective under ASC 450-20 is not intended to represent fair value.

The fundamental difference between these measurement objectives stems from their consideration and measurement of uncertainty. Under the principles in ASC 450-20, uncertainty is used to decide whether to recognize a liability, while under the principles in ASC 820, uncertainty in the amount and timing of expected cash flows are incorporated into the fair value measurement of the recognized liability.

Because uncertainty is used in determining when to recognize a liability and not at what amount it should be recognized, contingencies recorded under ASC 450-20 (once they meet the probability threshold for recognition as liabilities) are not measured at fair value. This is further evidenced by ASC 450-20-30-1, which notes that when the reasonable estimate of a loss falls within a range, and no amount within the range is a better estimate than any other amount, the minimum amount in the range should be accrued. Alternatively, if there is an amount within the range that appears at the time to be a better estimate than any other amount within the range, this amount would be accrued.

Consider the following example where there is uncertainty with respect to the ultimate payout under an existing obligation.

<b>Probability of payout</b>	<b>Estimated payout</b>	<b>Expected Outcome</b>	<b>Accrued loss under ASC 450-20</b>
20%	\$ 1,250,000		
20%	1,000,000		
20%	750,000		
20%	500,000		
20%	250,000		
		\$ 750,000	\$ 250,000

Although a probability-weighted measure is not necessarily representative of fair value (in the above example, the expected outcome of \$750,000 excludes the effect of time value and certain other assumptions that may be considered in a fair value measurement, such as consideration of a risk premium), it would be used as the starting point in determining the fair value of this obligation. In contrast, under ASC 450-20, the minimum amount in the range would be accrued as no amount within the range is deemed to be a better estimate of the liability than any other amount.

**Question 3.3-1 Does the contract value or cash surrender value of an insurance contract represent its fair value?**

While the contract value or cash surrender value of an insurance contract may approximate its fair value, this should not be presumed.

ASC 715 provides a practicability exception for insurance contracts accounted for by plan sponsors. ASC 715-30-35-60<sup>13</sup> states:

Insurance contracts that are in substance equivalent to the purchase of annuities shall be accounted for as such. Other contracts with insurance entities shall be accounted for as investments and measured at fair value. For some contracts, the best available evidence of fair value may be contract value. If a contract has a determinable cash surrender value or conversion value, that is presumed to be its fair value.

Because this language was not amended by ASC 820, the use of cash surrender value or conversion value to determine the fair value of an insurance contract accounted for as an investment under ASC 715 represents a practical expedient. However, companies would not be precluded from determining fair value pursuant to ASC 820. A company's decision to use contract value as a practical expedient in measuring the fair value of these contracts is an accounting policy election that should be applied consistently. This practical expedient should not be used to measure insurance contracts outside the scope of ASC 715 (e.g., insurance contracts elected to be measured at their fair value under the Fair Value Option Subsections of ASC 825).

Investments in life insurance contracts that are measured at their cash surrender value (e.g., business owned life insurance) under ASC 325-30<sup>14</sup> are not within the scope of ASC 820.<sup>15</sup> Although cash surrender value can be used as a practical expedient for the fair value of insurance contracts by plan sponsors under ASC 715, generally speaking, items recorded at their contract value or cash surrender value are not intended to be fair value measurements. As such, items that are specifically required to be measured at their contract value, not fair value, would not be subject to ASC 820.

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<sup>13</sup> ASC 715-60-35-120 contains a similar practicability exception.

<sup>14</sup> ASC 325-30 requires that the amount that could be realized under the insurance contract as of the date of the statement of financial position should be reported as an asset. The change in cash surrender or contract value during the period is an adjustment of premiums paid in determining the expense or income to be recognized under the contract for the period.

<sup>15</sup> In accordance with ASC 325-30, an investor may elect to account for its investments in life settlement contracts using either the investment method or the fair value method. If the fair value method is elected, the provisions of ASC 820 would apply to those instruments.

# 4

## The fair value framework

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Definition of Fair Value*

##### **820-10-35-2**

This Topic defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an **orderly transaction** between **market participants** at the measurement date.

### 4.1

#### Definition of fair value

ASC 820 has a single definition of fair value that is to be applied consistently in all Topics that require (or permit) fair value measurements (unless specifically scoped out as discussed in section 3.1). The fair value framework applies at both initial and subsequent measurement. The definition of fair value in ASC 820 is based on an exit price notion and clarifies the following:

- ▶ Fair value is the price to sell an asset or transfer a liability and therefore represents an exit price, not an entry price.
- ▶ The exit price for an asset or liability is conceptually different from its transaction price (an entry price). While an exit and an entry price may be identical in many situations, the transaction price is not presumed to represent the fair value of an asset or liability upon initial recognition.
- ▶ Fair value is the exit price in the principal market (or in the absence of a principal market, the most advantageous market). The price in the exit market should not be adjusted for transaction costs (i.e., transaction costs are not included in the fair value measurement of an asset or liability).
- ▶ Fair value is a market-based measurement, not an entity-specific measurement, and as such is determined based on assumptions market participants would consider in pricing the asset or liability.
- ▶ The exit price objective of a fair value measurement applies regardless of the reporting entity's intent or ability to sell the asset or transfer the liability at the measurement date.
- ▶ A fair value measurement contemplates the sale of an asset or the transfer of a liability, not a transaction to offset the risks associated with the asset or liability.<sup>16</sup>
- ▶ The transaction to sell the asset or transfer the liability as of the measurement date is a hypothetical transaction that is assumed to be orderly and considers an appropriate period of exposure to the market.
- ▶ The objective of a fair value measurement does not change based on the level of activity in the exit market or the valuation technique(s) used. That is, fair value remains a market-based exit price that considers current market conditions as of the measurement date, even if there has been a significant decrease in the volume and level of activity for the asset or liability.

While not attempting to remove the judgment involved in estimating fair value, ASC 820 provides a framework that is intended to promote consistency and increase comparability in fair value measurements used in financial reporting. Prior to ASC 820, the considerations for determining fair value often differed by asset type and across industries.

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<sup>16</sup> ASC 820 includes a measurement exception that allows certain financial instruments to be measured based on the reporting entity's net exposure to a particular risk, in contrast to the individual assets or liabilities that give rise to the exposure. The criteria to qualify for this measurement exception along with other application considerations are discussed in section 10.

## 4.2 Fair value framework

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### The Fair Value Measurement Approach

#### 820-10-55-1

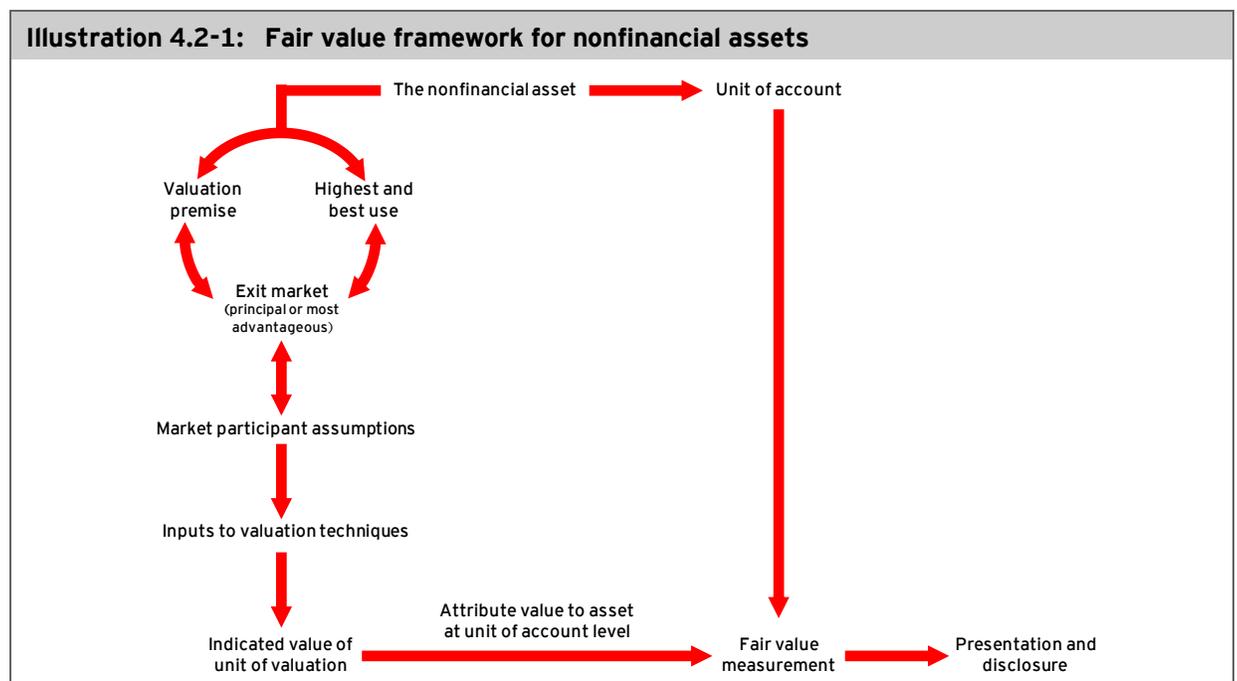
The objective of a **fair value** measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. A fair value measurement requires a reporting entity to determine all of the following:

- The particular asset or liability that is the subject of the measurement (consistent with its **unit of account**)
- For a nonfinancial asset, the valuation premise that is appropriate for the measurement (consistent with its **highest and best use**)
- The principal (or most advantageous) market for the asset or liability
- The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop **inputs** that represent the assumptions that **market participants** would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorized.

In addition to providing a single definition of fair value, ASC 820 also includes a framework for applying this definition to financial reporting. Many of the key concepts used in the fair value framework are interrelated and their interaction should be considered in the context of the entire approach.

### 4.2.1 Application of the fair value framework to nonfinancial assets

The following diagram illustrates our view on the interdependence of the various components of the fair value framework in ASC 820 for nonfinancial assets.

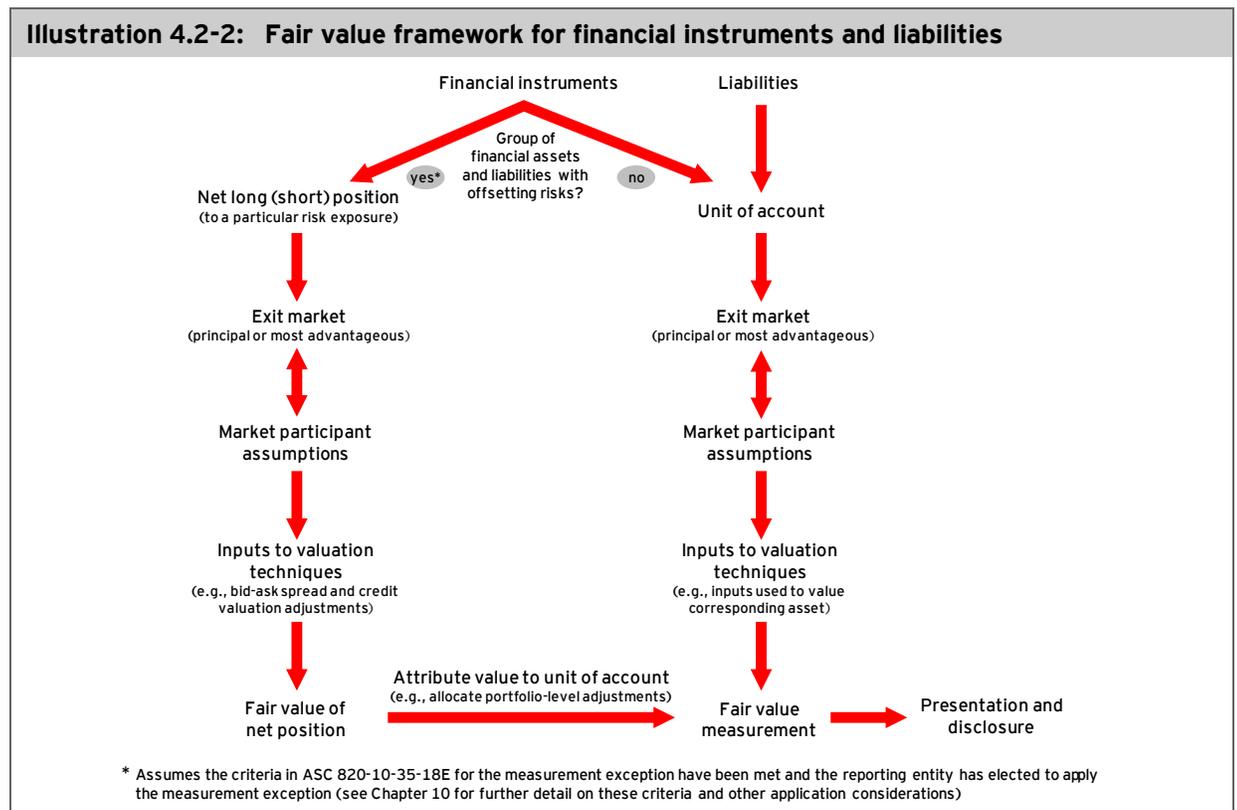


In practice, navigating the fair value framework may be more straightforward for certain types of assets (e.g., assets that trade in a formalized market) than for others (e.g., intangible assets). For assets that derive value when used in combination with other assets or for which a developed market does not exist, navigating the interdependence between valuation premise, highest and best use and exit market is important to applying the fair value framework. Refer to section 8 for additional discussion on the fair value measurement of nonfinancial assets.

## 4.2.2

### Application of the fair value framework to financial instruments and liabilities

Because ASC 820 clarifies that the concepts of “highest and best use” and “valuation premise” are not applicable when determining the fair value of financial instruments or liabilities, the fair value framework is applied differently when measuring these items as compared to nonfinancial assets. Those differences are highlighted in the diagram below.



As discussed in more detail in section 10, ASC 820 provides an exception to the principles of fair value, allowing companies to measure a group of financial instruments based on the price to sell (or transfer) its net position for a particular risk exposure, if certain criteria are met. As shown in Illustration 4.2-2, the use of this exception may require a reporting entity to allocate portfolio-level valuation adjustments to the appropriate unit of account.

Illustration 4.2-2 also shows how the fair value framework would apply to the measurement of liabilities. Instruments classified in a reporting entity’s shareholders’ equity are considered under the same framework. The fair value measurement of liabilities and instruments classified in a reporting entity’s shareholders’ equity is described in more detail in section 9.

Although there are differences in the application of the fair value framework for nonfinancial assets compared to financial instruments and liabilities, the objective of the fair value measurement remains the same, that is, an exit price in the current market.

# 5 The asset or liability

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Definition of Fair Value*

#### *The Asset or Liability*

##### **820-10-35-2B**

A fair value measurement is for a particular asset or liability. Therefore, when measuring fair value a reporting entity shall take into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Such characteristics include, for example, the following:

- a. The condition and location of the asset
- b. Restrictions, if any, on the sale or use of the asset.

##### **820-10-35-2C**

The effect on the measurement arising from a particular characteristic will differ depending on how that characteristic would be taken into account by market participants. Paragraph 820-10-55-51 illustrates a restriction's effect on fair value measurement.

##### **820-10-35-2D**

The asset or liability measured at fair value might be either of the following:

- a. A standalone asset or liability (for example, a **financial instrument** or a nonfinancial asset)
- b. A group of assets, a group of liabilities, or a group of assets and liabilities (for example, a reporting unit or a business).

##### **820-10-35-2E**

Whether the asset or liability is a standalone asset or liability, a group of assets, a group of liabilities, or a group of assets and liabilities for recognition or disclosure purposes depends on its **unit of account**. The unit of account for the asset or liability shall be determined in accordance with the Topic that requires or permits the fair value measurement, except as provided in this Topic.

## 5.1 The asset or liability

ASC 820 states that a fair value measurement is for a particular asset or liability, which is different from the price to offset the risks associated with that particular asset or liability. This is an important distinction, particularly in the valuation of certain financial instruments that are typically not “exited” through a sale or transfer, but whose risks are hedged through other transactions (e.g., derivatives).

However, ASC 820 does allow for financial instruments with offsetting risks to be measured based on their net exposure to a particular risk, in contrast to the assets or liabilities that give rise to this exposure. (See section 10 for additional discussion on the criteria to qualify for this measurement exception and application considerations.)

## 5.2 Characteristics of the asset or liability

ASC 820 is clear that a fair value measurement should take into account characteristics specific to the asset or liability that market participants would consider when pricing the asset or liability. For example, age and miles flown are characteristics to be considered in determining the fair value of an aircraft. In certain instances, an asset may not be in the condition or location that market participants would require for its sale at an observed market price. In these cases, in order to determine the fair value of the asset as it currently exists, the observed market price should be adjusted to the price a market participant would pay for the asset in its current condition and location. This may require the market price to be adjusted for transformation costs and/or transportation costs, as well as a normal profit margin.

Although the term “transformation costs” is not specifically used in ASC 820, the fact pattern in ASC 820-10-55-30 and 55-31 may be used to illustrate this concept.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Example 1: Highest and Best Use and Valuation Premise*

#### *Case B: Land*

#### **820-10-55-30**

A reporting entity acquires land in a business combination. The land is currently developed for industrial use as a site for a factory. The current use of land is presumed to be its highest and best use unless market or other factors suggest a different use. Nearby sites have recently been developed for residential use as sites for high-rise apartment buildings. On the basis of that development and recent zoning and other changes to facilitate that development, the reporting entity determines that the land currently used as a site for a factory could be developed as a site for residential use (that is, for high-rise apartment buildings) because market participants would take into account the potential to develop the site for residential use when pricing the land.

#### **820-10-55-31**

The highest and best use of the land would be determined by comparing both of the following:

- a. The value of the land as currently developed for industrial use (that is, the land would be used in combination with other assets, such as the factory, or with other assets and liabilities)
- b. The value of the land as a vacant site for residential use, taking into account the costs of demolishing the factory and other costs (including the uncertainty about whether the reporting entity would be able to convert the asset to the alternative use) necessary to convert the land to a vacant site (that is, the land is to be used by market participants on a standalone basis).

The highest and best use of the land would be determined on the basis of the higher of those values. In situations involving real estate appraisal, the determination of highest and best use might take into account factors relating to the factory operations, including its assets and liabilities.

In this example, land that is currently developed for industrial use as a site for a factory is acquired. Nearby sites have recently been developed for residential use (as sites for high-rise apartment buildings) and recent zoning changes facilitate such development. As a result, the reporting entity determines that the land could be developed as a site for residential use. Assume that the fair value of the land as currently developed for industrial use is \$4,000,000, and that the fair value of the land as a vacant site for residential use is \$5,000,000.

In order to convert or “transform” the land from its current use as an industrial site, the factory must be demolished. If demolition and other costs were \$500,000, the fair value of the land as a vacant lot for residential use would be \$4,500,000.<sup>17</sup> That is, the fair value of the land as a residential development site (\$5,000,000) should be adjusted for the transformation costs (\$500,000) necessary to prepare the land for residential use.

While the concept of highest and best use of an asset may consider its use in a different condition, the objective of a fair value measurement is to determine the price for the asset in its current form. Therefore, if no market exists for an asset in its current form, but there is a market for the transformed asset, the reporting entity should back out the costs to transform the asset (as well as any associated profit margin) to determine the fair value of the asset in its current condition. That is, a fair value measurement should consider the costs market participants would incur to recondition the asset (after acquiring the asset in its current condition) and the compensation they would expect for this effort.

## 5.2.1 Restrictions on assets (before the adoption of ASU 2022-03) (updated September 2022)

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Illustrations*

#### *Example 6: Restricted Assets*

#### **820-10-55-51**

The effect on a fair value measurement arising from a restriction on the sale or use of an asset by a reporting entity will differ depending on whether the restriction would be taken into account by market participants when pricing the asset. Cases A and B illustrate the effect of restrictions when measuring the fair value of an asset.

ASC 820 indicates that the effect on fair value of a restriction on the sale or use of an asset will differ depending on whether the restriction is deemed to be a characteristic of the asset or the entity holding the asset. A restriction that would transfer with the asset in an assumed sale would generally be deemed a characteristic of the asset and therefore would likely be considered by market participants in pricing the asset. Conversely, a restriction that is specific to the reporting entity holding the asset would not transfer with the asset in an assumed sale and therefore would not be considered when measuring fair value. Determining whether a restriction is a characteristic of the asset or of the entity holding the asset may be contractual in some cases. In other cases, this determination may require judgment based on the specific facts and circumstances.

Example 6, Case A and Case B (excerpted below) highlight the distinction between restrictions that are characteristics of the asset and that of the entity holding the asset, including how this determination affects the fair value measurement.

<sup>17</sup> For simplicity, the example does not specifically discuss other types of costs that may need to be considered in determining the fair value of the land for residential use, such as the effect of intangible or other assets related to the manufacturing facility.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Illustrations*

#### **Example 6: Restricted Assets**

##### **Case A: Restriction on the Sale of an Equity Instrument**

###### **820-10-55-52**

A reporting entity holds an equity instrument (a **financial asset**) for which sale is legally or contractually restricted for a specified period. (For example, such a restriction could limit sale to qualifying investors, as may be the case in accordance with Rule 144 or similar rules of the Securities and Exchange Commission [SEC].) The restriction is a characteristic of the instrument and, therefore, would be transferred to market participants. In that case, the fair value of the instrument would be measured on the basis of the quoted price for an otherwise identical unrestricted equity instrument of the same issuer that trades in a public market, adjusted to reflect the effect of the restriction. The adjustment would reflect the amount market participants would demand because of the risk relating to the inability to access a public market for the instrument for the specified period. The adjustment will vary depending on all of the following:

- a. The nature and duration of the restriction
- b. The extent to which buyers are limited by the restriction (for example, there might be a large number of qualifying investors)
- c. Qualitative and quantitative factors specific to both the instrument and the issuer.

##### **Case B: Restriction on the Use of an Asset**

###### **820-10-55-54**

A donor contributes land in an otherwise developed residential area to a not-for-profit neighborhood association. The land is currently used as a playground. The donor specifies that the land must continue to be used by the association as a playground in perpetuity; however, the association is not restricted from selling the land. Upon review of relevant documentation (for example, legal and other), the association determines that the fiduciary responsibility to meet the donor's restriction would not be transferred to market participants if the association sold the asset, that is, the donor restriction on the use of the land is specific to the association. Without the restriction on the use of the land by the association, the land could be used as a site for residential development. In addition, the land is subject to an easement (that is, a legal right that enables a utility to run power lines across the land). Following is an analysis of the effect on the fair value measurement of the land arising from the restriction and the easement:

- a. Donor restriction on use of land. Because in this situation the donor restriction on the use of the land is specific to the association, the restriction would not be transferred to market participants. Therefore, the fair value of the land would be the higher of its fair value used as a playground (that is, the fair value of the asset would be maximized through its use by market participants in combination with other assets or with other assets and liabilities) and its fair value as a site for residential development (that is, the fair value of the asset would be maximized through its use by market participants on a standalone basis), regardless of the restriction on the use of the land by the association
- b. Easement for utility lines. Because the easement for utility lines is specific to (that is, a characteristic of) the land, it would be transferred to market participants with the land. Therefore, the fair value measurement of the land would take into account the effect of the easement, regardless of whether the highest and best use is as a playground or as a site for residential development.

###### **820-10-55-55**

The donor restriction, which is legally binding on the association, would be indicated through classification of the associated net assets and disclosure of the nature of the restriction in accordance with paragraphs 958-210-45-8 through 45-9, 958-210-50-1, and 958-210-50-3.

## 5.2.1A

## Restrictions on assets (after the adoption of ASU 2022-03) (updated September 2023)



### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Illustrations

#### Pending Content:

**Transition Date:** (P) December 16, 2023; (N) December 16, 2024 | **Transition Guidance:** 820-10-65-13

#### Example 6: Restricted Assets

#### 820-10-55-51

The effect on a fair value measurement arising from a restriction on the sale or use of an asset by a reporting entity will differ depending on whether the restriction would be taken into account by market participants when pricing the asset. When the restriction is included within the unit of account of the asset, the restriction is a characteristic of the asset and should be considered in measuring the fair value of the asset. Cases A and B illustrate the effect of restrictions when measuring the fair value of an asset.

ASC 820 indicates that the effect on fair value of a restriction on the sale or use of an asset will differ depending on whether the restriction is deemed to be a characteristic of the asset or the entity holding the asset. A restriction that would transfer with the asset in an assumed sale would generally be deemed a characteristic of the asset and, therefore, would likely be considered by market participants in pricing the asset. Conversely, a restriction that is specific to the reporting entity holding the asset would not transfer with the asset in an assumed sale and, therefore, would not be considered when measuring fair value. Determining whether a restriction is a characteristic of the asset or of the entity holding the asset may require judgment based on the specific facts and circumstances.

Example 6, Case A and Case B (excerpted below) highlight the distinction between restrictions that are characteristics of the asset and that of the entity holding the asset, including how this determination affects the fair value measurement.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### Illustrations

#### Pending Content:

**Transition Date:** (P) December 16, 2023; (N) December 16, 2024 | **Transition Guidance:** 820-10-65-13

#### Example 6: Restricted Assets

*Editor's Note:* The content of paragraph 820-10-55-52 will change upon transition, together with a change in the heading noted below.

#### > > Case A: Restriction on the Sale of an Equity Security

#### 820-10-55-52

Company X issues Class A shares through a sale on a national securities exchange or an over-the-counter market as well as through a private placement transaction. Because the Class A shares issued through the private placement are not registered and are legally restricted from being sold on a national securities exchange or an over-the-counter market until the shares are registered or the conditions necessary for an exemption from registration have been satisfied, a market participant would sell the private placement Class A shares in a different market than the market used for registered Class A shares on the measurement date. Because that restriction would be included within the unit of account of the equity security, a market participant would consider the inability to resell the security on a national securities exchange or an over-the-counter market when pricing the equity security; therefore, the reporting entity that holds the Class A shares acquired through a private placement transaction would consider that restriction a characteristic of the asset. In that case, the reporting entity should measure the fair value of the equity security on the basis of the market price of the similar unrestricted equity security adjusted to reflect the effect of the restriction. The adjustment will vary depending on all of the following:

- a. The nature and remaining duration of the restriction
- b. The extent to which buyers are limited by the restriction (for example, there might be a large number of qualifying investors)
- c. Qualitative and quantitative factors specific to both the instrument and the issuer.

#### Pending Content:

**Transition Date:** (P) December 16, 2023; (N) December 16, 2024 | **Transition Guidance:** 820-10-65-13

#### 820-10-55-52A

A reporting entity holds Class A shares of Company X that are eligible for sale on a national securities exchange or an over-the-counter market. Separately, the reporting entity enters into a contractual arrangement in which it agrees that it will not sell the Class A shares for a certain time period. That arrangement may be referred to as a lock-up agreement or a market standoff agreement or may be the result of a provision within a separate agreement between certain shareholders (that is, separate from the legal documents that establish the rights and obligations of all holders of a particular class of stock). In that instance, the restriction is not included in the unit of account and therefore is not a characteristic of the asset. The equity security subject to the contractual sale restriction is identical to an equity security that is not subject to a contractual sale restriction. Therefore, consistent with the guidance in paragraphs 820-10-35-6B and 820-10-35-36B, the fair value of the equity security subject to the contractual sale restriction should be measured on the basis of the market price of the same equity security without the contractual sale restriction and should not be adjusted to reflect the reporting entity's inability to sell the equity security on the measurement date.

**Case B: Restrictions on the Use of an Asset****820-10-55-54**

A donor contributes land in an otherwise developed residential area to a not-for-profit neighborhood association. The land is currently used as a playground. The donor specifies that the land must continue to be used by the association as a playground in perpetuity; however, the association is not restricted from selling the land. Upon review of relevant documentation (for example, legal and other), the association determines that the fiduciary responsibility to meet the donor's restriction would not be transferred to market participants if the association sold the asset, that is, the donor restriction on the use of the land is specific to the association. Without the restriction on the use of the land by the association, the land could be used as a site for residential development. In addition, the land is subject to an easement (that is, a legal right that enables a utility to run power lines across the land). Following is an analysis of the effect on the fair value measurement of the land arising from the restriction and the easement:

- a. Donor restriction on use of land. Because in this situation the donor restriction on the use of the land is specific to the association, the restriction would not be transferred to market participants. Therefore, the fair value of the land would be the higher of its fair value used as a playground (that is, the fair value of the asset would be maximized through its use by market participants in combination with other assets or with other assets and liabilities) and its fair value as a site for residential development (that is, the fair value of the asset would be maximized through its use by market participants on a standalone basis), regardless of the restriction on the use of the land by the association
- b. Easement for utility lines. Because the easement for utility lines is specific to (that is, a characteristic of) the land, it would be transferred to market participants with the land. Therefore, the fair value measurement of the land would take into account the effect of the easement, regardless of whether the highest and best use is as a playground or as a site for residential development.

**820-10-55-55**

The donor restriction, which is legally binding on the association, would be indicated through classification of the associated net assets and disclosure of the nature of the restriction in accordance with paragraphs 958-210-45-8 through 45-9, 958-210-50-1, and 958-210-50-3.

A contractual restriction on the sale of an equity security is not part of the unit of account of the equity security and, therefore, is not considered when measuring its fair value. Rather, an entity should measure the fair value of an equity security subject to a contractual sale restriction the same way it measures an identical equity security that is not subject to such a restriction (e.g., based on the quoted price). This is because the unit of account when measuring the fair value of an equity security is the individual equity security. Incorporating the effects of a contractual sale restriction (that is, applying a discount to the price of an identical equity security that is not subject to a contractual sale restriction) is not consistent with that unit of account and, therefore, is not permitted in fair value measurements.<sup>18</sup>

An example of this is illustrated in ASC 820-10-55-52A (Example 6, Case A excerpted above). In this example, the equity security subject to the contractual sale restriction (e.g., a lock-up agreement) is identical to an equity security that is not subject to the contractual sale restriction. Therefore, the restriction is not a characteristic of the asset, and the entity should measure the fair value of the equity security on the basis of the market price of a similar unrestricted equity security.

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<sup>18</sup> Paragraph BC11 of ASU 2022-03.

ASC 820-10-35-6B states that an entity must be able to access the principal (or most advantageous) market. However, it does not need to be able to sell an equity security on the measurement date to measure the fair value of the equity security on the basis of the price in that market. Refer to ASC 820-10-35-6B excerpted in section 6.2 for further discussion. Additionally, the Board noted in the Background Information and Basis for Conclusions of ASU 2022-03<sup>19</sup> that an entity's inability to sell an equity security for a period exposing it to the risk of price decline is an entity-specific risk, which does not affect the fair value of the security itself on the measurement date.

On the other hand, ASC 820-10-55-52 (Example 6, Case A excerpted above) illustrates an example when a restriction would be included within the unit of account of the equity security (e.g., a security issued in a private placement that is not registered and is legally restricted from being sold on a national securities exchange or over-the-counter market) because a market participant would consider the inability to resell the security in the principal (or most advantageous) market in which the equity security would be sold (e.g., a national securities exchange or over-the-counter market) when pricing the equity security on the measurement date. Therefore, in that example, the entity would measure the fair value of the equity security on the basis of the market price of the similar unrestricted equity security, adjusted to reflect the effect of the restriction.

As stated in ASC 820-10-35-36B, a contractual sale restriction should not be recognized as a separate unit of account (refer to section 13.2 for further discussion).

Entities that hold equity securities subject to contractual sale restrictions will need to make additional disclosures. See section 20.8 for further discussion.

### 5.2.1A.1

#### Transition and effective date (updated September 2022)

##### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Transition and Open Effective Date Information*

##### **820-10-65-13**

The following represents the transition and effective date information related to Accounting Standards Update No. 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions:

- a. For **public business entities**, the pending content that links to this paragraph shall be effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2023. Early adoption is permitted.
- b. For all other entities, the pending content that links to this paragraph shall be effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2024. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance.
- c. An entity shall apply the pending content that links to this paragraph to **equity securities** within the scope of the pending content that links to this paragraph as follows:
  1. For entities that meet the definition of an investment company in accordance with the guidance in paragraphs 946-10-15-4 through 15-9, on a prospective basis to an equity security in which the contractual restriction that prohibits the sale of the equity security is executed or modified on or after the date at which the investment company first applies the pending content that links to this paragraph. An investment company that holds an equity security that is subject to a contractual sale restriction executed before the date at which the

<sup>19</sup> Paragraph BC13 of ASU 2022-03.

investment company first applies the pending content that links to this paragraph shall continue to account for that equity security using the accounting policy applied before the adoption of the pending content that links to this paragraph until the contractual sale restriction expires or is modified. An entity shall account for a modification to a contractual sale restriction in accordance with (c)(2) on the date of modification. Any adjustments as a result of applying the pending content that links to this paragraph shall be recognized as an adjustment to current-period earnings on the date the contractual sale restriction is modified.

2. For all other entities, on a prospective basis to all equity securities. Any adjustments as a result of applying the pending content that links to this paragraph shall be recognized as an adjustment to current-period earnings on the date at which an entity first applies the pending content that links to this paragraph.
- d. An entity that adopts the pending content that links to this paragraph in accordance with (c)(1) shall disclose the following in each period that the entity continues to apply a discount to equity securities subject to contractual sale restrictions executed before adopting the pending content that links to this paragraph:
1. The fair value of equity securities subject to a contractual sale restriction on the statement of financial position to which the entity continues to apply a discount.
  2. The nature and remaining duration of the contractual sale restriction.
  3. The circumstances that could cause a lapse in the restriction.

The equity securities included in (d)(1) through (3) shall be excluded from the amounts disclosed as required by paragraph 820-10-50-6B.

- e. An entity that adopts the pending content that links to this paragraph in accordance with (c)(2) shall disclose the amount recognized as an adjustment to earnings in the period that the entity first applies the pending content that links to this paragraph.

For public business entities, the guidance is effective for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. Early adoption is permitted. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance.

All entities, except entities that qualify as investment companies under ASC 946, should apply the new guidance prospectively to all equity securities subject to a contractual sale restriction that they hold. Adjustments resulting from the adoption of the guidance should be recognized in current period earnings and disclosed in the period of adoption.

Investment companies should apply the guidance prospectively to equity securities that become subject to a contractual sale restriction (or when a modification to an existing contractual restriction is executed) on or after the date of adoption. Adjustments that result from applying the guidance to a modified contractual sale restriction should be recognized in current period earnings and disclosed in the period of the modification. For equity securities that become subject to a contractual sale restriction before the date of adoption of the amendments, the investment company should continue to apply its existing accounting policy (before the adoption of the amendments) until the expiration or modification of the contractual restriction and disclose the following in each period that the entity continues to apply a discount to equity securities subject to contractual sale restrictions:

- ▶ The fair value of equity securities subject to a contractual sale restriction to which the entity continues to apply a discount

- ▶ The nature and remaining duration of the contractual sale restriction
- ▶ The circumstances that could cause a lapse in the restriction

The information provided in these disclosures should be excluded from the disclosures required for equity securities that become subject to new or modified contractual sale restrictions on or after the date of adoption (refer to section 20.8 for further discussion).

## 5.3

### Unit of account

The unit of account defines what is being measured for financial reporting purposes. It is an accounting concept that determines the level at which an asset or liability is aggregated or disaggregated for purposes of applying ASC 820, as well as other Topics. Identifying the asset or liability being measured is fundamental to determining its fair value.

The unit of account is determined in accordance with the provisions of the Topic that requires (or permits) the fair value measurement and may be a standalone asset or liability, a group of assets, a group of liabilities or a group of assets and liabilities. ASC 820 does not prescribe the unit of account to be used when measuring fair value except as follows:

- ▶ A reporting entity that holds a position in a single asset or liability that is traded in an active market (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) is required to measure the asset or liability based on the product of the quoted price for the individual asset or liability and the quantity held ( $P \times Q$ ).
- ▶ A reporting entity that manages a group of financial assets and financial liabilities with offsetting risks on the basis of its net exposure to market or credit risks may elect to measure the group based on the price that would be received to sell its net long position, or paid to transfer its net short position, for a particular risk (if certain criteria are met).<sup>20</sup>

In valuing nonfinancial assets, the concepts of “unit of account” and “valuation premise” are distinct, even though both concepts deal with determining the appropriate level of aggregation (or disaggregation) for assets and liabilities. The unit of account identifies what is being measured for financial reporting and drives the level of aggregation (or disaggregation) for presentation and disclosure purposes. Valuation premise is a valuation concept that addresses how a nonfinancial asset derives its maximum value to market participants, either on a standalone basis or through its use in combination with other assets and liabilities.

Because financial instruments do not have alternative uses and their fair values do not depend on their use within a group of other assets or liabilities, the concepts of highest and best use and valuation premise are not relevant for these instruments. As a result, the fair value for financial instruments should be largely based on the unit of account prescribed by the Topic that requires (or permits) the fair value measurement.

The distinction between these two concepts becomes clear when the unit of account of a nonfinancial asset differs from its valuation premise. Consider an asset (e.g., customized machinery) that was acquired outside of a business combination, along with other assets as part of an operating line. Although the unit of account for the customized machinery may be as a standalone asset (i.e., it is recognized for financial reporting purposes at the individual asset level), the determination of the fair value of the machinery is derived from its use with other assets in the operating line. (Refer to section 8 for additional discussion on the concept of valuation premise.)

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<sup>20</sup> As discussed further in section 20.3.3, using the measurement exception may require a company to allocate portfolio-level adjustments to the individual instruments for disclosure purposes.

## Questions and interpretive responses (updated September 2022)

**Question 5.1-1** Does ASC 820 allow for the decomposition of an asset into its component parts, and the assumption of prices that would be received for the separate sale of those component parts, in order to determine the fair value of the asset?

ASC 820 states that the objective of a fair value measurement is to determine the price that would be received to sell an asset or paid to transfer a liability at the measurement date. That is, a fair value measurement is to be determined for a particular asset or liability. The unit of account determines what is being measured by reference to the level at which the asset or liability is aggregated (or disaggregated) for accounting purposes.

Unless decomposition of an asset (or liability) into its component parts is required or allowed under US GAAP (e.g., a requirement to bifurcate under ASC 815), we generally do not believe it is appropriate to consider the unit of account at a level below that of the legal form of the asset or liability being measured. A valuation methodology that uses a “sum-of-the-parts” technique may still be appropriate under ASC 820; for example, when measuring complex financial instruments, companies often use valuation methodologies that attempt to determine the value of the entire instrument based on its component parts.

In situations where fair value can be determined for a financial instrument as a whole, we would generally not expect that an entity would conclude on a higher value because the sum of the parts exceeds the whole. Using a higher value inherently suggests that the asset would be decomposed and the various risk attributes transferred to different market participants who would pay more for the pieces than a market participant would for the instrument as a whole. Such a technique is not consistent with ASC 820’s principles, which contemplate the sale of an asset or transfer of a liability (as defined) in a single transaction.

For example, we do not believe it would be appropriate for an entity to measure the fair value of a cross-currency swap at the price it would expect to receive if it separately sold a US dollar interest rate swap and several foreign currency forward contracts, if the aggregate price of the component parts was determined to exceed that which the entity would receive if it sold the cross-currency swap in its entirety.<sup>21</sup> During the deliberations leading to the issuance of Statement 157, the FASB rejected a fair value measurement objective based on risk, as opposed to assets and liabilities.

In general, only when a company qualifies to use ASC 820’s measurement exception for measuring financial assets and financial liabilities with offsetting risks, and elects to do so, is the unit of measurement determined based on a particular risk exposure as opposed to the assets or liabilities which give rise to the exposure. However, even in those situations the unit of measurement becomes the company’s aggregate net position to a particular risk exposure. (Refer to section 10 for additional discussion on the application of this measurement exception.)

**Question 5.2-1** When a restriction is deemed to be a characteristic of the asset, is it appropriate to apply a constant discount percentage over the entire life of the restriction? (updated September 2022)

If an entity determines that a restriction is a characteristic of the asset and applies a discount when measuring its fair value (refer to section 5.2.1 for further discussion of restrictions on assets before the adoption of ASU 2022-03 and section 5.2.1A for further discussion of restrictions on assets after the adoption of ASU 2022-03), we generally do not believe a constant discount percentage should be used to measure the fair value of the asset because market participants would consider the remaining time on the asset’s restriction, and that changes from period to period.

<sup>21</sup> The issue of decomposing financial assets was the subject of debate regarding the measurement of loans based on securitization prices. Refer to Question IA.1-4 in Industry Appendix 1 on the fair value measurement considerations for the banking industry for additional discussion on the use of a securitization price in determining the fair value of a portfolio of whole loans.

For example, market participants would generally not assign the same discount for a restriction that terminates in one month, as they would for a two-year restriction. The SEC's previously codified view on this issue<sup>22</sup> stated the following:

Some investment companies value restricted securities held in their portfolio by applying either a constant percentage or an absolute dollar discount to the market quotation for unrestricted securities of the same class. The automatic valuation of restricted securities by such a method, however, would also not appear to satisfy the requirement of the Investment Company Act that each security, for which a market quotation is not readily available, be valued at fair value as determined in good faith by the board of directors.

Thus, it would be improper in valuing restricted securities automatically to maintain the same percentage discount (from the market quotation for unrestricted securities of the same class) that was received when the restricted securities were purchased, without regard to other relevant factors such as, for example, the extent to which the inherent value of the securities may have changed.

Moreover, if in valuing restricted securities, the diminution in value attributable to the restrictive feature is itself affected by factors subject to change, such as the length of time which must elapse before the investment company may require the issuer to cause the securities to be registered for public sale, the valuation should reflect any such changes.

Based on the guidance in ASC 820, companies should not simply assume a constant discount over the life of the restriction in determining fair value. One approach to value the restriction may be through a quantitative discount for lack of marketability model that explicitly incorporates the duration of the restriction and the characteristics of the underlying security.

The principal economic factor underlying a discount for lack of marketability is the increased risk resulting from the inability to quickly and efficiently return the investment to a cash position (i.e., the risk of a price decline during the restriction period). Quantitative discount for lack of marketability models capture these risks by considering the volatility of the security and the duration of the restriction. Another acceptable way in which the price of this risk may be determined is by using an option pricing model that estimates the value of a protective put option. For example, if a restricted or nonmarketable stock is acquired along with a separate option that provides the holder with the right to sell those shares at the current market price for unrestricted stock, the acquirer has, in effect, purchased marketability for the shares. The value of the put option may be considered an estimate of the discount for the lack of marketability associated with the restricted security. Other techniques or approaches may also be appropriate in measuring the discount associated with restricted securities.

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<sup>22</sup> As the result of the adoption of a new rule under the Investment Company Act of 1940 that modernizes valuation practices for registered investment companies and business development companies (collectively, funds) and clarifies how fund boards and trustees or depositors of unit investment trusts can satisfy their obligation to determine fair value in good faith for portfolio holdings without readily available market quotations, the SEC rescinded the guidance in Accounting Series Release (ASR) No. 113, which previously codified the above view on restricted securities. For further details, refer to the final rule on the SEC website at <https://www.sec.gov/rules/final/2020/ic-34128.pdf>.

# 6

## Exit price

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Definition of Fair Value*

##### *The Transaction*

##### **820-10-35-3**

A fair value measurement assumes that the asset or liability is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability at the measurement date under current market conditions.

##### **820-10-35-5**

A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:

- a. In the **principal market** for the asset or liability
- b. In the absence of a principal market, in the **most advantageous market** for the asset or liability.

### 6.1

#### The transaction

In determining fair value, the transaction to sell an asset or transfer a liability as of the measurement date is, by definition, hypothetical because the transaction has not yet occurred. If the asset had been sold or the liability transferred as of the measurement date, there would be no asset or liability for the reporting entity to measure at fair value. While hypothetical in nature, the transaction contemplated when measuring fair value must be consistent with ASC 820's requirement that the transaction:

- ▶ Be orderly in nature
- ▶ Take place between market participants that are independent of each other, but knowledgeable of the asset or liability<sup>23</sup>
- ▶ Occur on the measurement date

Each of these requirements is important so that the estimated exit price is determined consistent with the objective of a fair value measurement. For example, the concept of an orderly transaction is intended to distinguish a fair value measurement from the price in a distressed sale or forced liquidation. Unlike a forced liquidation, an orderly transaction assumes that the asset or liability is exposed to the market prior to the measurement date for a period that is usual and customary to allow for information dissemination and marketing. That is, the hypothetical transaction assumes that market participants have sufficient knowledge and awareness of the asset or liability, obtained through customary due diligence even if, in actuality, this process may not have yet begun (or may never occur at all if the entity does not sell the asset).

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<sup>23</sup> See section 7 for additional discussion on market participants.

It is important to note that the “orderly transaction” considered in determining fair value under ASC 820 does not take place at some point in the future. A fair value measurement considers market conditions as they exist at the measurement date and is intended to represent the current value of the asset or liability, not the potential value of the asset or liability at some future date. For example, consider a calendar-year reporting entity that holds an asset that is required to be measured at fair value as of 31 December 20X0. The entity intends to sell the asset in six months, during which time customary marketing activities and due diligence procedures for the asset will be performed. The fair value of this asset should not be determined based on the price the entity expects to receive for the asset in June 20X1 discounted back to the measurement date, but instead must be determined based on the price that would be received if the asset were sold on 31 December 20X0, assuming that the marketing activities and due diligence activities had already been performed.

Although a fair value measurement contemplates the price in an assumed transaction, pricing information from actual transactions for identical or similar assets and liabilities is considered in determining fair value. ASC 820 establishes a fair value hierarchy (discussed in section 14) to prioritize the inputs used to measure fair value, based on the relative reliability of those inputs. ASC 820 requires that valuation techniques maximize the use of observable inputs and minimize the use of unobservable inputs. As such, even in situations where the market for a particular asset is deemed to be inactive, relevant prices or inputs from this market should still be considered in the determination of fair value. It would not be appropriate for a company to default solely to a model’s value based on unobservable inputs (a Level 3 measurement), when Level 2 information (inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly) is available. Judgment is required in assessing the relevance of observable market data to determine the priority of inputs under the fair value hierarchy, particularly in situations where there has been a significant decrease in market activity for an asset or liability, as discussed in section 6.4.

## 6.2 The principal (or most advantageous) market (updated September 2022)



### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Definition of Fair Value

#### The Transaction

#### 820-10-35-5A

A reporting entity need not undertake an exhaustive search of all possible markets to identify the principal market or, in the absence of a principal market, the most advantageous market, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the market in which the reporting entity normally would enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market.

**820-10-35-6**

If there is a principal market for the asset or liability, the fair value measurement shall represent the price in that market (whether that price is directly observable or estimated using another valuation technique), even if the price in a different market is potentially more advantageous at the measurement date.

**820-10-35-6A**

The reporting entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and businesses within those entities) with different activities may have access to different markets, the principal (or most advantageous) market for the same asset or liability might be different for different entities (and businesses within those entities). Therefore, the principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the reporting entity, thereby allowing for differences between and among entities with different activities.

**820-10-35-6B**

Although a reporting entity must be able to access the market, the reporting entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market.

**Pending Content:**

**Transition Date:** (P) December 16, 2023; (N) December 16, 2024 | **Transition Guidance:** 820-10-65-13

Although a reporting entity must be able to access the market, the reporting entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market. For example, an **equity security** that an entity cannot sell on the measurement date because of a contractual sale restriction shall be measured at fair value on the basis of the price in the principal (or most advantageous) market. A contractual sale restriction does not change the market in which that equity security would be sold (see paragraphs 820-10-55-52 through 55-52A).

**820-10-35-6C**

Even when there is no observable market to provide pricing information about the sale of an asset or the transfer of a liability at the measurement date, a fair value measurement shall assume that a transaction takes place at that date, considered from the perspective of a market participant that holds the asset or owes the liability. That assumed transaction establishes a basis for estimating the price to sell the asset or to transfer the liability.

A fair value measurement contemplates an orderly transaction to sell the asset or transfer the liability in its principal market. ASC 820 defines “principal market” as the market with the greatest volume and level of activity for the asset or liability. The determination of the principal market (and, as a result, the market participants in the principal market) is made from the perspective of the reporting entity. This concept is important because it acknowledges that different reporting entities may sell assets or transfer liabilities in different markets, depending on their activities. For example, a securities dealer may exit a financial instrument by selling it in the inter-dealer market, while a manufacturing company would sell a financial instrument in the retail market. It would not be appropriate for a manufacturing company to assume that it would transact in the inter-dealer market (even when considering a hypothetical transaction) because the company does not have access to this market.

The recognition in ASC 820 that different entities may sell identical instruments in different markets (and therefore at different exit prices) has important implications, particularly with respect to the initial recognition of certain financial instruments, such as derivatives. For example, a derivative contract between a dealer and a retail customer may be initially recorded at different fair values by the two entities, as they would exit the derivative in different markets and, therefore, at different exit prices. Refer to section 11 for additional discussion on Day 1 gains and losses for dealers and retail counterparties.

Existing guidance indicates that the principal market for an asset or liability should be determined based on the market with the greatest volume and level of activity that the reporting entity can access, and not the entity's own level of activity in a particular market. That is, the determination as to which market(s) a particular company can access is entity-specific, but once the accessible markets are identified, market-based volume and activity determines the principal market.

Companies are not required to undertake an exhaustive search of all possible exit markets to determine the principal market for the asset or liability being measured. ASC 820 provides a rebuttable presumption that the market in which a company normally transacts for the asset or liability is the principal market, unless contrary evidence exists. As such, companies should assess information that is reasonably available when considering which market has the greatest volume and level of activity.

Although a reporting entity must be able to access the market, the reporting entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market.

After the adoption of ASU 2022-03, an entity should measure the fair value of an equity security subject to a contractual sale restriction the same way it measures an identical equity security that is not subject to such a restriction (e.g., based on the quoted price in the principal (or most advantageous) market). This is because a contractual sale restriction does not change the market in which that equity security would be sold. See section 5.2.1 for further discussion of restrictions on assets before the adoption of ASU 2022-03 and section 5.2.1A for further discussion of restrictions on assets after the adoption of ASU 2022-03.

### 6.2.1 Most advantageous market

If there is a principal market for the asset or liability being measured, the price in that market should be used to measure fair value, even if there is a more advantageous price in a different market at the measurement date. In other words, the most advantageous market concept is applied under ASC 820 only in situations where the reporting entity determines there is no principal market for the asset or liability being measured.

The concept of the most advantageous market is based on the assumption that the goal of most entities is to maximize profits or net assets. Assuming economically rational behavior, the FASB observed that the principal market would generally represent the most advantageous market. However, when this is not the case, the FASB decided to prioritize the price in the most liquid market (i.e., the principal market) as this market provides the most reliable price to determine fair value and also serves to increase consistency among reporting entities.

## 6.3

### The price

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Definition of Fair Value*

##### *The Price*

##### **820-10-35-9A**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (that is, an **exit price**) regardless of whether that price is directly observable or estimated using another valuation technique.

##### **820-10-35-9B**

The price in the principal (or most advantageous) market used to measure the fair value of the asset or liability shall not be adjusted for **transaction costs**. Transaction costs shall be accounted for in accordance with other Topics. Transaction costs are not a characteristic of an asset or a liability; rather, they are specific to a transaction and will differ depending on how a reporting entity enters into a transaction for the asset or liability.

##### **820-10-35-9C**

Transaction costs do not include **transportation costs**. If location is a characteristic of the asset (as might be the case, for example, for a commodity), the price in the principal (or most advantageous) market shall be adjusted for the costs, if any, that would be incurred to transport the asset from its current location to that market.

The price in an orderly transaction between independent market participants does not consider management's intent to sell the asset or transfer the liability at the measurement date. It also does not consider the reporting entity's ability to enter into the transaction on the measurement date. To illustrate, consider a security that is restricted from sale by the reporting entity as of the measurement date. Regardless of whether a restriction affects the fair value of the asset,<sup>24</sup> the restriction does not obviate the need to consider a hypothetical transaction to sell the security on the measurement date.

ASC 820 makes it clear that a reporting entity's intention to hold an asset or fulfill an obligation is not relevant when measuring fair value. This is true even if the accounting in other Topics is based on management's intent to hold the asset or settle the liability. This is because fair value is a market-based measurement, not an entity-specific measurement.

### 6.3.1

#### Transaction costs

ASC 820 states that the price in the principal (or most advantageous) market used to measure fair value should not be adjusted for transaction costs (e.g., commissions, certain due diligence costs, legal costs, and property transfer taxes). Transaction costs represent costs that result directly from and are essential to a transaction. That is, they would not have been incurred by the entity had the transaction not occurred. These costs are not included in a fair value measurement because they are not characteristics of the asset or liability being measured. ASC 820 does not provide any specific guidance as to when transaction costs should be recognized or where they should be reported, but simply states that these costs should be accounted for in accordance with the provisions of other Topics.

<sup>24</sup> As discussed in section 5, the effect of a restriction on a fair value measurement depends on whether the restriction is deemed to be a characteristic of the asset or a characteristic of the reporting entity holding the asset.

Although transaction costs are not included in the fair value measurement of an asset or liability, they are considered when a reporting entity assesses its most advantageous market. The following illustrative example from ASC 820 highlights how an entity would consider transaction costs in determining the most advantageous market.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### Example 4: Level 1 Principal (or Most Advantageous) Market

##### 820-10-55-42

Example 4 illustrates the use of **Level 1 inputs** to measure the fair value of an asset that trades in different **active markets** at different prices.

##### 820-10-55-43

An asset is sold in two different active markets at different prices. A reporting entity enters into transactions in both markets and can access the price in those markets for the asset at the measurement date. In Market A, the price that would be received is \$26, **transaction costs** in that market are \$3, and the costs to transport the asset to that market are \$2 (that is, the net amount that would be received is \$21). In Market B, the price that would be received is \$25, transaction costs in that market are \$1, and the costs to transport the asset to that market are \$2 (that is, the net amount that would be received in Market B is \$22).

##### 820-10-55-44

If Market A is the **principal market** for the asset (that is, the market with the greatest volume and level of activity for the asset), the fair value of the asset would be measured using the price that would be received in that market, after taking into account **transportation costs** (\$24).

##### 820-10-55-45

If neither market is the principal market for the asset, the fair value of the asset would be measured using the price in the **most advantageous market**. The most advantageous market is the market that maximizes the amount that would be received to sell the asset after taking into account transaction costs and transportation costs (that is, the net amount that would be received in the respective markets).

##### 820-10-55-45A

Because the reporting entity would maximize the net amount that would be received for the asset in Market B (\$22), the fair value of the asset would be measured using the price in that market (\$25), less transportation costs (\$2), resulting in a fair value measurement of \$23. Although transaction costs are taken into account when determining which market is the most advantageous market, the price used to measure the fair value of the asset is not adjusted for those costs (although it is adjusted for transportation costs).

## 6.3.2 Transportation costs

ASC 820 differentiates transportation costs from transaction costs. Transportation costs are costs that would be incurred to transport an asset to (or from) the principal (or most advantageous) market. If location is an attribute of the asset being measured (e.g., as might be the case with a commodity), the price in the principal (or most advantageous) market should be adjusted to include the costs that would be incurred to transport the asset from its current location to that market.

The following simplified example can be used to illustrate this concept. Consider an entity (Entity A) that holds a physical commodity measured at fair value in its warehouse in New York. For this commodity, the principal market is determined to be the London exchange. The exchange price for the asset is \$25; however, the contracts traded on the exchange for this commodity require physical delivery to London.

Assume that it would cost Entity A \$5 to transport the physical commodity to London. Assume also that Entity A would pay a broker commission of \$3 to transact on the London exchange. The fair value of the physical commodity would be \$20, that is, the price in the principal market for the asset (\$25) less transportation costs (\$5). The \$3 broker commission represents a transaction cost that would not adjust the price in the principal market.

## 6.4 Significant decrease in the volume or level of activity for an asset or liability

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability Has Significantly Decreased*

##### **820-10-35-54C**

The fair value of an asset or a liability might be affected when there has been a significant decrease in the volume or level of activity for that asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). To determine whether, on the basis of the evidence available, there has been a significant decrease in the volume or level of activity for the asset or liability, a reporting entity shall evaluate the significance and relevance of factors such as the following:

- a. There are few recent transactions.
- b. Price quotations are not developed using current information.
- c. Price quotations vary substantially either over time or among market makers (for example, some brokered markets).
- d. Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
- e. There is a significant increase in implied liquidity risk premiums, yields, or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the reporting entity's estimate of expected cash flows, taking into account all available market data about credit and other nonperformance risk for the asset or liability.
- f. There is a wide bid-ask spread or significant increase in the bid-ask spread.
- g. There is a significant decline in the activity of, or there is an absence of, a market for new issues (that is, a primary market) for the asset or liability or similar assets or liabilities.
- h. Little information is publicly available (for example, for transactions that take place in a principal-to-principal market).

##### **820-10-35-54D**

If a reporting entity concludes that there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities), further analysis of the transactions or quoted prices is needed. A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does not represent fair value or that a transaction in that market is not orderly. However, if a reporting entity determines that a transaction or quoted price does not represent fair value (for example, there may be transactions that are not orderly), an adjustment to the transactions or quoted prices will be necessary if the reporting entity uses those prices as a basis for measuring fair value and that adjustment may be significant to the fair value measurement in its entirety. Adjustments also may be necessary in other circumstances (for example, when a price for a similar asset requires significant adjustment to make it comparable to the asset being measured or when the price is stale).

**820-10-35-54F**

If there has been a significant decrease in the volume or level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate (for example, the use of a market approach and a present value technique). When weighting indications of fair value resulting from the use of multiple valuation techniques, a reporting entity shall consider the reasonableness of the range of fair value measurements. The objective is to determine the point within the range that is most representative of fair value under current market conditions. A wide range of fair value measurements may be an indication that further analysis is needed.

**820-10-35-54G**

Even when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (that is, not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.

**820-10-35-54H**

Estimating the price at which market participants would be willing to enter into a transaction at the measurement date under current market conditions if there has been a significant decrease in the volume or level of activity for the asset or liability depends on the facts and circumstances at the measurement date and requires judgment. A reporting entity's intention to hold the asset or to settle or otherwise fulfill the liability is not relevant when measuring fair value because fair value is a market-based measurement, not an entity-specific measurement.

While determining fair value for any asset or liability that does not trade in an active market often requires judgment, the above guidance is primarily focused on assets and liabilities in markets that have experienced a significant reduction in volume or activity. Prior to the decrease in activity, a market approach was likely the primary valuation approach used to estimate fair value for these items, given the availability and relevance of observable data. Under a market approach, fair value is based on prices and other relevant information generated by market transactions involving assets and liabilities that are identical or comparable to the item being measured. As transaction volume or activity for the asset decreases significantly, application of the market approach can prove more challenging and the use of additional valuation techniques may be warranted.

There are many reasons why the trading volume or level of activity for a particular asset or liability may decrease significantly. For example, shifts in supply and demand dynamics, changing levels of investors' risk appetites and liquidity constraints of key market participants could all result in a significant reduction in the level of activity for certain items or class of items. ASC 820-10-35-54D is clear that a decrease in the volume or level of activity on its own does not necessarily indicate that a transaction price or quoted price does not represent fair value. Additional analysis is required in these instances to assess the relevance of observed transactions or quoted prices in these markets. When market volumes decrease, adjustments to observable prices (which could be significant) may be necessary. As discussed in section 13, an adjustment based on unobservable inputs that is significant to the fair value measurement in its entirety would result in a Level 3 measurement. Observed prices associated with transactions that are not orderly would not be deemed to be representative of fair value.

ASC 820-10-35-54C provides a number of factors that should be considered when evaluating whether there has been a significant decrease in the level of activity for an asset or liability. These factors are not intended to be all-inclusive and should be considered along with any additional factors based on the individual facts and circumstances. A determination as to whether the asset or liability has experienced a significant decrease in activity is based on the weight of the available evidence.

## 6.5 Orderly transactions

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Identifying Transactions That Are Not Orderly*

##### **820-10-35-54I**

The determination of whether a transaction is orderly (or is not orderly) is more difficult if there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). In such circumstances, it is not appropriate to conclude that all transactions in that market are not orderly (that is, forced liquidations or distress sales). Circumstances that may indicate that a transaction is not orderly include the following:

- a. There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.
- b. There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.
- c. The seller is in or near bankruptcy or receivership (that is, the seller is distressed).
- d. The seller was required to sell to meet regulatory or legal requirements (that is, the seller was forced).
- e. The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

A reporting entity shall evaluate the circumstances to determine whether, on the weight of the evidence available, the transaction is orderly.

##### **820-10-35-54J**

A reporting entity shall consider all of the following when measuring fair value or estimating market risk premiums:

- a. If the evidence indicates the transaction is not orderly, a reporting entity shall place little, if any, weight (compared with other indications of fair value) on that transaction price.
- b. If the evidence indicates that a transaction is orderly, a reporting entity shall take into account that transaction price. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, such as the following:
  1. The volume of the transaction
  2. The comparability of the transaction to the asset or liability being measured
  3. The proximity of the transaction to the measurement date.
- c. If a reporting entity does not have sufficient information to conclude whether a transaction is orderly, it shall take into account the transaction price. However, that transaction price may not represent fair value (that is, the transaction price is not necessarily the sole or primary basis for measuring fair value or estimating market risk premiums). When a reporting entity does not have sufficient information to conclude whether particular transactions are orderly, the reporting entity shall place less weight on those transactions when compared with other transactions that are known to be orderly.

A reporting entity need not undertake exhaustive efforts to determine whether a transaction is orderly, but it shall not ignore information that is reasonably available. When a reporting entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly.

The determination of whether an observable transaction is orderly is a key consideration when assessing its relevance in estimating fair value. The ASC Master Glossary defines an orderly transaction as “a transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale).” This definition highlights two key components of transactions that are generally indicative of fair value. First, adequate market exposure is required in order to provide market participants the ability to obtain an awareness and knowledge of the asset or liability necessary for a market-based exchange. Second, the transaction should involve market participants that, while motivated to transact for the asset or liability, are not compelled to do so.

ASC 820 is clear that even when there has been a significant decrease in the volume or level of activity for an asset or liability (in relation to normal market activity), it is not appropriate to conclude that all transactions in that market are not orderly (i.e., forced liquidations or distressed sales). Instead, an assessment as to whether an observed transaction is not orderly generally needs to be made at the individual transaction level. While this assessment can require significant judgment, ASC 820 provides a number of factors that may indicate a transaction is not orderly. The factors in ASC 820-10-35-54I are not intended to be all-inclusive and there may be additional factors based on the individual facts and circumstances. Determining whether an observed transaction is orderly should be based on the weight of the available evidence from all relevant factors.

While ASC 820 provides characteristics of transactions that may not be orderly, there is often a lack of transparency into the details of those individual transactions to which the reporting entity is not a party. This lack of transparency poses practical challenges in determining whether a transaction is not orderly. Recognizing this difficulty, the FASB provided additional guidance in ASC 820-10-35-54J(c) which indicates that while observable data should not be ignored, if the reporting entity does not have sufficient information to conclude on whether a transaction is orderly, less weight should be placed on this transaction in comparison to other transactions that the reporting entity has concluded are orderly.

ASC 820 is also clear that a reporting entity need not undertake exhaustive efforts to determine whether a transaction is orderly. However, information that is reasonably available cannot be ignored. In addition, the guidance presumes that a reporting entity would have sufficient information to conclude on whether its own transactions are orderly.

## Questions and interpretive responses

### Question 6.2-1 **May a company have different principal (or most advantageous) markets for the same asset or liability?**

In certain instances, it may be appropriate for a company to determine that it has different principal markets for the same asset or liability. For example, there may be different exit markets for separate businesses of a single company for the same asset because those businesses are engaged in different activities and, therefore, have access to different markets. However, we do not believe that the determination of the principal market is based on management’s intent. Therefore, we would not expect a company to have different exit markets for the asset that is held within the same business simply because management has different exit strategies for the assets.

For example, consider an asset for which multiple exit markets exist and a company that has access to all of those exit markets. In our view, the fact that the company (or businesses within the company) has historically exited identical assets in different markets does not justify the use of different exit markets

in determining the fair value of these assets. Instead, the concept of a principal market (and most advantageous market) implies that one consistent market should generally be considered in determining the fair value of these identical assets.

To illustrate, assume the following three markets exist for a particular asset and that the company has the ability to transact in all three markets (and has historically done so).

Market	Price
A	\$30,000
B	\$25,000
C	\$22,000

Under the principal market concept, it would not be appropriate to value these identical assets at different prices solely because management intends to sell the assets in different markets. Likewise, a consistent fair value measurement for each asset utilizing a blended price that is determined based on the proportion of assets management intends to sell in each market would not be appropriate. Instead, we believe each of the assets should be measured at the price in the market determined to be the company's principal market. If Market B were determined to represent the principal market for the asset being measured, each asset would be valued at \$25,000.

In this example, selling the assets in either Market A or Market C would result in a gain or loss for the company. We believe this result is consistent with one of the fundamental concepts in the fair value framework. That is, the consequences of management's decisions (or a company's comparative advantages or disadvantages) should be recognized when those decisions are executed (or those advantages or disadvantages are achieved).

#### Question 6.2-2

**In situations where a company has access to multiple markets, should the principal market be determined based on entity-specific volume and activity or market-based volume and activity?**

In most instances, the market in which a reporting entity would sell an asset (or transfer a liability) with the greatest frequency will also represent the market with the greatest volume and deepest liquidity for all market participants. In these instances, the principal market would be the same regardless of whether it is determined based on entity-specific volume and activity or market-based volume and activity. However, when this is not the case, a reporting entity's principal market is determined using market-based volume and activity.

Because different entities engage in different activities, some entities have access to certain markets that other entities do not. For example, a company that does not function as a wholesaler would not have access to the wholesale market and therefore would need to look to the retail market as its principal market. Once the markets to which a particular entity has access have been identified, the determination of the principal market should not be based on management's intent or entity-specific volume, but rather should be based on the market with the greatest volume and level of activity for the asset or liability.

To illustrate, assume that there are three exit markets for a particular asset (e.g., leased cars) in which the reporting entity may transact (and has historically done so). As of the measurement date, the entity has 100 leased cars (same make, model and mileage) that it needs to measure at fair value for impairment purposes. Volumes and prices in the respective markets are as follows:

Market	Price	Entity-specific volume for the asset (based on history or intent)	Total market-based volume for the asset
A	\$30,000	60%	15%
B	\$25,000	25%	75%
C	\$22,000	15%	10%

In the above example, Market B is the principal market because it is the market with the greatest volume and level of activity for the asset. As such, the fair value of the 100 cars as of the measurement date would be \$2.5 million (\$25,000 per car).

**Question 6.3-1** Certain assets, such as other real estate owned (OREO) or property, plant and equipment acquired in a business combination that are to be sold are measured under US GAAP at their fair value less cost to sell. Does the guidance in ASC 820 change the measurement objective for these assets, such that transaction costs should not be deducted from fair value? If not, are these assets excluded from the scope of ASC 820 because they require the consideration of selling costs (transaction costs)?

ASC 820 does not change the measurement objective for assets accounted for at fair value less cost to sell. The “fair value less cost to sell” measurement objective includes (1) fair value and (2) cost to sell, and the fair value component should be determined in accordance with the principles of ASC 820. ASC 820 clarifies this point by stating that the measurement and disclosure requirements in ASC 820 apply to both fair value measurements and measurements based on fair value, such as fair value less cost to sell.

As such, ASC 820’s disclosures are required in situations where the fair value less cost to sell measurement is required subsequent to the initial recognition of the asset (e.g., discontinued operations). The guidance also clarifies that adjustments used to arrive at measurements based on fair value (e.g., the cost to sell when estimating fair value less cost to sell) should not be considered when determining where to categorize the measurement in the fair value hierarchy.

**Question 6.3-2** Does ASC 820 affect the accounting for transaction costs (e.g., commissions) associated with the acquisition of securities measured at fair value?

ASC 820-10-35-9B states that a fair value measurement should not be adjusted for transaction costs but does not provide specific guidance on accounting for transaction costs, instead noting that these costs should be accounted for in accordance with other Topics.

While it is clear that the subsequent measurement objective for available-for-sale and trading securities accounted for under ASC 320 is fair value, that guidance is silent with respect to the initial measurement objective.<sup>25</sup> ASC 820 was not intended to increase the required (or permitted) use of fair value measurements in US GAAP and therefore provides no additional guidance on the initial measurement objective for securities accounted for under ASC 320. Accordingly, we would expect companies to continue to follow their existing accounting policies with respect to the treatment of transaction costs for securities accounted for under ASC 320.

However, there is guidance, for example, for transaction costs incurred for the purchase of a security accounted for under ASC 946. ASC 946-320-30-1 states that an investment company initially measures its investments in debt and equity securities at their transaction price, which includes commissions and other charges that are part of the purchase transaction. Because investment companies are required to subsequently measure all investments at fair value with changes in fair value recognized in earnings, transaction costs are immediately recognized as an unrealized loss.

**Question 6.4-1** Can a market exhibit a significant decrease in volume or level of activity and still be considered active?

ASC 820 defines a market as active if transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. While the same factors may be used to assess whether a market has experienced a significant decrease in activity and to determine whether a market is active or inactive, these are separate and distinct determinations. That is, a

<sup>25</sup> Question IA.1-1 in Industry Appendix 1 on fair value measurement considerations for the banking industry discusses situations where the acquired security is accounted for under ASC 310-30.

significant decrease in the volume of transactions does not automatically imply that a market is no longer active. Despite a decrease from recent (or historical) levels of activity, transactions for an asset or liability in a particular market may still occur with sufficient frequency and volume to provide pricing information on an ongoing basis, such as an equity security traded on a public exchange.

The determination that a market has experienced a significant decrease in volume does not change the requirements of ASC 820 related to the use of relevant observable data from active markets. That is, even if there has been a significant decrease in activity, if a market is still deemed to be active, companies should continue to measure the fair value of identical instruments that trade in this market using P\*Q (Level 1 measurement).

**Question 6.4-2 Can an entity choose to ignore observable data from markets that are determined to be inactive?**

While observable prices from inactive markets may not be representative of fair value in all cases, this data should not be ignored. Instead, ASC 820-10-35-54D and 35-54J clarify that additional analysis is required to assess the relevance of the observable data. One important aspect in assessing the relevance of a quoted price from an inactive market is the determination of whether the transaction is orderly. If the observed price is based on a transaction that is determined to be forced or disorderly, little, if any, weight should be placed on it compared with other indications of value.

If the quoted price is based on a transaction that is determined to be orderly, this data point should generally be considered in the estimation of fair value. However, the relevance of quoted prices associated with orderly transactions can vary based on factors specific to the asset or liability being measured and the facts and circumstances surrounding the price. Some of the factors to be considered include:

- ▶ The condition and/or location of the asset or liability
- ▶ The similarity of the transactions to the asset or liability being measured (e.g., the extent to which the inputs relate to items that are comparable to the asset or liability)
- ▶ The size of the transactions
- ▶ The volume or level of activity in the markets within which the transactions are observed
- ▶ The proximity of the transactions to the measurement date
- ▶ Whether the market participants involved in the transaction had access to information about the asset or liability that is usual and customary

If the adjustments made to the observable price are significant and based on unobservable data, the resulting measurement would represent a Level 3 measurement.

**Question 6.5-1 Are all transactions entered into to meet regulatory requirements or transactions initiated during bankruptcy assumed to be not orderly?**

Although a company may be viewed as being compelled to sell assets to comply with regulatory requirements, such transfers are not necessarily disorderly. If the company was provided the usual and customary period of time to market the instrument to multiple potential buyers, the transaction price may be representative of the asset's fair value. Similarly, transactions initiated during bankruptcy should not automatically be assumed to be disorderly. The determination of whether a transaction is not orderly requires a thorough evaluation of the specific facts and circumstances, including the exposure period and the number of potential buyers.

**Question 6.5-2 Is it possible for orderly transactions to take place in a “distressed” market?**

While there may be increased instances of transactions that are not orderly when a market has undergone a significant decrease in volume, it is not appropriate to assume that all transactions that occur in a market during a period of dislocation are distressed or forced. This determination is made at the individual transaction level and requires the use of judgment based on the specific facts and circumstances. While market factors such as an imbalance in supply and demand can affect the prices at which transactions occur in a given market, such an imbalance, in and of itself, does not indicate that the parties to a transaction were not knowledgeable and willing market participants or that a transaction was not orderly. For example, when multiple buyers have bid on the asset, a transaction in a dislocated market is less likely to be considered a “distressed sale.”

In addition, while a fair value measurement incorporates the assumptions that sellers, as well as buyers, would consider in pricing the asset or liability, a reporting entity’s conclusion that it would not sell its own asset (or transfer its own liability) at prices currently observed in the market does not mean these transactions should be presumed to be distressed. ASC 820 makes clear that fair value is a market-based measurement, not an entity-specific measurement, and notes that the reporting entity’s intention to hold an asset or liability is not relevant in estimating its fair value.

The objective of a fair value measurement is to estimate the exit price in an orderly transaction between willing market participants at the measurement date under current market conditions. This price should include a risk premium that reflects the amount market participants would require as compensation for bearing any uncertainty inherent in the cash flows, and this uncertainty (as well as the compensation demanded to assume it) may be affected by current market conditions.

The objective of a fair value measurement does not change when markets are inactive or in a period of dislocation. Refer to section 12.4 for additional discussion on determining fair value when there has been a significant decrease in the level of activity for an asset or liability.

# 7

## Market participants

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Definition of Fair Value*

#### *Market Participants*

#### **820-10-35-9**

A reporting entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest. In developing those assumptions, a reporting entity need not identify specific market participants. Rather, the reporting entity shall identify characteristics that distinguish market participants generally, considering factors specific to all of the following:

- a. The asset or liability
- b. The principal (or most advantageous) market for the asset or liability
- c. Market participants with whom the reporting entity would enter into a transaction in that market.

### 7.1

#### Characteristics of market participants

ASC 820 defines market participants as buyers and sellers in the principal (or most advantageous) market for an asset or liability that have all of the following characteristics:

- ▶ They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms
- ▶ They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary
- ▶ They are able to enter into a transaction for the asset or liability
- ▶ They are willing to enter into a transaction for the asset or liability; that is, they are motivated but not forced or otherwise compelled to do so

ASC 820 indicates that market participants are assumed to be independent of each other. The FASB determined this clarification was appropriate because it emphasizes that a fair value measurement assumes an orderly transaction between market participants at the measurement date, not an orderly transaction between the reporting entity and another market participant. Although this amendment makes clear that market participants are not related parties, the price in a related-party transaction may be used as an input in a fair value measurement if a company has evidence that the transaction was entered into at market terms.

Market participants in the principal (or most advantageous) market should have sufficient knowledge of the asset or liability for which they are transacting. The appropriate level of knowledge does not necessarily need to come from publicly available information but could be obtained in the course of a normal due diligence process.

When determining potential market participants, certain characteristics should be considered, including the legal capability and the operating or financial capacity of an entity to purchase the asset or assume the liability. Market participants must have both the willingness and the ability to transact for the item being measured. For example, when valuing a reporting unit in accordance with ASC 350, the market participants considered in the analysis should be in both a financial and operating position to purchase the reporting unit.

Since the principal (or most advantageous) market is determined from the perspective of the reporting entity, other companies within the reporting entity's industry will often be considered market participants. However, in some instances, market participants may come from other industries, as may be the case when valuing the reporting entity's assets on a standalone basis. For example, a residential real estate development company may be considered a market participant for a piece of land held by a manufacturing company if the highest and best use of the land is deemed to be residential real estate development.

ASC 820 does not require companies to identify actual market participants when measuring fair value. Instead, companies may consider those characteristics that are specific to the types of entities that would generally transact for the asset or liability being measured. Determining these characteristics and how they would affect a fair value measurement requires significant judgment.

## 7.2 Market participant assumptions

ASC 820 specifies that fair value is a market-based measurement, not an entity-specific value. Fair value does not represent the value to one particular market participant, whose assessment of risk, specific synergies, or intended use for an asset may differ from other market participants. For example, if Market Participant A is willing to pay a higher price for an asset than any other market participant due to synergies unique to itself, that asset's fair value would not be based on the price Market Participant A is willing to pay. Rather, fair value would be based on the price that typical market participants would pay for the asset.

The underlying assumptions used in a fair value measurement are driven by the characteristics of the market participants that would transact for the item being measured and the factors those market participants would consider when pricing the asset or liability. Importantly, ASC 820 notes that fair value should be based on assumptions that market participants acting in their "economic best interest" would use when pricing an asset or liability. That is, market participants are assumed to transact in a manner that is consistent with the objective of maximizing the value of their net assets, business enterprise or profits. In certain instances, this may result in market participants considering premiums or discounts (e.g., control premiums or discounts for lack of marketability) when determining the price at which they would transact for a particular asset or liability. Refer to section 13 for additional discussion on the consideration of premiums and discounts in a fair value measurement.

In addition, if market participants would consider adjustments for the inherent risk in an asset or liability, or the risk in the valuation technique used to measure fair value, such risk adjustments should be considered in the fair value assumptions. For example, when measuring the fair value of certain financial instruments, market participants may include adjustments for liquidity, uncertainty and nonperformance risk.

When market observable data is not available, a company may use its own data to develop fair value assumptions. However, such entity-specific data should be adjusted if available information indicates that market participant assumptions would differ from those made by the company. See section 17 on Level 3 inputs for further discussion.

The intended use and assumptions for a nonfinancial asset (or asset group) may differ among market participants. For example, the principal market for a nonfinancial asset may include both strategic and financial buyers. Although both types of buyers would be considered in determining the characteristics of market participants, differences in the indicated values of the asset between these two types of market participants may exist.

The following example from ASC 820 illustrates this point.

### **Excerpt from Accounting Standards Codification**

#### **Fair Value Measurement – Overall**

#### *Implementation Guidance and Illustrations*

#### **Example 1: Highest and Best Use and Valuation Premise**

#### **Case A: Asset Group**

##### **820-10-55-26**

A reporting entity acquires assets and assumes liabilities in a business combination. One of the groups of assets acquired comprises Assets A, B, and C. Asset C is billing software integral to the business developed by the acquired entity for its own use in conjunction with Assets A and B (that is, the related assets). The reporting entity measures the fair value of each of the assets individually, consistent with the specified unit of account for the assets. The reporting entity determines that the highest and best use of the assets is their current use and that each asset would provide maximum value to market participants principally through its use in combination with other assets or with other assets and liabilities (that is, its complementary assets and the associated liabilities). There is no evidence to suggest that the current use of the assets is not their highest and best use.

##### **820-10-55-27**

In this situation, the reporting entity would sell the assets in the market in which it initially acquired the assets (that is, the entry and exit markets from the perspective of the reporting entity are the same). Market participant buyers with whom the reporting entity would enter into a transaction in that market have characteristics that are generally representative of both strategic buyers (such as competitors) and financial buyers (such as private equity or venture capital firms that do not have complementary investments) and include those buyers that initially bid for the assets. Although market participant buyers might be broadly classified as strategic or financial buyers, in many cases there will be differences among the market participant buyers within each of those groups, reflecting, for example, different uses for an asset and different operating strategies.

##### **820-10-55-28**

As discussed below, differences between the indicated fair values of the individual assets relate principally to the use of the assets by those market participants within different asset groups:

- a. Strategic buyer asset group. The reporting entity determines that strategic buyers have related assets that would enhance the value of the group within which the assets would be used (that is, market participant synergies). Those assets include a substitute asset for Asset C (the billing software), which would be used for only a limited transition period and could not be sold on its own at the end of that period. Because strategic buyers have substitute assets, Asset C would not be used for its full remaining economic life. The indicated fair values of Assets A, B, and C within the strategic buyer asset group (reflecting the synergies resulting from the use of the assets within that group) are \$360, \$260, and \$30, respectively. The indicated fair value of the assets as a group within the strategic buyer asset group is \$650.
- b. Financial buyer asset group. The reporting entity determines that financial buyers do not have related or substitute assets that would enhance the value of the group within which the assets would be used. Because financial buyers do not have substitute assets, Asset C (that is, the billing software) would be used for its full remaining economic life. The indicated fair values of Assets A, B, and C within the financial buyer asset group are \$300, \$200, and \$100, respectively. The indicated fair value of the assets as a group within the financial buyer asset group is \$600.

**820-10-55-29**

The fair values of Assets A, B, and C would be determined on the basis of the use of the assets as a group within the strategic buyer group (\$360, \$260, and \$30). Although the use of the assets within the strategic buyer group does not maximize the fair value of each of the assets individually, it maximizes the fair value of the assets as a group (\$650).

In the example above, the valuation premise for Assets A, B and C is based on their use in combination with each other (or with other related assets and liabilities held by or available to market participants), consistent with these assets' highest and best use.<sup>26</sup> The example also illustrates that the principal (or most advantageous) market for an asset group may include different types of market participants (e.g., strategic and financial buyers), who would make different assumptions in pricing the assets.

When there are two or more types of market participants that would transact for the asset or asset group, separate calculations should generally be performed for each type of market participant in order to identify which set of market participants would ultimately be considered in the fair value measurement. These analyses should consider the intended use of the asset and any resulting market participant synergies, including synergies among the assets within the asset group or with other complementary assets and liabilities generally available to market participants. Fair value is measured using assumptions based on those market participants that would maximize the value of the asset group.

In the previous example, strategic buyers are the market participants that would maximize the value of the asset group (i.e., \$650 exceeds the value of the asset group to financial buyers). Consequently, the fair value of the individual assets within the asset grouping would be estimated based on the indicated values related to the market participants with the highest overall value for the asset grouping. In other words, once the assets are appropriately grouped, they should be valued using a consistent set of assumptions (i.e., the assumptions for the same type of market participants and the same related use). As shown in the example, this is true even though the fair value measurement of a specific asset (i.e., Asset C) is deemed to be higher for the financial buyer.

The example also highlights the distinction between the unit of account (i.e., what is being measured and presented for financial reporting purposes) and the valuation premise, which forms the basis of how assets are considered for valuation purposes (i.e., as a group or on a standalone basis). The unit of account may be the individual assets (i.e., Asset A separate from Asset B and Asset C), but the valuation premise considers how Assets A, B and C would provide maximum value to market participants. The fair value of these assets is determined based on the valuation premise (i.e., their use in combination with other assets) and market participant assumptions that maximize the value of the asset group as a whole (i.e., the assumptions consistent with strategic buyers).

This example also highlights the interdependence between key concepts in the fair value framework. As discussed in section 4.2, assessing the interrelationships between highest and best use, valuation premise, exit market and market participants is important when measuring the fair value of nonfinancial assets.

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<sup>26</sup> The concepts of "valuation premise" and "highest and best use" are discussed in section 8.

# 8 Application to nonfinancial assets

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Application to Nonfinancial Assets*

#### *Highest and Best Use for Nonfinancial Assets*

##### **820-10-35-10A**

A fair value measurement of a nonfinancial asset takes into account a market participant's ability to generate economic benefits by using the asset in its **highest and best use** or by selling it to another market participant that would use the asset in its highest and best use.

##### **820-10-35-10B**

The highest and best use of a nonfinancial asset takes into account the use of the asset that is physically possible, legally permissible, and financially feasible, as follows:

- a. A use that is physically possible takes into account the physical characteristics of the asset that market participants would take into account when pricing the asset (for example, the location or size of a property).
- b. A use that is legally permissible takes into account any legal restrictions on the use of the asset that market participants would take into account when pricing the asset (for example, the zoning regulations applicable to a property).
- c. A use that is financially feasible takes into account whether a use of the asset that is physically possible and legally permissible generates adequate income or cash flows (taking into account the costs of converting the asset to that use) to produce an investment return that market participants would require from an investment in that asset put to that use.

##### **820-10-35-10C**

Highest and best use is determined from the perspective of market participants, even if the reporting entity intends a different use. However, a reporting entity's current use of a nonfinancial asset is presumed to be its highest and best use unless market or other factors suggest that a different use by market participants would maximize the value of the asset.

##### **820-10-35-10D**

To protect its competitive position, or for other reasons, a reporting entity may intend not to use an acquired nonfinancial asset actively, or it may intend not to use the asset according to its highest and best use. For example, that might be the case for an acquired intangible asset that the reporting entity plans to use defensively by preventing others from using it. Nevertheless, the reporting entity shall measure the fair value of a nonfinancial asset assuming its highest and best use by market participants.

### **Valuation Premise for Nonfinancial Assets**

#### **820-10-35-10E**

The highest and best use of a nonfinancial asset establishes the valuation premise used to measure the fair value of the asset, as follows:

- a. The highest and best use of a nonfinancial asset might provide maximum value to market participants through its use in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (for example, a business).
  1. If the highest and best use of the asset is to use the asset in combination with other assets or with other assets and liabilities, the fair value of the asset is the price that would be received in a current transaction to sell the asset assuming that the asset would be used with other assets or with other assets and liabilities and that those assets and liabilities (that is, its complementary assets and the associated liabilities) would be available to market participants.
  2. Liabilities associated with the asset and with the complementary assets include liabilities that fund working capital, but do not include liabilities used to fund assets other than those within the group of assets.
  3. Assumptions about the highest and best use of a nonfinancial asset shall be consistent for all of the assets (for which highest and best use is relevant) of the group of assets or the group of assets and liabilities within which the asset would be used.
- b. The highest and best use of a nonfinancial asset might provide maximum value to market participants on a standalone basis. If the highest and best use of the asset is to use it on a standalone basis, the fair value of the asset is the price that would be received in a current transaction to sell the asset to market participants that would use the asset on a standalone basis.

#### **820-10-35-11A**

The fair value measurement of a nonfinancial asset assumes that the asset is sold consistent with the unit of account specified in other Topics (which may be an individual asset). That is the case even when that fair value measurement assumes that the highest and best use of the asset is to use it in combination with other assets or with other assets and liabilities because a fair value measurement assumes that the market participant already holds the complementary assets and associated liabilities.

## **8.1 Highest and best use**

Highest and best use is a valuation concept that considers how market participants would use a nonfinancial asset to maximize its benefit or value. The maximum value of a nonfinancial asset to market participants may come from its use (1) in combination with other assets or with other assets and liabilities (formerly referred to as the “in-use” valuation premise) or (2) on a standalone basis (formerly referred to as the “in-exchange” premise).

In determining the highest and best use of a nonfinancial asset, ASC 820 indicates uses that are physically possible, legally permissible and financially feasible should be considered. As such, when assessing alternative uses, companies should consider the physical characteristics of the asset, any legal restrictions on its use and whether the value generated provides an adequate investment return for market participants.

Based on discussions between the Valuation Resource Group (VRG)<sup>27</sup> and the FASB staff, we do not believe the legally permissible criterion is meant to imply that an alternative use of the nonfinancial asset must be legally approved as of the measurement date. Instead, market participants would consider all relevant factors, as they exist at the measurement date, in determining whether a legally permissible use of the nonfinancial asset may be something other than its current use. That is, market participants would consider the probability, extent and timing of different types of approvals that may be required in assessing whether a change in the legal use of the nonfinancial asset could be obtained. Provided there is evidence to support these assertions, alternative uses that would enable market participants to maximize value should be considered, but a search for potential alternative uses need not be exhaustive.<sup>28</sup> In addition, any costs to transform the nonfinancial asset (e.g., obtaining a new zoning permit or converting the asset to the alternative use) and profit expectations from a market participant's perspective are also considered in the fair value measurement.

The concepts of highest and best use and valuation premise are applicable only when measuring the fair value of nonfinancial assets. The Board indicated that the concepts of highest and best use and valuation premise are not relevant when measuring the fair value of financial assets or any liabilities because:

- ▶ Financial assets have specific contractual terms; they do not have alternative uses. Changing the characteristics of the financial asset (i.e., changing the contractual terms) causes the item to become a different asset and the objective of a fair value measurement is to measure the asset as it exists as of the measurement date.
- ▶ The different ways by which an entity may relieve itself of a liability are not alternative uses. In addition, entity-specific advantages (or disadvantages) that enable a company to fulfill a liability more or less efficiently than other market participants are not considered in a fair value measurement.
- ▶ The concepts of highest and best use and valuation premise were developed within the valuation profession to value nonfinancial assets, such as land.

### 8.1.1 Highest and best use versus current use

Companies should consider alternative uses of an asset in their determination of fair value. A company's current or intended use of a nonfinancial asset might not be the highest and best use of the asset, and thus does not determine its premise of value. Instead, the highest and best use of the asset (or asset group) should be determined based on how market participants would maximize the asset's value.

For example, market participants may maximize the value of land, currently used as a site for a manufacturing facility, for residential housing instead. However, companies should have evidence to support an assumption that market participants would use the asset in this manner. ASC 820 indicates that absent factors suggesting an alternative use by market participants to maximize its value, the current use of the asset is presumed to be its highest and best use. As such, the consideration of alternative uses is not intended to be exhaustive.

It is important to note that even if the current use of a nonfinancial asset is the same as its highest and best use, the underlying assumptions used to value the asset should not be entity-specific, but instead should be based on the perspective of market participants. Entity-specific synergies, if they would differ from market participant synergies, would not be considered in the determination of the highest and best use of the asset.

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<sup>27</sup> The FASB's Valuation Resource Group was a group of valuation and accounting professionals who provided the FASB staff and Board with information on implementation issues surrounding fair value measurements used for financial statement reporting purposes.

<sup>28</sup> Refer to Question IA.5-5 in Industry Appendix 5 on fair value measurement considerations relating to the real estate industry for additional discussion on the application of the term "legally permissible" in the context of real estate assets.

The following example illustrates the concept of highest and best use and how a fair value measurement may require consideration of alternative uses for an asset.

**Illustration 8.1-1: Illustrative example of highest and best use**

A company acquires land in a business combination that is currently developed for industrial use as a site for a factory. This use of the land is presumed to be its highest and best use unless market or other factors suggest a different use.

In this instance, nearby sites have recently been developed for residential use as sites for high-rise apartment buildings. On the basis of that development, recent zoning and other changes to facilitate that development, the company determines that the land currently used as a site for a factory could be developed as a site for residential use (e.g., for high-rise apartment buildings).

Because market participants would take into account the potential to develop the site for residential use when pricing the land, the highest and best use of the land would be determined by comparing the following:

- ▶ The value of the land as currently developed for industrial use (i.e., the land would be used in combination with other assets, such as the factory, or with other assets and liabilities)
- ▶ The value of the land as a vacant site for residential use, taking into account the costs of demolishing the factory and other costs (including the uncertainty about whether the reporting entity would be able to convert the asset to the alternative use) necessary to convert the land to a vacant site (i.e., the land would be used by market participants on a standalone basis)

While the company may intend to continue to use the land as part of its factory operations, given the market conditions, the highest and best use of the land may be as a residential development. As such, the company should consider both scenarios to determine which premise of value achieves the maximum benefit to market participants.

## 8.2 Valuation premise – in combination with other assets and/or liabilities

Market participants may maximize the value of an asset (or group of assets) by using the asset in combination with other assets or with other assets and liabilities. When considering this valuation premise, ASC 820 clarifies that the fair value of the asset would be measured from the perspective of market participants who are presumed to hold the complementary assets and liabilities.

To illustrate, assume that machinery is customized and installed as part of an operating line. A fair value measurement would consider the customization and installation of the asset (or asset group) and reflect these attributes. That is, the value of the machinery would be determined based on its use in combination with other assets on the operating line and would consider the current condition and location of the assets (i.e., the fact that the machinery is customized, installed and configured for use).

In this example, because the highest and best use (and thus the fair value) of the machinery on the operating line is determined to be in combination with other assets, the other assets in the asset group (i.e., the other equipment on the operating line) should also be valued using the same valuation premise. That is, each of the assets in the asset group should be valued using the same premise of value. As highlighted by the illustrative example in section 7.2, the same valuation premise should be used for each asset, regardless of whether any individual asset within the group would have a higher value under another premise.

In addition, the fair value measurement of a nonfinancial asset assumes the asset is sold consistent with its unit of account, irrespective of its valuation premise. As such, when the highest and best use of a nonfinancial asset is through its use with other assets (but the unit of account is the individual asset), a fair value measurement contemplates the sale of the individual asset to market participants that already

hold the complementary assets. Only when the unit of account of the item being measured at fair value is an asset group (as may be the case when measuring long-lived assets for impairment) should the sale of the assets as a group be considered.

The effect of a nonfinancial asset's valuation premise on a fair value measurement varies based on the facts and circumstances. ASC 820-10-55-3 describes how the fair value of a nonfinancial asset would be determined based on its use in combination with other assets or with other assets and liabilities as follows:

### **Excerpt from Accounting Standards Codification**

#### **Fair Value Measurement – Overall**

#### *Implementation Guidance and Illustrations*

#### *Valuation Premise for Nonfinancial Assets*

#### **820-10-55-3**

When measuring the fair value of a nonfinancial asset used in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (for example, a business), the effect of the valuation premise depends on the circumstances. For example:

- a. The fair value of the asset might be the same whether the asset is used on a standalone basis or in combination with other assets or with other assets and liabilities. That might be the case if the asset is a business that market participants would continue to operate. In that case, the transaction would involve valuing the business in its entirety. The use of the assets as a group in an ongoing business would generate synergies that would be available to market participants (that is, market participant synergies that, therefore, should affect the fair value of the asset on either a standalone basis or in combination with other assets or with other assets and liabilities).
- b. An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through adjustments to the value of the asset used on a standalone basis. That might be the case if the asset is a machine and the fair value measurement is determined using an observed price for a similar machine (not installed or otherwise configured for use), adjusted for transportation and installation costs so that the fair value measurement reflects the current condition and location of the machine (installed and configured for use).
- c. An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through the market participant assumptions used to measure the fair value of the asset. For example, if the asset is work-in-process inventory that is unique and market participants would convert the inventory into finished goods, the fair value of the inventory would assume that market participants have acquired or would acquire any specialized machinery necessary to convert the inventory into finished goods.
- d. An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the valuation technique used to measure the fair value of the asset. That might be the case when using the multiperiod excess earnings method to measure the fair value of an intangible asset because that valuation technique specifically takes into account the contribution of any complementary assets and the associated liabilities in the group in which such an intangible asset would be used.
- e. In more limited situations, when a reporting entity uses an asset within a group of assets, the reporting entity might measure the asset at an amount that approximates its fair value when allocating the fair value of the asset group to the individual assets of the group. That might be the case if the valuation involves real property and the fair value of improved property (that is, an asset group) is allocated to its component assets (such as land and improvements).

Although the approach used to incorporate the valuation premise into a fair value measurement may differ based on the facts and circumstances, the determination of a nonfinancial asset's valuation premise (based on its highest and best use) and the inputs applied in the valuation technique used to estimate fair value should always be considered from the perspective of market participants, not the reporting entity.

### 8.3 Valuation premise – standalone basis

If a nonfinancial asset provides maximum value to market participants on a standalone basis, its fair value is determined individually. In addition, the asset should be measured based only on its current characteristics, potentially requiring an adjustment for transformation costs. For example, if land that is used as a factory site is to be valued on a standalone basis, transformation costs (e.g., the cost of removing the factory) should be considered in the fair value measurement.

When the valuation premise of one nonfinancial asset in an asset group is valued on a standalone basis, all of the other assets in the group should also be valued using a consistent valuation premise. For example, based on the illustrative example in section 8.1.1, if the highest and best use of the land is determined to be on a standalone basis (i.e., as vacant land), the fair value of the equipment in the factory could be determined under two alternative valuation premises: (1) standalone (i.e., the value of the equipment sold on a standalone basis) or (2) in conjunction with other equipment on the operating line, but in a different factory. Regardless of the valuation premise used to measure the equipment, market participant assumptions regarding the cost of redeployment, such as costs for disassembling, transporting and reinstalling the equipment should be considered in the fair value measurement.

### 8.4 Defensive value

In certain instances, the highest and best use of an asset may be to not actively use it, but instead to lock it up or shelve it. That is, the maximum value provided by an asset may be its defensive value. ASC 820 clarifies that the fair value of an asset used defensively is not assumed to be zero or a nominal amount. Instead, one should consider the incremental value such a use provides to the assets being protected, such as the incremental value provided to a company's existing brand name by acquiring and shelving a competing brand. Generally speaking, a nominal fair value is appropriate only when an asset is abandoned (i.e., when a company would be willing to give the asset away for no consideration).

Importantly, a company's decision to use an asset defensively does not mean that market participants would necessarily maximize the asset's value in a similar manner. Likewise, a company's decision to actively use an asset does not preclude its highest and best use to market participants as being defensive in nature. The following example in ASC 820 illustrates these points.

#### **Excerpt from Accounting Standards Codification**

##### **Fair Value Measurement – Overall**

##### *Implementation Guidance and Illustrations*

##### *Example 1: Highest and Best Use and Valuation Premise*

##### *Case C: In-Process Research and Development Project*

##### **820-10-55-32**

A reporting entity acquires an in-process research and development project in a business combination. The reporting entity does not intend to complete the project. If completed, the project would compete with one of its own projects (to provide the next generation of the reporting entity's commercialized technology). Instead, the reporting entity intends to hold (that is, lock up) the project to prevent its competitors from obtaining access to the technology. In doing this, the project is expected to provide

defensive value, principally by improving the prospects for the reporting entity's own competing technology. To measure the fair value of the project at initial recognition, the highest and best use of the project would be determined on the basis of its use by market participants. For example:

- a. The highest and best use of the in-process research and development project would be to continue development if market participants would continue to develop the project and that use would maximize the value of the group of assets or of assets and liabilities in which the project would be used (that is, the asset would be used in combination with other assets or with other assets and liabilities). That might be the case if market participants do not have similar technology, either in development or commercialized. The fair value of the project would be measured on the basis of the price that would be received in a current transaction to sell the project, assuming that the in-process research and development would be used with its complementary assets and the associated liabilities and that those assets and liabilities would be available to market participants.
- b. The highest and best use of the in-process research and development project would be to cease development if, for competitive reasons, market participants would lock up the project and that use would maximize the value of the group of assets or of assets and liabilities in which the project would be used. That might be the case if market participants have technology in a more advanced stage of development that would compete with the project if completed and the project would be expected to improve the prospects for their own competing technology if locked up. The fair value of the project would be measured on the basis of the price that would be received in a current transaction to sell the project, assuming that the in-process research and development would be used (that is, locked up) with its complementary assets and the associated liabilities and that those assets and liabilities would be available to market participants.
- c. The highest and best use of the in-process research and development project would be to cease development if market participants would discontinue its development. That might be the case if the project is not expected to provide a market rate of return if completed and would not otherwise provide defensive value if locked up. The fair value of the project would be measured on the basis of the price that would be received in a current transaction to sell the project on its own (which might be zero).

The fair value of the in-process research and development project in the above example depends on whether market participants would use the asset offensively, defensively or abandon it (as illustrated by points a, b and c in the example, respectively). If there are multiple types of market participants who would use the asset differently, these alternative scenarios must be considered before concluding on the asset's highest and best use.<sup>29</sup>

As previously noted, while applying the fair value framework may be straightforward in many situations, in other instances, an iterative process may be needed to consistently apply the various components. This may be required due to the interdependence among several key concepts in ASC 820's fair value framework. For example, the highest and best use of a nonfinancial asset determines its valuation premise and affects the identification of the appropriate market participants. Likewise, the determination of the principal (or most advantageous) market can be important in determining the highest and best use of a nonfinancial asset.

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<sup>29</sup> The AICPA's Accounting and Valuation Guide, "Assets Acquired to Be Used in Research and Development Activities," provides non-authoritative accounting and valuation guidance related to in-process research and development assets acquired in a business combination or asset acquisition.

## Questions and interpretive responses

### Question 8.2-1 How should complementary liabilities be considered when measuring the fair value of a nonfinancial asset?

ASC 820 indicates that in certain circumstances the highest and best use of a nonfinancial asset may be based on its use in combination with other assets and liabilities but provides limited guidance on the types of liabilities that could be considered complementary to a nonfinancial asset.

ASC 820-10-35-10E(a)(2) states that liabilities associated with a nonfinancial asset (and any related complementary assets) would include liabilities that fund working capital but not liabilities used to fund any assets outside of the group of assets to be used in combination with one another. ASC 820-10-55-3(d) notes that an asset's use in combination with other assets and liabilities might be incorporated when using the multiperiod excess earnings method to measure the fair value of an intangible asset that has been acquired in a business acquisition. The multiperiod excess earnings method specifically takes into account the contribution of any complementary assets and the associated liabilities in the group in which such an intangible asset would be used.

In our view, the clarification on considering corresponding liabilities when measuring the fair value of nonfinancial assets was generally intended to align the guidance in ASC 820 with current practice for measuring the fair value of certain nonfinancial assets (e.g., intangible assets) where a contributory charge is taken for working capital. We generally would not expect this clarification to result in significant changes to the valuation of most nonfinancial assets. For example, we believe that real estate should generally be valued independently from any debt used to finance the property. As a result, the fair value of real estate may be lower than the par value of any nonrecourse debt used to fund the real estate. (Refer to Industry Appendix 5 for additional discussion on fair value measurement considerations related to the real estate industry.)

### Question 8.4-1 How does the concept of defensive value affect the measurement of intangible assets acquired in a business combination accounted for in accordance with ASC 805?

An intangible asset acquired in a business combination that an entity does not intend to actively use, develop or exploit, but intends to retain to prevent competitors from gaining access, is commonly referred to as a defensive intangible asset (also referred to as a "locked-up asset"). These assets could include those that the acquirer will never use actively as well as assets that will be used by the acquirer during a transition period when the acquirer intends to discontinue the use of those assets.<sup>30</sup>

ASC 820's fair value framework is based on the consideration of market participant assumptions and the highest and best use of the asset. Accordingly, unless the asset would be immediately abandoned by market participants, its fair value will likely not be zero. Even if it is determined that market participants would also use the asset in a defensive manner (e.g., they would shelve it), the asset would likely still have value because, while not used actively, the asset would likely contribute to an increase in the value of other assets owned by market participants.

<sup>30</sup> Refer to our FRDs, *Business combinations* and *Intangibles – Goodwill and other*, for additional discussion on the subsequent accounting for defensive intangible assets acquired in a business combination.

# 9 Application to liabilities and instruments classified in a reporting entity's shareholders' equity

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Application to Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity*

##### *General Principles*

###### **820-10-35-16**

A fair value measurement assumes that a financial or nonfinancial liability or an instrument classified in a reporting entity's shareholders' equity (for example, equity interests issued as consideration in a business combination) is transferred to a market participant at the measurement date. The transfer of a liability or an instrument classified in a reporting entity's shareholders' equity assumes the following:

- a. Subparagraph superseded by Accounting Standards Update No. 2011-04.
- b. A liability would remain outstanding and the market participant transferee would be required to fulfill the obligation. The liability would not be settled with the counterparty or otherwise extinguished on the measurement date.
- c. An instrument classified in a reporting entity's shareholders' equity would remain outstanding and the market participant transferee would take on the rights and responsibilities associated with the instrument. The instrument would not be cancelled or otherwise extinguished on the measurement date.

###### **820-10-35-16A**

Even when there is no observable market to provide pricing information about the transfer of a liability or an instrument classified in a reporting entity's shareholders' equity (for example, because contractual or other legal restrictions prevent the transfer of such items), there might be an observable market for such items if they are held by other parties as assets (for example, a corporate bond or a call option on a reporting entity's shares).

###### **820-10-35-16AA**

In all cases, a reporting entity shall maximize the use of relevant **observable inputs** and minimize the use of **unobservable inputs** to meet the objective of a fair value measurement, which is to estimate the price at which an orderly transaction to transfer the liability or instrument classified in shareholders' equity would take place between market participants at the measurement date under current market conditions.

##### *Implementation Guidance and Illustrations*

###### *Example 7: Measuring Liabilities*

###### **820-10-55-55A**

A fair value measurement of a liability assumes that the liability, whether it is a financial liability or a nonfinancial liability, is transferred to a market participant at the measurement date (that is, the liability would remain outstanding and the market participant transferee would be required to fulfill the obligation; it would not be settled with the counterparty or otherwise extinguished on the measurement date).

**820-10-55-56**

The fair value of a liability reflects the effect of nonperformance risk. Nonperformance risk relating to a liability includes, but may not be limited to, the reporting entity's own credit risk. A reporting entity takes into account the effect of its credit risk (credit standing) on the fair value of the liability in all periods in which the liability is measured at fair value because those that hold the reporting entity's obligations as assets would take into account the effect of the reporting entity's credit standing when estimating the prices they would be willing to pay. Cases A-E illustrate the measurement of liabilities and the effect of nonperformance risk (including a reporting entity's own credit risk) on a fair value measurement.

## 9.1 Fair value of a liability

ASC 820 clarifies that the fair value measurement of a liability contemplates the transfer of the liability to a market participant at the measurement date.<sup>31</sup> The liability is assumed to continue (i.e., it is not settled or extinguished), and the market participant to whom the liability is transferred would be required to fulfill the obligation. ASC 820 also indicates that nonperformance risk<sup>32</sup> remains unchanged before and after the transfer, implying that the liability is hypothetically transferred to a market participant of equal credit standing.

The clarification that fair value is not based on the price to settle a liability with the existing counterparty, but rather to transfer it to a market participant of equal credit standing, affects the assumptions about the principal (or most advantageous) market and the market participants in the exit market for the liability. (Refer to Question 9.1-1 for further detail on the distinction between the settlement notion for liabilities and the transfer notion in ASC 820.)

### 9.1.1 Use of a corresponding asset to measure a liability (updated September 2022)



#### **FASB amendment**

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

<sup>31</sup> ASC 820 defines the fair value of a liability as the price that would be paid to transfer the liability in an orderly transaction between market participants at the measurement date.

<sup>32</sup> "Nonperformance risk" is the risk that an obligation will not be fulfilled. This risk includes, but is not limited to, a reporting entity's own credit risk.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Application to Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity*

#### *Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity Held by Other Parties as Assets*

##### **820-10-35-16B**

When a quoted price for the transfer of an identical or a similar liability or instrument classified in a reporting entity's shareholders' equity is not available and the identical item is held by another party as an asset, a reporting entity shall measure the fair value of the liability or equity instrument from the perspective of a market participant that holds the identical item as an asset at the measurement date.

##### **820-10-35-16BB**

In such cases, a reporting entity shall measure the fair value of the liability or equity instrument as follows:

- a. Using the quoted price in an active market for the identical item held by another party as an asset, if that price is available
- b. If that price is not available, using other observable inputs, such as the quoted price in a market that is not active for the identical item held by another party as an asset
- c. If the observable prices in (a) and (b) are not available, using another valuation approach, such as:
  1. An income approach (for example, a present value technique that takes into account the future cash flows that a market participant would expect to receive from holding the liability or equity instrument as an asset; see paragraph 820-10-55-3F)
  2. A market approach (for example, using quoted prices for similar liabilities or instruments classified in shareholders' equity held by other parties as assets; see paragraph 820-10-55-3A).

##### **820-10-35-16C**

Paragraph superseded by Accounting Standards Updates No. 2011-04.

##### **820-10-35-16D**

When measuring the fair value of a liability or an equity instrument held by another party as an asset, a reporting entity shall adjust the quoted price of the asset only if there are factors specific to the asset that are not applicable to the fair value measurement of the liability or equity instrument. When the asset held by another party includes a characteristic restricting its sale, the fair value of the corresponding liability or equity instrument also would include the effect of the restriction. Some factors that may indicate that the quoted price of the asset should be adjusted include the following:

- a. The quoted price for the asset relates to a similar (but not identical) liability or equity instrument held by another party as an asset. For example, the liability or equity instrument may have a particular characteristic (for example, the credit quality of the issuer) that is different from that reflected in the fair value of the similar liability or equity instrument held as an asset.
- b. The unit of account for the asset is not the same as for the liability or equity instrument. For example, for liabilities, in some cases the price for an asset reflects a combined price for a package comprising both the amounts due from the issuer and a third-party credit enhancement. If the unit of account for the liability is not for the combined package, the objective is to measure the fair value of the issuer's liability, not the fair value of the combined package. Thus, in such cases, the reporting entity would adjust the observed price for the asset to exclude the effect of the third-party credit enhancement. See paragraph 820-10-35-18A for further guidance.

**Pending Content:**

**Transition Date:** (P) December 16, 2023; (N) December 16, 2024 | **Transition Guidance:** 820-10-65-13

When measuring the fair value of a liability or an equity instrument held by another party as an asset, a reporting entity shall adjust the quoted price of the asset only if there are factors specific to the asset that are not applicable to the fair value measurement of the liability or equity instrument. When the asset held by another party includes a characteristic restricting its sale, (see paragraphs 820-10-35-6B and 820-10-35-36B), the fair value of the corresponding liability or equity instrument also would include the effect of the restriction. Some factors that may indicate that the quoted price of the asset should be adjusted include the following:

- a. The quoted price for the asset relates to a similar (but not identical) liability or equity instrument held by another party as an asset. For example, the liability or equity instrument may have a particular characteristic (for example, the credit quality of the issuer) that is different from that reflected in the fair value of the similar liability or equity instrument held as an asset.
- b. The unit of account for the asset is not the same as for the liability or equity instrument. For example, for liabilities, in some cases the price for an asset reflects a combined price for a package comprising both the amounts due from the issuer and a third-party credit enhancement. If the unit of account for the liability is not for the combined package, the objective is to measure the fair value of the issuer's liability, not the fair value of the combined package. Thus, in such cases, the reporting entity would adjust the observed price for the asset to exclude the effect of the third-party credit enhancement. See paragraph 820-10-35-18A for further guidance.

In most instances, a quoted price for the liability being measured will not be available, as liabilities are generally not transferred. Absent a quoted price for an identical or similar liability, ASC 820 indicates the fair value of a liability should be measured from the perspective of a market participant that holds the identical instrument as an asset at the measurement date. This approach applies even when the identical item held as an asset is not traded (i.e., when the fair value of the corresponding asset is a Level 3 measurement), as discussed in more detail below.

As with all fair value measurements, inputs used to determine the fair value of a liability from the perspective of a market participant that holds the identical instrument as an asset must be prioritized in accordance with the fair value hierarchy. Accordingly, ASC 820 indicates that the fair value of a liability held by another party as an asset should be determined based on the quoted price of the corresponding asset in an active market, if available. If such a price is not available, other observable inputs for the identical asset would be used, such as a quoted price in an inactive market. Absent quoted prices for the identical instrument held as an asset, other valuation approaches, including the income or market approaches, would be used to determine the liability's fair value. In these instances, the objective is still to determine the fair value of the liability from the perspective of a market participant that holds the identical instrument as an asset. When the asset held by another party includes a characteristic restricting its sale, the fair value of the corresponding liability or equity instrument also would include the effect of the restriction. Refer to section 5.2.1 for further discussion of restrictions on assets before the adoption of ASU 2022-03 and section 5.2.1A for further discussion of restrictions on assets after the adoption of ASU 2022-03.

In some instances, the corresponding asset price may need to be adjusted for factors specific to the identical item held as an asset but not applicable to the liability. Factors that may indicate an adjustment to the quoted price of an asset should be made include the following:

- ▶ The characteristics of the asset differ from the characteristics of the liability being measured (e.g., the credit quality of the liability may be different from that of a similar but not identical corresponding asset used in the market approach)

- ▶ The asset and liability are deemed to have different units of account (e.g., the quoted price of the asset includes the effect of a third-party credit enhancement<sup>33</sup> as described in ASC 820-10-35-18A)

The fair value of a liability may also differ from the price of its corresponding asset when the instrument is priced within a bid-ask spread. In these instances, the liability should be valued based on the price within the bid-ask spread that is most representative of where liability would be exited, not the corresponding asset. (Refer to section 13.3 for additional detail on pricing within the bid-ask spread.)

The following two examples extracted from ASC 820-10-55-82 include considerations when using the quoted price of an identical (or similar) liability held by another party as an asset to estimate the fair value of a liability.

The first example highlights how companies need to assess whether the quoted price for a corresponding asset includes the effects of factors not applicable to the liability. However, for simplicity purposes, this example does not consider bid-ask spread considerations.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### Example 7: Measuring Liabilities

#### Case D: Debt Obligation—Quoted Price

#### 820-10-55-82

On January 1, 20X1, Entity B issues at par a \$2 million BBB-rated exchange-traded 5-year fixed-rate debt instrument with an annual 10 percent coupon. Entity B has elected to account for this instrument using the fair value option.

#### 820-10-55-83

On December 31, 20X1, the instrument is trading as an asset in an active market at \$929 per \$1,000 of par value after payment of accrued interest. Entity B uses the quoted price of the asset in an active market as its initial input into the fair value measurement of its liability ( $\$929 \times [\$2 \text{ million} \div \$1,000] = \$1,858,000$ ).

#### 820-10-55-84

In determining whether the quoted price of the asset in an active market represents the fair value of the liability, Entity B evaluates whether the quoted price of the asset includes the effect of factors not applicable to the fair value measurement of a liability, for example, whether the quoted price of the asset includes the effect of a third-party credit enhancement that would be separately accounted for from the perspective of the issuer. Entity B determines that no adjustments are required to the quoted price of the asset. Accordingly, Entity B concludes that the fair value of its debt instrument at December 31, 20X1, is \$1,858,000. Entity B categorizes and discloses the fair value measurement of its debt instrument within Level 1 of the fair value hierarchy.

The second example provides factors that would be incorporated when using a present value technique to estimate the fair value of a financial liability (e.g., changes in credit spreads for the liability) as well as factors that would be excluded (e.g., adjustments related to transferability restrictions on the liability or profit margin).

<sup>33</sup> Refer to section 9.2.2 for further discussion on the impact of third-party credit enhancements on the fair value of a liability.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Example 7: Measuring Liabilities*

##### *Case E: Debt Obligation—Present Value Technique*

#### **820-10-55-85**

On January 1, 20X1, Entity C issues at par in a private placement a \$2 million BBB-rated 5-year fixed-rate debt instrument with an annual 10 percent coupon. Entity C has elected to account for this instrument using the fair value option.

#### **820-10-55-86**

At December 31, 20X1, Entity C still carries a BBB credit rating. Market conditions, including available interest rates, credit spreads for a BBB-quality credit rating and liquidity, remain unchanged from the date the debt instrument was issued. However, Entity C's credit spread has deteriorated by 50 basis points because of a change in its risk of nonperformance. After taking into account all market conditions, Entity C concludes that if it was to issue the instrument at the measurement date, the instrument would bear a rate of interest of 10.5 percent or Entity C would receive less than par in proceeds from the issue of the instrument.

#### **820-10-55-87**

For the purpose of this example, the fair value of Entity C's liability is calculated using a present value technique. Entity C concludes that a market participant would use all of the following inputs (consistent with paragraph 820-10-55-5) when estimating the price the market participant would expect to receive to assume Entity C's obligation:

- a. The terms of the debt instrument, including all of the following:
  1. Coupon rate of 10 percent
  2. Principal amount of \$2 million
  3. Term of 4 years.
- b. The market rate of interest of 10.5 percent (which includes a change of 50 basis points in the risk of nonperformance from the date of issue).

#### **820-10-55-88**

On the basis of its present value technique, Entity C concludes that the fair value of its liability at December 31, 20X1, is \$1,968,641.

#### **820-10-55-89**

Entity C does not include any additional input into its present value technique for risk or profit that a market participant might require for compensation for assuming the liability. Because Entity C's obligation is a financial liability, Entity C concludes that the interest rate already captures the risk or profit that a market participant would require as compensation for assuming the liability. Furthermore, Entity C does not adjust its present value technique for the existence of a restriction preventing it from transferring the liability.

While the example above assumes that relevant market data related to the nonperformance risk of the debt obligation is readily available, estimating the appropriate credit spreads to apply can be the most challenging aspect of using a present value technique to value a debt instrument. Credit spreads on identical or similar liabilities issued by the same obligor represent high quality market data. But even when issued by the same obligor, credit spreads on liabilities with significantly different features or characteristics may not appropriately capture the credit risk of the liability being measured. When spreads on identical instruments do not exist and data from comparable debt instruments (e.g., option adjusted spreads or OAS) is used, the specific characteristics of these comparable liabilities (e.g., tenor, seniority, collateral, coupon, principal amortization, covenant strength, etc.) should be analyzed carefully. In addition, credit default swap (CDS) spreads, which represent the compensation required by the CDS issuer to accept the default risk of a debt issuer (i.e., the reference obligor), may also provide useful market data.

In some instances, observable market data is not available for a specific debt issuer, but the issuer has a reported credit rating. In these circumstances, credit spreads or CDS spreads of similarly rated companies or debt instruments may be used as a proxy to evaluate the credit risk of the liability being measured. Once again, the specific characteristics of these similar debt instruments and the subject liability need to be assessed.

Other situations may involve a liability with no observable credit quality measures (e.g., credit spreads) issued by a company that is not rated. In these circumstances, techniques such as a regression or other quantitative analysis may be performed to determine the credit quality of the issuer. Comparing financial metrics such as profit margins, leverage ratios, and asset sizes between the non-rated issuer of the liability being measured to rated companies may allow a credit rating to be estimated. Once a credit rating has been determined, an appropriate credit spread could be quantified from other comparable (i.e., similarly rated) debt instruments.

## 9.1.2

### Liabilities not held by other parties as an asset

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Application to Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity*

##### *Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity Not Held by Other Parties as Assets*

##### **820-10-35-16H**

When a quoted price for the transfer of an identical or a similar liability or instrument classified in a reporting entity's shareholders' equity is not available and the identical item is not held by another party as an asset, a reporting entity shall measure the fair value of the liability or equity instrument using a valuation technique from the perspective of a market participant that owes the liability or has issued the claim on equity.

##### **820-10-35-16I**

For example, when applying a present value technique, a reporting entity might take into account either of the following:

- a. The future cash outflows that a market participant would expect to incur in fulfilling the obligation, including the compensation that a market participant would require for taking on the obligation (see paragraphs 820-10-35-16J through 35-16K).
- b. The amount that a market participant would receive to enter into or issue an identical liability or equity instrument, using the assumptions that market participants would use when pricing the identical item (for example, having the same credit characteristics) in the principal (or most advantageous) market for issuing a liability or an equity instrument with the same contractual terms.

**820-10-35-16J**

When using a present value technique to measure the fair value of a liability that is not held by another party as an asset (for example, an asset retirement obligation), a reporting entity shall, among other things, estimate the future cash outflows that market participants would expect to incur in fulfilling the obligation. Those future cash outflows shall include market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the obligation. Such compensation includes the return that a market participant would require for the following:

- a. Undertaking the activity (that is, the value of fulfilling the obligation—for example, by using resources that could be used for other activities)
- b. Assuming the risk associated with the obligation (that is, a **risk premium** that reflects the risk that the actual cash outflows might differ from the expected cash outflows; see paragraph 820-10-35-16L).

**820-10-35-16K**

For example, a nonfinancial liability does not contain a contractual rate of return and there is no observable market yield for that liability. In some cases, the components of the return that market participants would require will be indistinguishable from one another (for example, when using the price a third-party contractor would charge on a fixed-fee basis). In other cases, a reporting entity needs to estimate those components separately (for example, when using the price a third-party contractor would charge on a cost-plus basis because the contractor in that case would not bear the risk of future changes in costs).

**820-10-35-16L**

A reporting entity can include a risk premium in the fair value measurement of a liability or an instrument classified in a reporting entity's shareholders' equity that is not held by another party as an asset in one of the following ways:

- a. By adjusting the cash flows (that is, as an increase in the amount of cash outflows)
- b. By adjusting the rate used to discount the future cash flows to their present values (that is, as a reduction in the discount rate).

A reporting entity shall ensure that it does not double count or omit adjustments for risk. For example, if the estimated cash flows are increased to take into account the compensation for assuming the risk associated with the obligation, the discount rate should not be adjusted to reflect that risk.

While many liabilities are held by market participants as corresponding assets, some are not. For example, there is typically no corresponding asset holder for an ARO. When no observable price is available for the liability and no corresponding asset exists, the fair value of the liability is measured from the perspective of a market participant that owes the liability, using an appropriate valuation technique (e.g., a present value technique). ASC 820-10-35-16J indicates that when using a present value technique to value such liabilities, a reporting entity should estimate the future cash outflow market participants would expect to incur, which should include market participants' expectations about the costs of fulfilling the obligation and the compensation they would require for taking on the obligation (undertaking the activity and assuming the risk associated with the obligation).

ASC 820 provides the following example that illustrates how these considerations would be captured when using a valuation technique to measure the fair value of a liability not held by another party as an asset.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### Example 7: Measuring Liabilities

##### Case C: Asset Retirement Obligation

##### 820-10-55-77

On January 1, 20X1, Entity A assumes an asset retirement obligation in a business combination. The reporting entity is legally required to dismantle and remove an offshore oil platform at the end of its useful life, which is estimated to be 10 years.

##### 820-10-55-78

On the basis of paragraph 410-20-30-1, Entity A uses the expected present value technique to measure the fair value of the asset retirement obligation.

##### 820-10-55-79

If Entity A was contractually allowed to transfer its asset retirement obligation to a market participant, Entity A concludes that a market participant would use all of the following inputs, probability-weighted as appropriate, when estimating the price it would expect to receive:

- a. Labor costs
- b. Allocation of overhead costs
- c. The compensation that a market participant would require for undertaking the activity and for assuming the risk associated with the obligation to dismantle and remove the asset. Such compensation includes both of the following:
  1. Profit on labor and overhead costs
  2. The risk that the actual cash outflows might differ from those expected, excluding inflation.
- d. Effect of inflation on estimated costs and profits
- e. Time value of money, represented by the risk-free rate
- f. Nonperformance risk relating to the risk that Entity A will not fulfill the obligation, including Entity A's own credit risk.

##### 820-10-55-80

The significant assumptions used by Entity A to measure fair value are as follows:

- a. Labor costs are developed on the basis of current marketplace wages, adjusted for expectations of future wage increases, required to hire contractors to dismantle and remove offshore oil platforms. Entity A assigns probability assessments to a range of cash flow estimates as follows.

Cash flow estimate	Probability assessment	Expected cash flows
\$ 100,000	25%	\$ 25,000
\$ 125,000	50%	62,500
\$ 175,000	25%	<u>43,750</u>
		<u>\$ 131,250</u>

The probability assessments are developed on the basis of Entity A's experience with fulfilling obligations of this type and its knowledge of the market.

- b. Entity A estimates allocated overhead and equipment operating costs using the rate it applies to labor costs (80 percent of expected labor costs). This is consistent with the cost structure of market participants.
- c. Entity A estimates the compensation that a market participant would require for undertaking the activity and for assuming the risk associated with the obligation to dismantle and remove the asset as follows:
  1. A third-party contractor typically adds a markup on labor and allocated internal costs to provide a profit margin on the job. The profit margin used (20 percent) represents Entity A's understanding of the operating profit that contractors in the industry generally earn to dismantle and remove offshore oil platforms. Entity A concludes that this rate is consistent with the rate that a market participant would require as compensation for undertaking the activity.
  2. A contractor would typically require compensation for the risk that the actual cash outflows might differ from those expected because of the uncertainty inherent in locking in today's price for a project that will not occur for 10 years. Entity A estimates the amount of that premium to be 5 percent of the expected cash flows, including the effect of inflation.
- d. Entity A assumes a rate of inflation of 4 percent over the 10-year period on the basis of available market data.
- e. The risk-free rate of interest for a 10-year maturity on January 1, 20X1, is 5 percent. Entity A adjusts that rate by 3.5 percent to reflect its risk of nonperformance (that is, the risk that it will not fulfill the obligation), including its credit risk. Therefore, the discount rate used to compute the present value of the cash flows is 8.5 percent.

#### 820-10-55-81

Entity A concludes that its assumptions would be used by market participants. In addition, Entity A does not adjust its fair value measurement for the existence of a restriction preventing it from transferring the liability. As illustrated in the following table, Entity A measures the fair value of its liability for the asset retirement obligation as \$194,879.

	<b>Expected Cash Flows 1/1/X1</b>
Expected labor costs	\$ 131,250
Allocated overhead and equipment costs (.80 x \$131,250)	105,000
Contractor's profit markup [.20 x (\$131,250 + \$105,000)]	<u>47,250</u>
Expected cash flows before inflation adjustment	283,500
Inflation factor (4% for 10 years)	<u>1.4802</u>
Expected cash flows adjusted for inflation	419,637
Market-risk premium (0.05 x \$419,637)	<u>20,982</u>
Expected cash flows adjusted for market risk	<u>440,619</u>
Expected present value using discount rate of 8.5% for 10 years	<u>\$ 194,879</u>

In practice, estimating the risk premium for the ARO in the example above requires significant judgment, particularly in circumstances where the retirement activities will be performed many years in the future. Information about the compensation market participants would demand to assume an ARO may be limited, because very few AROs are transferred in the manner contemplated by ASC 820.

Because of these data limitations, companies may look to risk premiums observed from business combinations where AROs are assumed, including their own business combination transactions. ASC 820 indicates that when market information is not reasonably available, a company may consider its own data in developing assumptions related to the market risk premium. (Refer to section 17 for additional discussion on the use of a reporting entity's own data to determine unobservable inputs.)

Alternatively, the market risk premium may be estimated by considering the difference between a fixed-price arrangement and a cost-plus arrangement with a third party to complete the remediation and monitor the site. The difference between the fixed-price arrangement and the cost-plus arrangement may provide insight into the risk premium market participants would demand to fulfill the obligation.

While all available evidence about market participant assumptions regarding the market risk premium should be considered, circumstances may exist when an explicit assumption cannot be determined. In such cases, based on the specific guidance in ASC 410-20-55-13 – which acknowledges that explicit assumptions in some cases may not be able to be incorporated into the measurement of an ARO – we believe the market risk premium may be incorporated into the fair value measurement on an implicit basis.<sup>34</sup>

### 9.1.2.1 Consideration of an entry price in measuring a liability not held as an asset

Although fair value represents an exit price, ASC 820-10-35-16I(b) indicates that in certain situations an entry price may be considered in estimating the fair value of a liability. ASC 820 allows for entry prices to be considered in estimating the fair value of a liability because the FASB believes that a liability's entry and exit prices will be identical in many instances. As a result, the price at which a market participant could enter into the identical liability on the measurement date (e.g., an obligation having the same credit characteristics) may be indicative of its fair value.

However, an entry price may differ from the exit price for a liability for a number of reasons. For example, a company may transfer the liability in a different market from that in which the obligation was incurred. When entry and exit prices differ, we believe ASC 820 is clear that the objective of the measurement remains an exit price.

## 9.2 Nonperformance risk

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Application to Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity*

#### *Nonperformance Risk*

#### **820-10-35-17**

The fair value of a liability reflects the effect of **nonperformance risk**. Nonperformance risk includes, but may not be limited to, a reporting entity's own **credit risk**. Nonperformance risk is assumed to be the same before and after the transfer of the liability.

#### **820-10-35-18**

When measuring the fair value of a liability, a reporting entity shall take into account the effect of its credit risk (credit standing) and any other factors that might influence the likelihood that the obligation will or will not be fulfilled. That effect may differ depending on the liability, for example:

- a. Whether the liability is an obligation to deliver cash (a financial liability) or an obligation to deliver goods or services (a nonfinancial liability)

<sup>34</sup> For further discussion on the application of risk premiums to the fair value measurement of AROs, refer to our FRD, [Asset retirement obligations](#).

- b. The terms of credit enhancements related to the liability, if any.

Paragraph 820-10-55-56 illustrates the effect of credit risk on the fair value measurement of a liability.

**820-10-35-18A**

The fair value of a liability reflects the effect of nonperformance risk on the basis of its unit of account. In accordance with Topic 825, the issuer of a **liability issued with an inseparable third-party credit enhancement** that is accounted for separately from the liability shall not include the effect of the credit enhancement (for example, a third-party guarantee of debt) in the fair value measurement of the liability. If the credit enhancement is accounted for separately from the liability, the issuer would take into account its own credit standing and not that of the third-party guarantor when measuring the fair value of the liability.

ASC 820 requires a fair value measurement of a liability to incorporate nonperformance risk (i.e., the risk that an obligation will not be fulfilled). Conceptually, nonperformance risk encompasses more than just an entity's credit risk and may also include other risks such as settlement risk. For example, in the case of a commodity contract, nonperformance risk may include the risk associated with physically extracting and transferring an asset to the point of delivery.

## 9.2.1 Effect of an entity's own credit risk on the fair value of a liability

Consistent with the idea that credit risk affects the initial measurement of a liability, the FASB believes that including changes in an entity's own credit standing in subsequent fair value measurements is also appropriate. Because the terms of the obligation were determined based on the entity's credit standing at the time of issuance (and since ASC 820 assumes the liability is transferred to another party with the same credit standing at the measurement date), subsequent changes in the entity's credit standing will result in the obligation's terms being favorable or unfavorable relative to current market requirements. The FASB also uses the term instrument-specific credit risk to describe own credit risk. Changes in instrument-specific credit risk not only include changes in the risk of the entity defaulting on the obligation but also include changes in the price of credit.

Considering instrument-specific credit risk when measuring the fair value of a liability produces accounting results that some find counterintuitive. For example, a company that experiences credit deterioration would recognize an accounting gain on a liability measured at fair value, assuming all other valuation inputs remain unchanged. Many stakeholders believe this result could be misleading, especially if the entity lacks the intent or ability to realize those gains. Many also do not believe it is useful to recognize a loss as credit standing improves.

The FASB addressed these concerns by requiring changes in fair value of financial liabilities measured using the fair value option caused by changes in instrument-specific credit risk to be presented separately in other comprehensive income (OCI) (i.e., equity) in accordance with ASC 825-10-45-5A. This guidance does not apply to derivative liabilities since they are required to be measured at fair value under ASC 815.

As discussed above, the fair value of a liability is affected not only by a change in a company's credit rating (i.e., a credit downgrade), but also by changes in market-based credit spreads (i.e., the price of credit). The following examples from ASC 820 demonstrate how changes in a company's credit standing affect the fair value of a liability.

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Example 7: Measuring Liabilities*

##### *Case A: Liabilities and Credit Risk—General*

###### **820-10-55-57**

This Case has the following assumptions:

- a. Entity X and Entity Y each enter into a contractual obligation to pay cash (\$500) to Entity Z in 5 years.
- b. Entity X has a AA credit rating and can borrow at 6 percent, and Entity Y has a BBB credit rating and can borrow at 12 percent.

###### **820-10-55-57A**

Entity X will receive about \$374 in exchange for its promise (the present value of \$500 in 5 years at 6 percent). Entity Y will receive about \$284 in exchange for its promise (the present value of \$500 in 5 years at 12 percent). The fair value of the liability to each entity (that is, the proceeds) incorporates that reporting entity's credit standing.

##### *Case B: Structured Note*

###### **820-10-55-59**

On January 1, 20X7, Entity A, an investment bank with a AA credit rating, issues a five-year fixed rate note to Entity B. The contractual principal amount to be paid by Entity A at maturity is linked to the Standard and Poor's S&P 500 index. No credit enhancements are issued in conjunction with or otherwise related to the contract (that is, no collateral is posted and there is no third-party guarantee). Entity A elects to account for the entire note at fair value in accordance with paragraph 815-15-25-4. The fair value of the note (that is, the obligation of Entity A) during 20X7 is measured using an expected present value technique. Changes in fair value are as follows:

- a. Fair value at January 1, 20X7. The expected cash flows used in the expected present value technique are discounted at the risk-free rate using the treasury yield curve at January 1, 20X7, plus the current market observable AA corporate bond spread to treasuries, if nonperformance risk is not already reflected in the cash flows, adjusted (either up or down) for Entity A's specific credit risk (that is, resulting in a credit-adjusted risk-free rate). Therefore, the fair value of Entity A's obligation at initial recognition takes into account nonperformance risk, including that reporting entity's credit risk, which presumably is reflected in the proceeds.
- b. Fair value at March 31, 20X7. During March 20X7, the credit spread for AA corporate bonds widens, with no changes to the specific credit risk of Entity A. The expected cash flows used in the expected present value technique are discounted at the risk-free rate using the treasury yield curve at March 31, 20X7, plus the current market observable AA corporate bond spread to treasuries if nonperformance risk is not already reflected in the cash flows, adjusted for Entity A's specific credit risk (that is, resulting in a credit-adjusted risk-free rate). Entity A's specific credit risk is unchanged from initial recognition. Therefore, the fair value of Entity A's obligation changes as a result of changes in credit spreads generally. Changes in credit spreads reflect current market participant assumptions about changes in nonperformance risk generally, changes in liquidity risk, and the compensation required for assuming those risks.

- c. Fair value at June 30, 20X7. As of June 30, 20X7, there have been no changes to the AA corporate bond spreads. However, on the basis of structured note issues corroborated with other qualitative information, Entity A determines that its own specific creditworthiness has strengthened within the AA credit spread. The expected cash flows used in the expected present value technique are discounted at the risk-free rate using the treasury yield curve at June 30, 20X7, plus the current market observable AA corporate bond spread to treasuries (unchanged from March 31, 20X7), if nonperformance risk is not already reflected in the cash flows, adjusted for Entity A's specific credit risk (that is, resulting in a credit-adjusted risk-free rate). Therefore, the fair value of the obligation of Entity A changes as a result of the change in its own specific credit risk within the AA corporate bond spread.

Case B illustrates that even though Entity A retains its AA credit rating through both subsequent measurement periods (i.e., 31 March and 30 June), changes in credit spreads or changes in its own credit risk within the AA corporate bond spread (or both) may affect the fair value of the liability.

## 9.2.2

### Liabilities issued with an inseparable third-party credit enhancement

ASC 820-10-35-18A states that the fair value of a liability should incorporate nonperformance risk on the basis of its unit of account. For the issuer of a liability with an inseparable third-party credit enhancement, ASC 825 clarifies that the unit of account does not include the third-party credit enhancement.<sup>35</sup> As such, when measuring the fair value of a liability with an inseparable third-party credit enhancement (e.g., a third-party guarantee), an issuer would evaluate nonperformance risk based on its own credit standing, not that of the guarantor.

ASC 820's guidance is based on the fact that the third-party credit enhancement does not relieve the issuer of its ultimate obligation under the liability. Any payments made by a guarantor in accordance with the guarantee result in a transfer of the issuer's debt obligation from the investor to the guarantor. The issuer's resulting debt obligation to the guarantor has not been guaranteed. Consequently, the fair value of that obligation takes into account the credit standing of the issuer and not the credit standing of the guarantor.<sup>36</sup>

## 9.3

### Restriction on the transfer of a liability

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Application to Liabilities and Instruments Classified in a Reporting Entity's Shareholders' Equity*

##### *Restriction Preventing the Transfer of a Liability or an Instrument Classified in a Reporting Entity's Shareholders' Equity*

##### **820-10-35-18B**

When measuring the fair value of a liability or an instrument classified in a reporting entity's shareholders' equity, a reporting entity shall not include a separate input or an adjustment to other inputs relating to the existence of a restriction that prevents the transfer of the item. The effect of a restriction that prevents the transfer of a liability or an instrument classified in a reporting entity's shareholders' equity is either implicitly or explicitly included in the other inputs to the fair value measurement.

<sup>35</sup> The unit of account guidance in ASC 825-10-25-13 does not apply to the holder of the issuer's credit-enhanced liability or to any of the following financial instruments or transactions: (1) a credit enhancement granted to the issuer of the liability provided by a government or government agency (e.g., deposit insurance), (2) a credit enhancement provided between reporting entities within a consolidated or combined group (e.g., between a parent and its subsidiary) or (3) between entities under common control.

<sup>36</sup> Paragraph BC39 of ASU 2011-04.

**820-10-35-18C**

For example, at the transaction date, both the creditor and the obligor accepted the transaction price for the liability with full knowledge that the obligation includes a restriction that prevents its transfer. As a result of the restriction being included in the transaction price, a separate input or an adjustment to an existing input is not required at the transaction date to reflect the effect of the restriction on transfer. Similarly, a separate input or an adjustment to an existing input is not required at subsequent measurement dates to reflect the effect of the restriction on transfer.

ASC 820 clarifies that the fair value of a liability should not include a separate input (or adjustment to other inputs) for the existence of a contractual restriction that prevents the transfer of the liability. The FASB believes that the effect of non-transferability is already implicitly or explicitly incorporated into other inputs in the fair value measurement. For example, the effect of non-transferability would have been captured in the original transaction price of the liability as both parties to the transaction were knowledgeable of such restrictions when the liability was issued.

ASC 820-10-35-18C indicates that no separate adjustment for lack of transferability is necessary for either the initial or subsequent fair value measurement of a liability, which differs from the treatment of asset restrictions. ASC 820 considers liability restrictions and asset restrictions differently because:

- ▶ Restrictions on the transfer of a liability relate to the performance of the obligation, whereas restrictions on the transfer of an asset relate to the marketability of the asset.
- ▶ Unlike assets, virtually all liabilities include a restriction preventing their transfer. As a result, the effect of a restriction preventing the transfer of a liability would in theory be consistent for all liabilities.

The guidance also appears to assume that the effect of a restriction on the fair value of a liability remains constant over the life of the liability. Accordingly, no additional adjustments are required in subsequent measurements if the effect of the restriction was already captured in the initial pricing of the liability. Unlike restrictions on assets, which typically expire and whose effect on fair value changes over time, restrictions on liabilities usually remain throughout the life of the obligation.

## 9.4 Fair value of instruments classified in a reporting entity's shareholders' equity

The guidance for measuring the fair value of an instrument classified in a reporting entity's shareholders' equity is generally consistent with the requirement for measuring liabilities, except for the requirement to incorporate nonperformance risk, which does not apply directly to equity instruments. As a result, the requirements for measuring the fair value of certain instruments that may be classified either as a liability or as equity, such as contingent consideration and warrants, would be generally consistent irrespective of whether they are classified as a liability or as equity.

When valuing instruments classified in a reporting entity's shareholders' equity (in the absence of a quoted price for the instrument), fair value would be measured from the perspective of a market participant holding the identical instrument as an asset, even when the asset is not traded or is valued using unobservable inputs. However, as with all fair value measurements, observable inputs for the corresponding asset should be maximized and unobservable inputs minimized. In addition, as with liabilities, adjustments to the value of the corresponding asset may be required when the characteristics of the asset are not present in the equity instrument or if there are differences in units of account. (Refer to section 9.1 for additional discussion on these adjustments.)

### 9.4.1 Equity instruments not held by another party as an asset

An equity instrument without a corresponding asset should be valued from the perspective of another market participant that has issued a similar claim on equity.

## Questions and interpretive responses

### Question 9.1-1 How does the valuation of a liability based on a transfer notion differ from that based on a settlement notion?

One important difference between the two concepts is the consideration of entity-specific advantages or disadvantages. Under a transfer notion, the fair value of a liability is based on the price that would be paid to market participants to assume the obligation. The guidance is clear that a company's intention to settle or otherwise fulfill the liability is not relevant when measuring its fair value. Because the fair value of the liability is considered from the perspective of market participants, and not the entity itself, any relative efficiencies (or inefficiencies) of the reporting entity in settling the liability would not be considered in the fair value measurement.

This point was stated in the Basis for Conclusions of Statement 157:

The Board agreed that the fair value of the liability from the perspective of a market participant is the same regardless of how the reporting entity intends to settle the liability. Conceptually, a fair value measurement provides a market benchmark to use as a basis for assessing the reporting entity's advantages (or disadvantages) in performance or settlement relative to the market.

Unlike a transfer notion, a settlement notion may allow for the consideration of a reporting entity's specific advantages (or disadvantages) in settling (or performing) the obligation. However, the Boards concluded that "when a liability is measured at fair value, the relative efficiency of the reporting entity in settling the liability using its own internal resources appears in earnings over the course of its settlement, not before."<sup>37</sup> Therefore, a company cannot presume that the fair value of a liability is the same as the amount at which the reporting entity would ultimately settle its obligation. The requirement to incorporate nonperformance risk in the fair value measurement of a liability could also result in a difference between the fair value of a liability and its settlement value. That is, the counterparty may not accept a different amount as settlement for the obligation even if the entity's credit standing has changed (i.e., the settlement value may not necessarily consider changes in credit risk).

### Question 9.1-2 How does the guidance for measuring the fair value of liabilities affect the way acquirers value contingent consideration that is recognized as a liability in a business combination?

ASC 820 clarifies that, absent a quoted price, the fair value of a liability held by another party as an asset should be determined from the perspective of the asset holder, even when the asset is not traded. Consistent with the "no arbitrage" premise, the FASB has explained that "in an efficient market, the price of a liability held by another party as an asset must equal the price for the corresponding asset. If those prices differed, the market participant transferee (i.e., the party taking on the obligation) would be able to earn a profit by financing the purchase of the asset with the proceeds received by taking on the liability. In such cases, the price for the liability and the price for the asset would adjust until the arbitrage opportunity was eliminated."<sup>38</sup>

However, the above approach would not apply to liabilities that do not have a corresponding asset (e.g., AROs). For these liabilities, a risk premium that increases the fair value of the obligation should generally be incorporated in the valuation.

<sup>37</sup> Paragraph C40 of the Basis for Conclusions in Statement 157 (which is also consistent with paragraph BC81 of IFRS 13).

<sup>38</sup> Paragraph BC34 of ASU 2011-04.

**Question 9.2-1 Does ASC 820 require a company to consider the effects of both counterparty credit risk and its own credit risk when valuing its derivative transactions?**

ASC 820 addresses the issue of credit risk both explicitly and implicitly. On considering a company's own credit risk in the valuation of liabilities, the guidance is explicit. ASC 820-10-35-17 states that "the fair value of a liability reflects the effect of nonperformance risk. Nonperformance risk includes, but may not be limited to, a reporting entity's own credit risk." ASC 820-10-35-18 further indicates that "when measuring the fair value of a liability, a reporting entity shall take into account the effect of its credit risk (credit standing) and any other factors that might influence the likelihood that the obligation will or will not be fulfilled."

The guidance is less explicit about how counterparty credit risk should be considered. ASC 820 requires the fair value of an asset or liability to be determined based on market participant assumptions. Because market participants consider counterparty credit risk in pricing a derivative contract, a company's valuation methodology should incorporate counterparty risk in its determination of fair value.

Even prior to the issuance of Statement 157 it was common practice for derivative dealers to incorporate counterparty credit risk when valuing their derivative portfolios. In July 1993, the Group of Thirty issued *Derivatives: Practices and Principles* and its related Working Papers (G30 Study), which recommended that dealers and end-users measure their derivatives exposure by considering both current credit exposure and potential exposure.

**Question 9.2-2 How should a company incorporate its own credit risk into the valuation of its derivative contracts?**

ASC 820 requires that the fair value measurement of a liability reflect nonperformance risk, which would include a company's own credit risk. As such, when valuing its derivative liability positions, a company should incorporate the effect of its own credit standing. The valuation methodology used to measure the fair value of common types of derivatives such as swaps and forwards that could have either positive (asset) or negative (liability) values over their lives, should also incorporate the effect of own credit risk.

In situations where a company has a credit support annex (CSA) or master netting agreement with a counterparty, a company may consider the credit risk of its derivative instruments with that counterparty on a net basis if it qualifies to use the measurement exception noted in section 3.4. (Refer to section 10 for more detail on applying the measurement exception for financial instruments with offsetting credit risks.)

A variety of methods can be used to determine a credit valuation adjustment (CVA). To incorporate own credit risk into their derivative valuation methodologies, some companies' approaches attempt to mirror their approach for measuring counterparty credit risk. This is appropriate if the company has an acceptable methodology to quantify counterparty credit risk. Generally, companies can determine expected credit losses using concepts such as expected exposure and probabilities of default. While the degree of sophistication and complexity may differ by company and by the size and nature of the derivative portfolio, the inputs used under any methodology should be consistent with assumptions market participants would use. (Refer to Appendix D of this publication for a more detailed discussion of the considerations and methodologies used in estimating a CVA.)

**Question 9.2-3 Does the existence of master netting agreements or CSAs eliminate the need to consider an entity's own credit risk when measuring the fair value of derivative liabilities?**

ASC 820 is clear that nonperformance risk should be considered from the perspective of the liability being measured, not the entity obligated under the liability. As such, nonperformance risk may differ for various liabilities of the same entity. This difference may result from the specific terms of the liability (e.g., seniority or priority in liquidation) or from specific credit enhancements related to the liability (e.g., collateral).

Bilateral collateral arrangements, master netting agreements, CSAs and other credit enhancement or risk mitigation tools will reduce the credit exposure associated with a liability (or asset) and should be considered in determining the fair value of the liability. Although these agreements reduce credit exposure, they may not eliminate the exposure completely. For example, a CSA may not require collateral to be posted until a certain threshold has been reached, and once reached require collateral only for the exposure in excess of the threshold. Therefore, while master netting agreements and CSAs mitigate the effect of own credit risk on the fair value of a liability, their presence alone may not enable an entity to ignore its own credit risk.

Companies should assess their credit exposure to a specific liability when determining how their own credit risk would affect its fair value. (Appendix D provides additional detail on the consideration of collateral and other credit enhancements when estimating a CVA.)

**Question 9.2-4**

**Should a company incorporate nonperformance risk into the valuation of a warrant on its own stock that may be settled in cash and is classified as a liability?**

Warrants, which function economically and structurally in a manner similar to stock options, are often issued as "equity kickers" to preferred stock or as yield enhancements to debt instruments. They are typically detachable and can be sold separately from the equity or debt instrument with which they were issued.

The treatment of nonperformance risk is unique for a liability whose fair value is tied to the performance of the obligor's underlying stock, such as the warrants noted above. This is because the amount of the obligation (prior to the explicit consideration of nonperformance risk) is determined based on the equity value of the company. In contrast, for most derivatives, the underlying is unrelated to the issuer and no direct relationship exists between the intrinsic value of the instrument and the entity's nonperformance risk.

ASC 820 clarifies that the fair value of a liability considers the inability of an obligor to fulfill its obligation (i.e., nonperformance risk). However, because a company's stock price is generally reflective of excess shareholder returns (after the company has met its obligations), we believe that a separate adjustment for nonperformance risk would be unnecessary for a liability whose value is based on the company's own equity.

Some argue that nonperformance risk should not be incorporated into the fair value of these warrants because the company can simply issue more shares to fulfill the ultimate obligation. Although this may be possible, that view could potentially be held for any liability. Instead, we believe that the underlying stock price theoretically captures all expected future stock price paths (including default scenarios), and therefore already captures the nonperformance risk of the issuer. Upon an actual default by the issuer, it is unlikely that the holder of the warrant (as an asset) would experience a loss due to default, because the warrant holder will likely have no claim on the entity (i.e., the warrant has no intrinsic value). We believe this approach is consistent with how a market participant holding the warrant as an asset would consider credit risk.

Note: The response to this question is specific to warrants issued and should not be analogized to other instruments issued by an entity related to its own equity, such as an agreement to repurchase shares at a specified price in the future.

**Question 9.2-5**

**Does the unit of account for a liability issued with an inseparable third-party credit enhancement affect the fair value measurement of the corresponding asset held by another party?**

The unit of account prescribed in ASC 825 is specific to the issuer of the liability and does not apply to the holder of the credit-enhanced liability (as an asset). The guidance does not require the investor to separately account for two units of account: the receivable from the issuer and the guarantee from the third-party guarantor. Note, however, that the guidance in ASC 825 for inseparable credit enhancements relates only to enhancements provided by third parties and does not apply to credit enhancements provided between a parent and its subsidiary or between entities under common control. The guidance is also not applicable to guarantees provided by a government or government agency, such as deposit insurance.

When held by another party as an asset, the price for such instruments (e.g., guaranteed debt) would incorporate market participant assumptions regarding the benefit (if any) of the credit enhancement. As discussed in section 9.1.1, ASC 820 indicates that unit of account differences arising from the existence of a third-party credit enhancement may require an adjustment to the quoted price of the corresponding asset when estimating the fair value of a liability.

#### Question 9.2-6

#### **Does the guidance for considering third-party credit enhancements in a fair value measurement apply to liabilities other than debt?**

The guidance in ASC 820 and ASC 825 for liabilities issued with third-party credit enhancements applies to all liabilities that are measured or disclosed at fair value on a recurring basis. Although the guidance would not affect the initial measurement of guaranteed debt that is subsequently measured at amortized cost,<sup>39</sup> it would apply to the disclosure of that debt's fair value as required by ASC 825.

While an issuer's accounting for guaranteed debt may be the most common application of this guidance, the clarification with respect to the unit of account for certain types of credit enhancements could affect other liabilities, including derivative instruments measured at fair value in accordance with ASC 815. Many OTC derivative contracts are subject to credit support requirements under an ISDA Master Agreement between the derivative counterparties. The application of this guidance to OTC derivatives will depend on the nature of the credit support provided. For example, while credit support is typically provided through the posting of collateral, in certain industries (e.g., oil and gas), posting a letter of credit (LOC) for the benefit of a derivative counterparty is not uncommon.

In those instances where a LOC is posted for the benefit of a derivative counterparty, we believe the guidance in ASC 820-10-35-18A would generally apply. If a company defaults on its derivative contracts, the bank issuing the LOC will pay the counterparty and the company's obligation merely transfers from the original counterparty to the issuing bank. In other words, the company will have a continuing obligation, even in the event it defaults on the derivative. As such, the company's nonperformance risk (not that of the bank providing the LOC) would be considered in determining the fair value of the derivative liability.

We believe this generally would apply even if the LOC was deemed separable from the derivative contract. While ASC 825-10-25-13 specifically addresses third-party credit enhancements that are inseparable from the liability, the underlying principles should also apply to separable credit enhancements. In our view, including the effect of separable credit enhancements while excluding the effect of inseparable credit enhancements would contradict the principles of ASC 820. Refer to Question IA.6-8 in Industry Appendix 6 on the fair value measurement considerations for the oil and gas industry for additional discussion on this topic.

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<sup>39</sup> Refer to section 5.15.2.2 of our FRDs, *Issuer's accounting for debt and equity financings (before the adoption of ASU 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity)* or *Issuer's accounting for debt and equity financings (after the adoption of ASU 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity)*, as applicable, for an illustrative example highlighting the difference between the journal entries for guaranteed debt accounted for at amortized cost and guaranteed debt accounted for under the fair value option in ASC 825.

# 10 Application to financial instruments and nonfinancial items accounted for as derivatives

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Application to Financial Assets and Financial Liabilities with Offsetting Positions in Market Risks or Counterparty Credit Risk*

##### **820-10-35-18D**

A reporting entity that holds a group of **financial assets, financial liabilities**, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items is exposed to market risks (that is, **interest rate risk, currency risk, or other price risk**) and to the credit risk of each of the counterparties. If the reporting entity manages that group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items on the basis of its net exposure to either market risks or credit risk, the reporting entity is permitted to apply an exception to this Topic for measuring fair value. That exception permits a reporting entity to measure the fair value of a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items on the basis of the price that would be received to sell a net long position (that is, an asset) for a particular risk exposure or paid to transfer a net short position (that is, a liability) for a particular risk exposure in an orderly transaction between market participants at the measurement date under current market conditions. Accordingly, a reporting entity shall measure the fair value of the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items consistently with how market participants would price the net risk exposure at the measurement date.

##### **820-10-35-18E**

A reporting entity is permitted to use the exception in paragraph 820-10-35-18D only if the reporting entity does all of the following:

- a. Manages the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items on the basis of the reporting entity's net exposure to a particular market risk (or risks) or to the credit risk of a particular counterparty in accordance with the reporting entity's documented risk management or investment strategy
- b. Provides information on that basis about the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items to the reporting entity's **management**
- c. Is required or has elected to measure those financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items at fair value in the statement of financial position at the end of each reporting period.

**820-10-35-18F**

The exception in paragraph 820-10-35-18D does not pertain to financial statement presentation. In some cases, the basis for the presentation of financial instruments in the statement of financial position differs from the basis for the measurement of financial instruments, for example, if a Topic does not require or permit financial instruments to be presented on a net basis. In such cases, a reporting entity may need to allocate the portfolio-level adjustments (see paragraphs 820-10-35-18I through 35-18L) to the individual assets or liabilities that make up the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items managed on the basis of the reporting entity's net risk exposure. A reporting entity shall perform such allocations on a reasonable and consistent basis using a methodology appropriate in the circumstances.

**820-10-35-18G**

A reporting entity shall make an accounting policy decision to use the exception in paragraph 820-10-35-18D. A reporting entity that uses the exception shall apply that accounting policy, including its policy for allocating bid-ask adjustments (see paragraphs 820-10-35-18I through 35-18K) and credit adjustments (see paragraph 820-10-35-18L), if applicable, consistently from period to period for a particular portfolio.

**820-10-35-18H**

The exception in paragraph 820-10-35-18D applies only to financial assets and financial liabilities within the scope of Topic 815 or Topic 825 and nonfinancial items accounted for as derivatives in accordance with Topic 815.

## 10.1 Measurement of financial instruments and nonfinancial items accounted for as derivatives

ASC 820 specifies that the concepts of “highest and best use” and “valuation premise” are relevant only when measuring the fair value of nonfinancial assets. Therefore, the fair value of financial assets and liabilities is generally based on the unit of account prescribed by the Topic that requires (or permits) the fair value measurement. In many cases, the unit of account is the individual financial instrument. For example, the unit of account in ASC 815 for derivative instruments is generally the individual contract.

As discussed in section 8.1, the Board believes that financial instruments do not have alternative uses and that their fair values usually do not depend on their use within a group of other assets or liabilities. However, ASC 820 provides a measurement exception (the “portfolio approach”) that allows a company to determine the fair value of a group of financial assets and financial liabilities with offsetting risks based on the sale or transfer of its net exposure to a particular risk (or risks), if certain criteria are met. ASU 2018-09 clarified that nonfinancial items accounted for as derivatives in accordance with ASC 815 may also be included in the group of instruments measured under the portfolio approach.

The FASB provided the measurement exception in response to concerns raised by constituents that calculating valuation adjustments for market risk and credit risk on a gross basis would be inconsistent with their risk management practices and that the sum of the fair values of the individual instruments do not equal the fair value of their net risk exposure.

For example, without the portfolio approach, the fair value framework would require companies to measure all derivative contracts on an individual basis, consistent with their unit of account. Such an approach would not be consistent with industry practice, as valuation adjustments related to OTC derivative contracts are typically determined on a portfolio basis, capturing the risk mitigation benefits associated with holding positions that have offsetting exposures.

ASC 820 makes clear that applying the portfolio approach is an exception to the principles of fair value because it represents an entity-specific measure (i.e., an entity's net risk exposure is a function of the other financial instruments specifically held by that entity and its unique risk preferences).

## 10.2 Application of the measurement exception

Companies that hold a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or combinations of these items are generally exposed to market risks (e.g., interest rate risk, currency risk or other price risk) and to the credit risk of each of its counterparties. ASC 820 allows companies to make an accounting policy election to measure the fair value of a group of these instruments based on the price that would be received to sell a net long position or transfer a net short position for a particular risk exposure if all of the following criteria are met:

- ▶ The company manages the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or combinations of these items on the basis of its net exposure to a particular market risk or to the credit risk of a particular counterparty in accordance with its documented risk management or investment strategy.
- ▶ The company provides information about the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or combinations of these items to key management on this basis.
- ▶ The company measures all of the financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or combinations of these items in the group at fair value in the statement of financial position each reporting period.

As indicated by these criteria, the portfolio approach applies only to a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or a combination of these items, with offsetting risks. As such, a group of financial instruments comprised of only financial assets (e.g., a portfolio of loans) would not qualify for the exception and would need to be valued in a manner consistent with its unit of account. (Refer to Industry Appendix 1 for additional discussion on the valuation of loans and other fair value measurement considerations related to the banking industry.) Additionally, the guidance indicates that the portfolio approach can be applied only to financial assets and liabilities that are within the scope of ASC 815 or ASC 825 and nonfinancial items accounted for as derivatives in accordance with ASC 815.

It is also important to note that in order to use the portfolio approach, companies are required to meet all the above criteria, both initially and on an ongoing basis. While acknowledging that portfolios are not static in nature (i.e., instruments within the portfolio will mature or be traded, and new instruments will be issued), ASC 820 requires that a company apply its accounting policy consistently from period to period.

The FASB has noted that a company's accounting policy decision could be changed if its risk exposure preferences change. If that were to occur, a company could decide not to use the exception but instead measure the fair value of its group of instruments on an individual instrument basis.<sup>40</sup> We generally expect that a company's use of the portfolio approach would be consistent from period to period as changes in risk management policies are typically uncommon.

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<sup>40</sup> Paragraph BC59 of ASU 2011-04.

## 10.2.1 Presentation considerations

ASC 820 is clear that applying the portfolio approach for measurement purposes does not affect financial statement presentation. That is, while companies are allowed to measure fair value on the basis of net exposure if the required criteria are met, they must still comply with the financial statement presentation requirements specified in other Topics.

Companies may need to allocate portfolio-level adjustments for a group of instruments measured on a net basis to the individual assets and liabilities comprising the group. Companies may also need to allocate portfolio-level adjustments for disclosure purposes when items in the group would be categorized in different levels of the fair value hierarchy. (Refer to section 20.3.3 for additional discussion on the allocation of portfolio-level adjustments related to the fair value hierarchy disclosures.)

ASC 820 does not prescribe any methodology for allocating portfolio-level adjustments, instead noting that the allocation should be performed in a reasonable and consistent manner that is appropriate in the circumstances.<sup>41</sup>

## 10.2.2 Additional considerations for offsetting market risks

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Application to Financial Assets and Financial Liabilities with Offsetting Positions in Market Risks or Counterparty Credit Risk*

#### *Exposure to Market Risks*

#### **820-10-35-18I**

When using the exception in paragraph 820-10-35-18D to measure the fair value of a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items managed on the basis of the reporting entity's net exposure to a particular market risk (or risks), the reporting entity shall apply the price within the bid-ask spread that is most representative of fair value in the circumstances to the reporting entity's net exposure to those market risks (see paragraphs 820-10-35-36C through 35-36D).

#### **820-10-35-18J**

When using the exception in paragraph 820-10-35-18D, a reporting entity shall ensure that the market risk (or risks) to which the reporting entity is exposed within that group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items is substantially the same. For example, a reporting entity would not combine the interest rate risk associated with a financial asset with the commodity price risk associated with a financial liability, because doing so would not mitigate the reporting entity's exposure to interest rate risk or commodity price risk. When using the exception in paragraph 820-10-35-18D, any basis risk resulting from the market risk parameters not being identical shall be taken into account in the fair value measurement of the financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items within the group.

<sup>41</sup> Although ASC 820 does not address specific methodologies that may be used to allocate portfolio-level valuation adjustments, the SEC staff has expressed views on various approaches that could be used in order to allocate nonperformance risk to individual derivatives subject to a master netting arrangement for purposes of assessing fair value hedge effectiveness. Refer to section 4.9.4 of our FRD, *Derivatives and hedging*, for information on allocation methodologies discussed with the SEC staff.

**820-10-35-18K**

Similarly, the duration of the reporting entity's exposure to a particular market risk (or risks) arising from the financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items shall be substantially the same. For example, a reporting entity that uses a 12-month futures contract against the cash flows associated with 12 months' worth of interest rate risk exposure on a 5-year financial instrument within a group made up of only those financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items measures the fair value of the exposure to 12-month interest rate risk on a net basis and the remaining interest rate risk exposure (that is, years 2 through 5) on a gross basis.

When using the exception to measure a company's net exposure to a particular market risk, the guidance requires that the offsetting market risks be "substantially the same." For example, companies would not be able to offset the interest rate risk associated with a financial asset with the currency price risk associated with a financial liability because these two market risks are not substantially the same. The combination of these instruments does not mitigate the market risk for either the financial assets or the financial liabilities.

A company exposed to different forms of offsetting interest rate risk (e.g., a long exposure to the Secured Overnight Financing Rate (SOFR) that is partially offset by a short exposure to the USD prime rate) would generally meet the "substantially the same" threshold. Although some basis risk exists between the positions, the combination of these instruments mitigates the company's overall interest rate risk. While the measurement exception could be used in this instance, the fair value measurement of the net long position should capture the effect of the basis risk.

Similarly, ASC 820 requires that the duration of a company's exposure to a certain market risk arising from a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815, or combinations of these items, be substantially the same. For example, a company that holds a financial asset with a three-year maturity and a financial liability (whose risk is substantially the same as the financial asset) with a one-year maturity would measure the one-year exposure on a net basis, but the remaining two-year exposure on a gross basis. In practice, we believe the portfolio approach will generally be applied to offsetting market risks that fall within specified maturity buckets.

**10.2.3****Additional considerations for offsetting credit risks****Excerpt from Accounting Standards Codification****Fair Value Measurement – Overall*****Application to Financial Assets, Financial Liabilities, and Nonfinancial Items Accounted for as Derivatives under Topic 815 with Offsetting Positions in Market Risks or Counterparty Credit Risk*****820-10-35-18L**

When using the exception in paragraph 820-10-35-18D to measure the fair value of a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with Topic 815, or combinations of these items entered into with a particular counterparty, the reporting entity shall include the effect of the reporting entity's net exposure to the credit risk of that counterparty or the counterparty's net exposure to the credit risk of the reporting entity in the fair value measurement when market participants would take into account any existing arrangements that mitigate credit risk exposure in the event of default (for example, a master netting agreement with the counterparty or an agreement that requires the exchange of collateral on the basis of each party's net exposure to the credit risk of the other party). The fair value measurement shall reflect market participants' expectations about the likelihood that such an arrangement would be legally enforceable in the event of default.

To measure counterparty credit risk on a net basis, a company must generally have an arrangement in place that mitigates credit risk upon default (e.g., a master netting agreement or CSA with the counterparty) that market participants would take into account when pricing the exposure.

A company is not required to prove that such agreements will be “legally enforceable” in all jurisdictions to use the measurement exception. Instead, a company should consider market participant expectations about the likelihood that such arrangements would be legally enforceable when valuing the net credit exposure.

## 10.2.4 Other application issues

A company may elect to use the portfolio approach on a portfolio-by-portfolio basis. In addition, if elected, companies are not required to apply the portfolio approach to all of the risks of the instruments that make up the particular group. For example, a company could choose to measure only the credit risk associated with a group of financial instruments on a net basis, but not the group’s exposure to market risk.<sup>42</sup>

If the portfolio approach is used to measure a company’s net exposure to a particular market risk, the net position becomes the unit of measurement. That is, the company’s net exposure to a particular market risk (e.g., the net long or short position for USD interest rate exposure within a specified maturity bucket) represents the asset or liability being measured. In applying the portfolio approach, the objective of the valuation is to determine the price that market participants would pay (or receive) in a single transaction for the entire net position to a particular risk exposure, as defined. While not entirely clear in the guidance, it is our understanding that an adjustment based on the size of the net position should be considered in the valuation if market participants would incorporate such an adjustment when transacting for the net exposure. Because the unit of measurement is the net position, size is considered a characteristic of the asset (net long position for a particular risk exposure) or liability (net short position for a particular risk exposure) being measured, not a characteristic of the company’s specific holdings.

It is also important to note that when applying the portfolio approach, companies may offset credit and market risks at different levels of aggregation. This approach is consistent with risk management practices employed by many companies.

The FASB has acknowledged that such an approach may be required because it is unlikely that all of the financial assets and liabilities giving rise to the net exposure for a particular market risk will be with the same counterparty.<sup>43</sup> The example below illustrates this concept.

### Illustration 10.2-1: Calculating net exposure

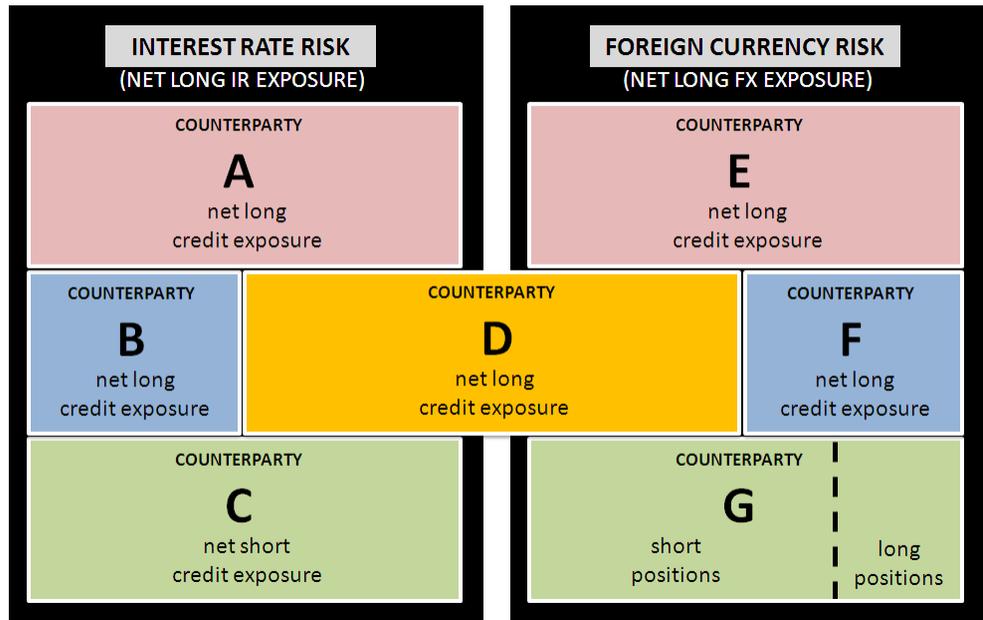
Company XYZ holds a portfolio of long and short derivative positions (USD interest rate swaps and USD/JPY foreign currency forwards) with various counterparties as follows:

- ▶ Counterparties A, B and C: only interest rate swaps
- ▶ Counterparty D: interest rate swaps and foreign currency forwards
- ▶ Counterparties E, F and G: only foreign currency forwards

<sup>42</sup> A company may also decide to apply the portfolio approach to only certain market risks related to the group. For example, a company that is exposed to both interest rate and foreign currency risk in a portfolio of financial assets and financial liabilities could choose to measure only its interest rate risk exposure on a net basis. As previously noted, however, a company’s application of the portfolio approach should be consistent from period to period.

<sup>43</sup> Paragraph BC65 of ASU 2011-04.

Company XYZ has executed master netting agreements with each of its counterparties except counterparty G. In addition, the agreement in place with counterparty D can be applied across products.



Using the measurement exception, Company XYZ may consider its credit risk exposure to each individual counterparty except counterparty G on a net basis (i.e., net long credit exposure to Counterparty A, net short credit exposure to Counterparty C, etc.). At the same time, the company may consider its net long exposure to USD interest rate risk from its portfolio of derivatives with counterparties A, B, C and D. The company may also consider its net long exposure to foreign currency risk (Japanese yen risk) from its portfolio of derivatives with counterparties D, E, F and G.

### Questions and interpretive responses

#### Question 10.2-1 Is there a minimum level of offset required to use the portfolio approach?

While there are explicit criteria that a company must meet in order to use the portfolio approach (as discussed in section 10.2), ASC 820 does not specify any minimum level of offset within the group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815 or combinations of these items. For example, if a company has positions with offsetting credit risk to a particular counterparty, we believe use of the portfolio approach is appropriate even if the extent of offset is minimal (provided that the company has in place a legally enforceable agreement that provides for offsetting upon default and all the other required criteria are met). To illustrate, even if the gross credit exposure was \$100,000 (long) and \$5,000 (short), upon counterparty default the company would be exposed to a credit loss of only \$95,000 under the terms of its master netting agreement.

With respect to market risk, considering the degree of offset may require additional judgment. We would expect companies to assess the appropriateness of using the portfolio approach based on the nature of the portfolio being managed (e.g., derivative versus cash instruments) and its documented risk management policies (or investment strategies). A company should use the portfolio approach in a manner consistent with the FASB's basis for providing the measurement exception, and not in a manner to circumvent other principles within the guidance.

**Question 10.2-2** **May Level 1 instruments be included in a portfolio of financial instruments with offsetting risks when calculating the net exposure to a particular market risk?**

It is our understanding that Level 1 instruments may be included when using the exception to value financial instruments with offsetting risks. As noted in the example provided in ASC 820-10-35-18K, a reporting entity is allowed to consider the effect of holding futures contracts when evaluating its net exposure to a particular market risk, such as interest rate risk. While Level 1 instruments such as futures contracts may be considered when calculating a company's net exposure to a particular market risk, we believe the quoted price (unadjusted) for these Level 1 instruments should be used when allocating the fair value to the individual units of account for presentation and disclosure purposes, to comply with ASC 820's requirement to measure Level 1 instruments at P\*Q.



# 11

## Fair value at initial recognition

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Initial Measurement*

##### **820-10-30-1**

The fair value measurement framework, which applies at both initial and subsequent measurement if **fair value** is required or permitted by other Topics, is discussed primarily in Section 820-10-35. This Section sets out additional guidance specific to applying the framework at initial measurement.

##### **820-10-30-2**

When an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability (an **entry price**). In contrast, the fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability (an **exit price**). Entities do not necessarily sell assets at the prices paid to acquire them. Similarly, entities do not necessarily transfer liabilities at the prices received to assume them.

##### **820-10-30-3**

In many cases, the transaction price will equal the fair value (for example, that might be the case when on the transaction date the transaction to buy an asset takes place in the market in which the asset would be sold).

##### **820-10-30-3A**

When determining whether fair value at initial recognition equals the transaction price, a reporting entity shall take into account factors specific to the transaction and to the asset or liability. For example, the transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:

- a. The transaction is between **related parties**, although the price in a related party transaction may be used as an input into a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms.
- b. The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.
- c. The **unit of account** represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the asset or liability measured at fair value is only one of the elements in the transaction (for example, in a **business combination**), the transaction includes unstated rights and privileges that are measured separately, in accordance with another Topic, or the transaction price includes **transaction costs**.
- d. The market in which the transaction takes place is different from the **principal market** (or **most advantageous market**). For example, those markets might be different if the reporting entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the **dealer market**.

##### **820-10-30-6**

If another Topic requires or permits a reporting entity to measure an asset or a liability initially at fair value and the transaction price differs from fair value, the reporting entity shall recognize the resulting gain or loss in earnings unless that Topic specifies otherwise.

## 11.1 Exit price versus entry price

ASC 820 defines fair value as the price to sell an asset or transfer a liability, that is, an exit price. Transaction price represents the price paid by the reporting entity to acquire an asset or received to assume a liability and is by definition an entry price. Conceptually, an exit price is different from an entry price as companies do not necessarily sell assets (or transfer liabilities) at the prices paid to acquire (or assume) them. This distinction is significant and can have important implications on the initial recognition of assets and liabilities at fair value.

### 11.1.1 Transaction price not equal to fair value at initial recognition

Prior to the issuance of Statement 157, there was a presumption in US GAAP that the transaction price represented the fair value of an asset or liability on its initial recognition.<sup>44</sup> While this presumption could be rebutted, it required a company to obtain persuasive evidence (e.g., observable market data) that the transaction price was not representative of fair value at initial recognition. While ASC 820 acknowledges that in many situations the transaction price equals the exit price and therefore represents fair value at initial recognition, it does not presume this to be the case.

ASC 820 provides certain factors that a company should consider in determining whether the transaction price represents the fair value of an asset or liability at initial recognition. For example, a transaction price may not represent fair value if the unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. This may be the case with a complex financial instrument where the transaction price includes a fee for structuring the transaction.

Another factor to consider is whether the market in which the company transacted for the item is different from the principal (or most advantageous) market for the asset or liability. For example, a securities dealer may acquire an asset in the retail market but the exit market for the instrument may be the inter-dealer market.

Although they are helpful in identifying the factors companies should consider in assessing whether a transaction price would equal fair value, the examples provided in ASC 820-10-30-3A are not intended to be exhaustive.

## 11.2 Day 1 gains and losses

The clarification in ASC 820 that the transaction price is not presumed to be fair value<sup>45</sup> allows for the recognition of inception (or Day 1) gains and losses in those instances where the transaction price does not represent the fair value of an asset or liability at initial recognition. In contrast to the requirements that previously existed in US GAAP, ASC 820 does not impose a reliability threshold for the recognition of gains or losses upon the initial measurement of an asset or liability at its fair value. As such, the recognition of Day 1 gains and losses is not prohibited, even for instruments whose fair value is measured using valuation models based on unobservable (i.e., Level 3) inputs.<sup>46</sup> However, in all instances, companies should have evidence to substantiate the amount by which fair value is assumed to differ from the transaction price.

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<sup>44</sup> Examples in the accounting literature where this presumption was historically articulated included paragraphs 7 and 27 in CON 7 and footnote 3 in EITF 02-3.

<sup>45</sup> As discussed in section 3.3.1, the transaction price presumption is still assumed in the initial measurement of guarantees at fair value in accordance with ASC 460-10-30-2.

<sup>46</sup> Level 3 inputs are discussed in section 17.

While valuation techniques used to measure fair value, such as a pricing model, should maximize the use of observable inputs and minimize the use of unobservable inputs, unobservable inputs may be used to measure fair value if there is little or no market activity for the asset or liability at the measurement date. The guidance is clear, however, that even in these situations, the objective of a fair value measurement remains an exit price from the perspective of a market participant that holds the asset or owes the liability.

A company should not assume that its pricing model's value is indicative of fair value, but rather should consider whether this value incorporates all the assumptions that market participants would use in pricing the asset or liability. These include assumptions about risk (e.g., the risk premium that market participants would require for the risk inherent in the cash flows of the instrument, the pricing model, the unobservability of the inputs used) as well as profit margin. In many cases, an adjustment to a pricing model's value may be required to appropriately capture market participant assumptions regarding the fair value of the asset or liability.

Importantly, the clarification of fair value as an exit price affects the accounting by retail customers as much as financial institutions (i.e., dealers). For example, retail customers whose entry and exit market for an asset (or liability) measured at fair value is with a wholesaler (e.g., a dealer) could experience a Day 1 loss, because the price at which a wholesaler would sell an asset to a retail customer would generally exceed the price a wholesaler would pay to acquire that asset from a retail customer (this difference in price is commonly referred to as the bid-ask spread in many financial markets). (Refer to Question 11.2-4 for additional discussion on Day 1 losses for derivative end-users.)

## 11.3

### Related parties

Under both ASC 820 and ASC 850, related parties are defined to include the following:

- ▶ Affiliates of the entity
- ▶ Entities for which investments in their equity securities would be required, absent the election of the fair value option under the Fair Value Option Subsections of ASC 825, to be accounted for by the equity method by the investing entity
- ▶ Trusts for the benefit of employees (e.g., pension and profit-sharing trusts that are managed by or under the trusteeship of management)
- ▶ Principal owners of the entity and members of their immediate families
- ▶ Management of the entity and members of their immediate families
- ▶ Other parties with which the entity may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests
- ▶ Other parties that can significantly influence the management or operating policies of the transacting parties or that have an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests

As discussed in section 7, the definition of market participants is clear that buyers and sellers for the item being measured are not related parties. That is, the hypothetical transaction used to determine fair value in ASC 820 is assumed to take place between market participants that are independent from one another. However, ASC 820 indicates that the price in a related party transaction may be used as an input into a fair value measurement if there is evidence the transaction was entered into at market terms. The Board believes such an approach is consistent with the requirements in ASC 850, which notes

that “[t]ransactions involving related parties cannot be presumed to be carried out on an arm’s-length basis, as the requisite conditions of competitive, free-market dealings may not exist. Representations about transactions with related parties, if made, shall not imply that the related party transactions were consummated on terms equivalent to those that prevail in arm’s-length transactions unless such representations can be substantiated.”<sup>47</sup> Evidence to support that a related party transaction was executed at market terms may be difficult to substantiate absent corroborating market data from transactions between independent parties.

## Questions and interpretive responses

**Question 11.2-1** Is it appropriate to recognize inception gains (or losses) based on a model value that utilizes significant unobservable inputs for derivative instruments that primarily trade in a one-way market (i.e., a market in which substantially all of the activity is in one direction)? What factors should a company consider when estimating the fair value of these instruments?

In determining whether the transaction price represents fair value at initial recognition, a company should consider the individual facts and circumstances of the transaction. While not intended to be all-inclusive, the list in ASC 820-10-30-3A provides examples of situations where a transaction price may not equal fair value and therefore support the recognition of an inception gain (or loss). If factors indicate that the transaction price does not represent fair value, a company is not precluded from recognizing an inception gain (or loss) even if the fair value estimate is deemed to be a Level 3 measurement.

For example, a derivatives dealer may potentially recognize a gain at the inception of a derivative contract for which no readily determinable exit price exists, if the dealer can support its assertion that the fair value of the instrument differs from its transaction price. This might be the case when the exit market for the derivative is the inter-dealer market (i.e., market participants would be other dealers), but the transaction took place in the retail market (i.e., the counterparty to the transaction is a customer). However, we believe evidence to substantiate the amount by which the derivative’s fair value is assumed to exceed the transaction price is needed prior to recognizing a Day 1 gain.

Importantly, ASC 820 is clear that a fair value measurement should be adjusted for market participant assumptions about risk, including compensation that market participants would require for bearing any uncertainty in the cash flows of the instrument. As such, adjustments for uncertainty associated with a valuation technique or certain inputs used to measure fair value are required if market participants would incorporate such risk adjustments when pricing the asset or liability. A measurement (e.g., a “mark-to-model” measurement) that ignores these market participant adjustments for risk is not representative of fair value.

In addition to adjustments market participants would require for risk and uncertainty, the fair value for such derivative instruments should also consider the fact that, while the inter-dealer price (i.e., the exit price in a hypothetical transaction) may differ from the retail price (i.e., transaction price), another dealer would also expect to earn a profit on the transaction. Accordingly, a pricing model’s value should incorporate assumptions regarding the appropriate profit margin that market participants (i.e., other dealers) would demand when estimating the instrument’s fair value at inception.

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<sup>47</sup> ASC 850-10-50-5.

**Question 11.2-2 May a dealer recognize a Day 1 gain (or loss) if the transaction is originally entered into with another dealer (i.e., entry and exit markets for the transaction are deemed to be the same)?**

ASC 820 contains no explicit prohibitions on the recognition of Day 1 gains (or losses), even in situations where the entry and exit markets are the same. Therefore, it may be acceptable in certain situations for a dealer to recognize a Day 1 gain (or loss) on a transaction where the entry and exit markets are deemed to be the same (e.g., the inter-dealer market). A difference in the price within the bid-ask spread at which a dealer could exit a transaction versus where it entered the transaction could be one reason to record an inception gain or loss. ASC 820 clarifies that the exit price within the bid-ask spread that is most representative of fair value in the circumstances should be used to measure fair value, regardless of where in the fair value hierarchy the input falls.

Notwithstanding the guidance in ASC 820, the SEC staff has cautioned registrants of its belief that in many instances the recognition of inception gains may not be appropriate.<sup>48</sup> For example, the SEC staff noted that the recognition of an inception gain based on a valuation model may not be appropriate when the initial transaction occurs in the reporting entity's principal market, absent the satisfaction of any of the criteria in ASC 820-10-30-3A. While the SEC staff has indicated that it would consider the bid-ask spread dynamics discussed above as potentially supporting inception gains or losses, the SEC staff also noted that the point within the bid-ask spread used to measure fair value is not an arbitrary choice, but rather should incorporate circumstances specific to the reporting entity and the transaction, and be applied in a consistent manner. (Refer to section 13.3 for additional discussion on measuring the fair value of assets or liabilities that trade in markets with bid-ask spreads.)

**Question 11.2-3 May a company recognize a Day 1 gain or loss on a bifurcated derivative related to a hybrid instrument?**

ASC 815 requires an embedded derivative that must be separated from its host contract to be measured at fair value. ASC 815-15-30-2 states that the initial carrying value assigned to the host contract is determined as the difference between the basis of the hybrid financial instrument and the fair value of the embedded derivative.

As such, a company would effectively be precluded from recognizing a gain or loss on the initial recognition of an embedded derivative since the company is required to determine the initial carrying value of the host contract as the difference between the basis of the hybrid financial instrument (i.e., transaction price) and the fair value of the embedded derivative. Under this model, any potential Day 1 gains or losses associated with the bifurcated derivative would not be recognized immediately in earnings but rather included in the basis of the host contract. Depending on the nature of the host contract, the gain (or loss) may be amortized into earnings over the life of the host contract, such as if the host is a debt instrument.

However, if the company elects to measure the entire hybrid financial instrument at fair value in accordance with the Fair Value Option Subsections of ASC 825 (and therefore is not required to bifurcate the embedded derivative), a Day 1 gain or loss may be recognized on the hybrid instrument if the transaction price is determined to differ from the fair value of the entire instrument.

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<sup>48</sup> This issue was addressed by the SEC staff at the 2006 AICPA National Conference on Current SEC and PCAOB Developments.

**Question 11.2-4** Does the application of ASC 820 result in end-users recognizing Day 1 losses for their OTC derivative transactions?

ASC 820 clarifies that exit prices and entry prices are conceptually different. While a transaction price (an entry price) for an asset or liability may equal its exit price in certain instances, the transaction price is not presumed to represent the fair value of the asset or liability at initial recognition. If the transaction price is not equal to the exit price for the asset or liability, a company would record a Day 1 gain or loss.

The following example from ASC 820 discusses how an interest rate swap at initial recognition may be measured differently by a retail counterparty (i.e., an end-user) and a dealer.

**Excerpt from Accounting Standards Codification**

**Fair Value Measurement – Overall**

*Implementation Guidance and Illustrations*

**Example 5: Transaction Prices and Fair Value at Initial Recognition—Interest Rate Swap at Initial Recognition**

**820-10-55-46**

This Topic (see paragraphs 820-10-30-3 through 30-3A) clarifies that in many cases the transaction price, that is, the price paid (received) for a particular asset (liability), will represent the fair value of that asset (liability) at initial recognition, but not presumptively. This Example illustrates when the price in a transaction involving a derivative instrument might (and might not) equal the fair value of the instrument at initial recognition.

**820-10-55-47**

Entity A (a retail counterparty) enters into an interest rate swap in a retail market with Entity B (a dealer) for no initial consideration (that is, the transaction price is zero). Entity A can access only the retail market. Entity B can access both the retail market (that is, with retail counterparties) and the **dealer market** (that is, with dealer counterparties).

**820-10-55-48**

From the perspective of Entity A, the retail market in which it initially entered into the swap is the principal market for the swap. If Entity A were to transfer its rights and obligations under the swap, it would do so with a dealer counterparty in that retail market. In that case, the transaction price (zero) would represent the fair value of the swap to Entity A at initial recognition, that is, the price that Entity A would receive to sell or pay to transfer the swap in a transaction with a dealer counterparty in the retail market (that is, an **exit price**). That price would not be adjusted for any incremental (transaction) costs that would be charged by that dealer counterparty.

**820-10-55-49**

From the perspective of Entity B, the dealer market (not the retail market) is the principal market for the swap. If Entity B were to transfer its rights and obligations under the swap, it would do so with a dealer in that market. Because the market in which Entity B initially entered into the swap is different from the principal market for the swap, the transaction price (zero) would not necessarily represent the fair value of the swap to Entity B at initial recognition.

The example above seems to indicate that retail counterparties may not incur a gain or loss at inception because they are assumed to transact and exit in the same principal market (the retail market with securities dealers). However, this example does not address the bid-ask spread.

The bid-ask spread is the difference between the price a prospective dealer is willing to pay for an instrument (the “bid” price) and the price at which the dealer would sell that same instrument (the “ask” price). The bid-ask spread allows the dealer to earn a profit as a market maker in the OTC marketplace. Bid-ask spreads may differ by dealer, market and instrument type.

ASC 820 notes that instruments that trade in markets with bid-ask spreads (e.g., a dealer market) should be measured at the price within the bid-ask spread that is most representative of fair value in the circumstances. (Refer to section 13 for additional discussion on pricing within the bid-ask spread.) The difference in the price within the bid-ask spread where the retail counterparty could hypothetically exit the instrument and the price within the bid-ask spread that the retail counterparty actually transacted for the instrument, could result in an inception loss for the retail counterparty.

The FASB has acknowledged that the fair value of an interest rate swap may differ from its transaction price because of the bid-ask spread, even when the entry and exit markets for the swap are identical. Indeed, because the FASB did not intend for ASC 820 to preclude the use of the shortcut method for hedge accounting under ASC 815, it modified the requirement that the fair value of an interest rate swap must be zero at the inception of the hedging relationship to qualify for the shortcut method. ASC 815-20-25-104(b) states that “the fair value of the swap may be other than zero at the inception of the hedging relationship only if the swap was entered into at the relationship’s inception, the transaction price of the swap was zero in the entity’s principal market (or most advantageous market), and the difference between transaction price and fair value is attributable solely to differing prices within the bid-ask spread between the entry transaction and a hypothetical exit transaction.”

In addition to the effect of the bid-ask spread, retail counterparties may potentially recognize additional losses or expenses at the inception of derivative contracts. For example, if the transaction price for a complex derivative includes a structuring fee, the retail counterparty may recognize a loss when measuring the fair value of the derivative. Because the transaction price includes the price for the derivative instrument, as well as the fee paid by the retail counterparty to the dealer for structuring the transaction, the unit of account represented by the transaction price differs from the unit of account for the instrument being measured, as discussed in ASC 820-10-30-3A(c).



# 12

## Valuation techniques

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Valuation Techniques*

##### **820-10-35-24**

A reporting entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

##### **820-10-35-24A**

The objective of using a valuation technique is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. Three widely used valuation approaches are the **market approach**, **cost approach**, and **income approach**. The main aspects of valuation techniques consistent with those approaches are summarized in paragraphs 820-10-55-3A through 55-3G. An entity shall use valuation techniques consistent with one or more of those approaches to measure fair value.

##### **820-10-35-24B**

In some cases, a single valuation technique will be appropriate (for example, when valuing an asset or a liability using quoted prices in an **active market** for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate (for example, that might be the case when valuing a reporting unit). If multiple valuation techniques are used to measure fair value, the results (that is, respective indications of fair value) shall be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

##### **820-10-35-24C**

If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, a reporting entity shall ensure that those valuation techniques reflect observable market data (for example, the price for a similar asset or liability) at the measurement date.

##### *Implementation Guidance and Illustrations*

##### *Market Approach*

##### **820-10-55-3A**

The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business.

**820-10-55-3B**

For example, valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgment, considering qualitative and quantitative factors specific to the measurement.

**820-10-55-3C**

Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the specific securities, but rather relying on the securities' relationship to other benchmark quoted securities.

**Cost Approach****820-10-55-3D**

The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).

**820-10-55-3E**

From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. That is because a market participant buyer would not pay more for an asset than the amount for which it could replace the service capacity of that asset. Obsolescence encompasses physical deterioration, functional (technological) obsolescence, and economic (external) obsolescence and is broader than depreciation for financial reporting purposes (an allocation of historical cost) or tax purposes (using specified service lives). In many cases, the current replacement cost method is used to measure the fair value of tangible assets that are used in combination with other assets or with other assets and liabilities.

**Income Approach****820-10-55-3F**

The income approach converts future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.

**820-10-55-3G**

Those valuation techniques include, for example, the following:

- a. **Present value** techniques
- b. Option-pricing models, such as the Black-Scholes-Merton formula or a binomial model (that is, a lattice model), that incorporate present value techniques and reflect both the time value and the intrinsic value of an option
- c. The multiperiod excess earnings method, which is used to measure the fair value of some intangible assets.

## 12.1 Valuation techniques (updated September 2022)

ASC 820 recognizes three valuation approaches to measure fair value: the market approach, cost approach and income approach. These approaches are consistent with generally accepted valuation methodologies used outside of financial reporting. An entity shall use valuation techniques (e.g., matrix pricing, present value techniques) consistent with one or more of those approaches to measure fair value. Not all three approaches are applicable to all types of assets or liabilities. However, when measuring the fair value of an asset or liability, a company should use all valuation techniques that are appropriate and for which adequate data is available. The following table summarizes the approaches that would most likely be used to value each asset type:

Asset type	Market approach	Income approach	Cost approach
Business	✓	✓	
Real property	✓	✓	✓
Machinery and equipment	✓	✓	✓
Intangible assets		✓	
Financial assets	✓	✓	

The fair value hierarchy does not prioritize the valuation techniques to be used; instead, it prioritizes the inputs used in the application of these techniques. When selecting valuation technique(s), companies should consider the exit market for the asset or liability and the nature of the asset or liability being measured. Determining the appropriate technique(s) requires judgment, sufficient knowledge of the item being measured and an adequate level of expertise regarding the valuation techniques.

In addition, specific methodologies may differ under each approach. For example, when valuing intangible assets, different applications of the income approach such as the multiperiod excess earnings method and the relief-from-royalty method may be used depending on the nature of the asset. In many cases, it may be appropriate for valuation professionals to evaluate the appropriateness of each methodology based on their expertise and judgment.

The unique characteristics of an asset or liability and the availability of observable prices affect the number of valuation approaches and/or techniques used in a fair value analysis. For example, valuing a reporting unit often requires multiple valuation approaches, such as an income approach based on the reporting unit's expected cash flows and a market approach using observable earnings multiples of similar companies. On the other hand, financial assets that frequently trade in active markets are often valued using only a market approach given the availability and relevance of observable data.

Even in those instances when using a single valuation approach is deemed sufficient, companies should be aware of changing circumstances that may necessitate the use of multiple valuation approaches. A significant decrease in the volume and level of activity for an asset or liability could represent such a situation. In these cases, observable transactions that once formed the basis for the fair value measurement may cease to exist or may no longer be determinative of fair value and thus require an adjustment. ASC 820-10-35-54F indicates that a change in valuation technique or the use of multiple techniques may be appropriate in instances where there has been a significant reduction in the level of activity for the asset or liability (e.g., the use of an income approach, such as a discounted cash flow model, in addition to, or in place of, a market approach).

Regardless of the technique(s) used, the objective of a fair value measurement remains the same, that is, an exit price under current market conditions from the perspective of market participants. As such, when the transaction price is determined to represent fair value at initial recognition, ASC 820 requires a valuation technique based on unobservable inputs to be calibrated to that transaction price. Subsequent to initial recognition, the valuation technique should continue to be calibrated to observable market data when available. Calibration ensures that a valuation technique incorporates current market conditions and may also help to identify potential deficiencies in the valuation model.

## 12.2 Evaluation of valuation techniques

While the use of a single valuation technique may be appropriate in measuring the fair value of certain assets and liabilities, in many situations, more than one valuation technique should be applied. For example, when sufficient data is available, valuation techniques consistent with both the market approach and income approach are commonly used. In these instances, the market and income approach should generally provide consistent indications of fair value and serve to validate each other.

In cases where multiple techniques are used, the results of each technique must be evaluated in order to determine the fair value of the asset or liability. Evaluating multiple valuation techniques does not require that the respective value indications must be made to equal (see illustrative example in section 12.2.2). Rather, ASC 820-10-35-24B states that a range of value indications obtained from multiple techniques should be evaluated to determine the point within that range that is most representative of fair value in the circumstances.

If the results from different valuation techniques are similar, the issue of weighting multiple value indications becomes less important since the assigned weights will not significantly alter the fair value measurement. However, when indications of value are disparate, companies should seek to understand why significant differences exist and what assumptions might contribute to the variance. ASC 820-10-35-54F indicates that when evaluating results from multiple valuation techniques, a wide range of fair value measurements may be an indication that further analysis is needed. For example, divergent results between valuation techniques using a market approach and income approach may indicate a misapplication of one or both of the approaches and would likely necessitate additional analysis.

The following should be considered when evaluating valuation techniques:

- ▶ Whether one valuation technique results in a value indication that is more representative of fair value than another technique
- ▶ Whether inputs used in one valuation technique are more readily observable or require fewer adjustments
- ▶ Whether the resulting value range from one valuation technique is narrower than the range indicated by other valuation techniques
- ▶ If the application of valuation techniques using the market approach and income approach produces divergent results, whether one technique may have been misapplied or depends on inputs considered to be less reliable

Because the selection, application and evaluation of valuation techniques can be complex, companies should consider the need to use valuation professionals to assist in performing fair value measurements.

### 12.2.1 Weighting different indications of value

Although the guidance refers to “weighting” results of different valuation techniques, we do not believe a company is required to explicitly apply percentage weights to each technique to determine fair value (although this may be appropriate in certain cases). The guidance does not prescribe a specific weighting methodology (e.g., explicit assignment of percentages versus qualitative assessment of value indications), so evaluating the indications of value from different techniques will require judgment based on the merits of each methodology and their respective assumptions.

Identifying a single point within a range is not the same as finding the point within the range that is most representative of fair value. As such, simply assigning arbitrary weights to different indications of value is not appropriate. The weighting of multiple value indications is a process that requires significant judgment and entails a working knowledge of the different valuation techniques and inputs. Such knowledge is necessary to properly assess the relevance of these methodologies and inputs to the asset or liability being measured. For example, in certain instances it may be more appropriate to rely primarily on the fair value indicated by the technique that maximizes the use of observable inputs and minimizes the use of unobservable inputs. In all cases, companies are expected to document how they considered the various indications of value, including how they evaluated qualitative and quantitative factors, in determining fair value.

### 12.2.2 Illustrative examples on the use of multiple valuation techniques

The following examples from ASC 820 illustrate situations where the use of multiple valuation techniques is appropriate and, when used, how different indications of value are assessed.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Implementation Guidance and Illustrations*

##### *Example 3: Use of Multiple Valuation Techniques*

##### *Case A: Machine Held and Used*

##### **820-10-55-36**

A reporting entity acquires a machine in a business combination. The machine will be held and used in its operations. The machine was originally purchased by the acquired entity from an outside vendor and, before the business combination, was customized by the acquired entity for use in its operations. However, the customization of the machine was not extensive. The acquiring entity determines that the asset would provide maximum value to market participants through its use in combination with other assets or with other assets and liabilities (as installed or otherwise configured for use). There is no evidence to suggest that the current use of the machine is not its highest and best use. Therefore, the highest and best use of the machine is its current use in combination with other assets or with other assets and liabilities.

##### **820-10-55-37**

The reporting entity determines that sufficient data are available to apply the **cost approach** and, because the customization of the machine was not extensive, the **market approach**. The **income approach** is not used because the machine does not have a separately identifiable income stream from which to develop reliable estimates of future cash flows. Furthermore, information about short-term and intermediate-term lease rates for similar used machinery that otherwise could be used to project an income stream (that is, lease payments over remaining service lives) is not available. The market and cost approaches are applied as follows:

- a. The market approach is applied using quoted prices for similar machines adjusted for differences between the machine (as customized) and the similar machines. The measurement reflects the price that would be received for the machine in its current condition (used) and location (installed and configured for use). The fair value indicated by that approach ranges from \$40,000 to \$48,000.

- b. The cost approach is applied by estimating the amount that would be required currently to construct a substitute (customized) machine of comparable utility. The estimate takes into account the condition of the machine and the environment in which it operates, including physical wear and tear (that is, physical deterioration), improvements in technology (that is, functional obsolescence), conditions external to the condition of the machine such as a decline in the market demand for similar machines (that is, economic obsolescence), and installation costs. The fair value indicated by that approach ranges from \$40,000 to \$52,000.

#### **820-10-55-38**

The reporting entity determines that the higher end of the range indicated by the market approach is most representative of fair value and, therefore, ascribes more weight to the results of the market approach. That determination is made on the basis of the relative subjectivity of the inputs, taking into account the degree of comparability between the machine and the similar machines. In particular:

- a. The inputs used in the market approach (quoted prices for similar machines) require fewer and less subjective adjustments than the inputs used in the cost approach.
- b. The range indicated by the market approach overlaps with, but is narrower than, the range indicated by the cost approach.
- c. There are no known unexplained differences (between the machine and the similar machines) within that range.

Accordingly, the reporting entity determines that the fair value of the machine is \$48,000.

#### **820-10-55-38A**

If customization of the machine was extensive or if there were not sufficient data available to apply the market approach (for example, because market data reflect transactions for machines used on a standalone basis, such as, a scrap value for specialized assets, rather than machines used in combination with other assets or with other assets and liabilities), the reporting entity would apply the cost approach. When an asset is used in combination with other assets or with other assets and liabilities, the cost approach assumes the sale of the machine to a market participant buyer with the complementary assets and the associated liabilities. The price received for the sale of the machine (that is, an exit price) would not be more than either of the following:

- a. The cost that a market participant buyer would incur to acquire or construct a substitute machine of comparable utility
- b. The economic benefit that a market participant buyer would derive from the use of the machine.

#### **Case B: Software Asset**

#### **820-10-55-39**

A reporting entity acquires a group of assets. The asset group includes an income-producing software asset internally developed for licensing to customers and its complementary assets (including a related database with which the software asset is used) and the associated liabilities. To allocate the cost of the group to the individual assets acquired, the reporting entity measures the fair value of the software asset. The reporting entity determines that the software asset would provide maximum value to market participants through its use in combination with other assets or with other assets and liabilities (that is, its complementary assets and the associated liabilities). There is no evidence to suggest that the current use of the software asset is not its highest and best use. Therefore, the highest and best use of the software asset is its current use. (In this case, the licensing of the software asset, in and of itself, does not indicate that the fair value of the asset would be maximized through its use by market participants on a standalone basis.)

**820-10-55-40**

The reporting entity determines that, in addition to the income approach, sufficient data might be available to apply the cost approach but not the market approach. Information about market transactions for comparable software assets is not available. The income and cost approaches are applied as follows:

- a. The income approach is applied using a present value technique. The cash flows used in that technique reflect the income stream expected to result from the software asset (license fees from customers) over its economic life. The fair value indicated by that approach is \$15 million.
- b. The cost approach is applied by estimating the amount that currently would be required to construct a substitute software asset of comparable utility (that is, taking into account functional and economic obsolescence). The fair value indicated by that approach is \$10 million.

**820-10-55-41**

Through its application of the cost approach, the reporting entity determines that market participants would not be able to construct a substitute software asset of comparable utility. Some characteristics of the software asset are unique, having been developed using proprietary information, and cannot be readily replicated. The reporting entity determines that the fair value of the software asset is \$15 million, as indicated by the income approach.

Both of the above examples highlight situations where it was appropriate to use more than one valuation technique to estimate fair value. Although the indication of value from the valuation technique using the cost approach was ultimately not given much weight in either example, performing this valuation technique was an important part of the estimation process. Even when a particular valuation technique is given little weight, its application can highlight specific characteristics of the item being measured and may help in assessing the value indications from other techniques.

**12.3****Consistent valuation methodology****Excerpt from Accounting Standards Codification****Fair Value Measurement – Overall****Valuation Techniques****820-10-35-25**

Valuation techniques used to measure fair value shall be applied consistently. However, a change in a valuation technique or its application (for example, a change in its weighting when multiple valuation techniques are used or a change in an adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, any of the following events take place:

- a. New markets develop.
- b. New information becomes available.
- c. Information previously used is no longer available.
- d. Valuation techniques improve.
- e. Market conditions change.

**820-10-35-26**

Revisions resulting from a change in the valuation technique or its application shall be accounted for as a change in accounting estimate. (See paragraph 250-10-45-17. However, paragraph 250-10-50-5 explains that the disclosures in Topic 250 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.)

**Disclosure*****Changes in Valuation Techniques or Their Application*****820-10-50-7**

As discussed in paragraph 250-10-50-5, the disclosures required by Topic 250 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

ASC 820 indicates that valuation techniques should be applied on a consistent basis among similar assets and across reporting periods. However, when changing a valuation technique (or the relative importance of one technique over another) results in a more representative fair value measurement, such a change is appropriate and should be implemented.

ASC 820-10-35-25 provides examples of circumstances that may trigger a change in valuation technique or relative weights assigned to valuation techniques. In addition, other factors such as a change in the exit market or the highest and best use of a nonfinancial asset by market participants could warrant a change in valuation techniques in certain circumstances. Under ASC 820, a change in valuation technique or to the weighting of valuation techniques is considered a change in an accounting estimate.<sup>49</sup> However, when a valuation technique is applied in error, the correction of the technique would be accounted as a correction of an error in accordance with ASC 250, *Accounting Changes and Error Corrections*.

## 12.4 **Determining fair value when there has been a significant decrease in activity for an asset or liability**

Estimating fair value poses unique challenges when there has been a significant decrease in the level of activity or volume for the asset or liability being measured. Section 6 identifies factors for determining when a significant decrease in activity has occurred and whether observed transactions in these situations are orderly. Section 6 also addresses the need to assess the relevance of observable market data when activity has significantly decreased and whether adjustments to quoted prices may be warranted. This section addresses how a significant decrease in the level of activity for an asset or liability can influence which valuation technique(s) are used and how those techniques are applied.

Determining fair value when market activity for the item being measured has significantly declined requires the use of judgment and consideration of the specific facts and circumstances. However, the core concepts of the fair value framework continue to apply.

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<sup>49</sup> ASC 820-10-50-7 notes that the disclosures required by ASC 250 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

The following example from ASC 820 highlights some key valuation considerations for assets that trade in markets that have experienced a significant decrease in volume and level of activity.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Implementation Guidance and Illustrations*

#### **Example 8: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability Has Significantly Decreased**

##### **820-10-55-90**

This Example illustrates the use of judgment when measuring the fair value of a **financial asset** when there has been a significant decrease in the volume or level of activity for the asset when compared with normal market activity for the asset (or similar assets). (See paragraphs 820-10-35-54C through 35-54H.) This Example has all of the following assumptions:

- a. Entity A invests in a junior AAA-rated tranche of a residential mortgage-backed security on January 1, 20X8 (the issue date of the security).
- b. The junior tranche is the third most senior of a total of seven tranches.
- c. The underlying collateral for the residential mortgage-backed security is unguaranteed nonconforming residential mortgage loans that were issued in the second half of 20X6.
- d. At March 31, 20X9 (the measurement date), the junior tranche is now A-rated. This tranche of the residential mortgage-backed security was previously traded through a **brokered market**. However, trading volume in that market was infrequent, with only a few transactions taking place per month from January 1, 20X8, to June 30, 20X8, and little, if any, trading activity during the nine months before March 31, 20X9.

##### **820-10-55-91**

Entity A takes into account the factors in paragraph 820-10-35-54C to determine whether there has been a significant decrease in the volume or level of activity for the junior tranche of the residential mortgage-backed security in which it has invested. After evaluating the significance and relevance of the factors, Entity A concludes that the volume and level of activity of the junior tranche of the residential mortgage-backed security have significantly decreased. Entity A supported its judgment primarily on the basis that there was little, if any, trading activity for an extended period before the measurement date.

##### **820-10-55-92**

Because there is little, if any, trading activity to support a valuation technique using a market approach, Entity A decides to use an income approach using the discount rate adjustment technique described beginning in paragraph 820-10-55-10 to measure the fair value of the residential mortgage-backed security at the measurement date. (See also paragraphs 820-10-35-36 through 35-36A.) Entity A uses the contractual cash flows from the residential mortgage-backed security. The discount rate adjustment technique described beginning in paragraph 820-10-55-10 would not be appropriate when determining whether there has been an other-than-temporary impairment and/or a change in yield in accordance with paragraph 325-40-35-4 when that technique uses contractual cash flows rather than most likely cash flows.

**Pending Content:**

**Transition Date:** (P) December 16, 2019; (N) December 16, 2022 | **Transition Guidance:** 326-10-65-1

Because there is little, if any, trading activity to support a valuation technique using a market approach, Entity A decides to use an income approach using the discount rate adjustment technique described beginning in paragraph 820-10-55-10 to measure the fair value of the residential mortgage-backed security at the measurement date. (See also paragraphs 820-10-35-36 through 35-36A.) Entity A uses the contractual cash flows from the residential mortgage-backed security. The discount rate adjustment technique described beginning in paragraph 820-10-55-10 would not be appropriate when determining whether there has been a credit loss and/or a change in yield in accordance with paragraph 325-40-35-4 when that technique uses contractual cash flows rather than most likely cash flows.

**820-10-55-93**

Entity A then estimates a discount rate (that is, a market rate of return) to discount those contractual cash flows. The market rate of return is estimated using both of the following:

- a. The risk-free rate of interest
- b. Estimated adjustments for differences between the available market data and the junior tranche of the residential mortgage-backed security in which Entity A has invested. Those adjustments reflect available market data about expected nonperformance and other risks (for example, default risk, collateral value risk, and liquidity risk) that market participants would take into account when pricing the asset in an orderly transaction at the measurement date under current market conditions.

**820-10-55-94**

Entity A took into account the following information when estimating the adjustments in the preceding paragraph:

- a. The credit spread for the junior tranche of the residential mortgage-backed security at the issue date as implied by the original transaction price
- b. The change in credit spread implied by any observed transactions from the issue date to the measurement date for comparable residential mortgage-backed securities or on the basis of relevant indices
- c. The characteristics of the junior tranche of the residential mortgage-backed security compared with comparable residential mortgage-backed securities or indices, including all of the following:
  1. The quality of the underlying assets, that is, information about all of the following:
    - i. Delinquency rates
    - ii. Foreclosure rates
    - iii. Loss experience
    - iv. Prepayment rates.
  2. The seniority or subordination of the residential mortgage-backed security tranche held
  3. Other relevant factors.
- d. Relevant reports issued by analysts and rating agencies
- e. Quoted prices from third parties such as brokers or pricing services.

**820-10-55-95**

Entity A estimates that one indication of the market rate of return that market participants would use when pricing the junior tranche of the residential mortgage-backed security is 12 percent (1,200 basis points). This market rate of return was estimated as follows:

- a. Begin with 300 basis points for the relevant risk-free rate of interest at March 31, 20X9.
- b. Add 250 basis points for the credit spread over the risk-free rate when the junior tranche was issued in January 20X8.
- c. Add 700 basis points for the estimated change in the credit spread over the risk-free rate of the junior tranche between January 1, 20X8, and March 31, 20X9. This estimate was developed on the basis of the change in the most comparable index available for that time period.
- d. Subtract 50 basis points (net) to adjust for differences between the index used to estimate the change in credit spreads and the junior tranche. The referenced index consists of subprime mortgage loans, whereas Entity A's residential mortgage-backed security consists of similar mortgage loans with a more favorable credit profile (making it more attractive to market participants). However, the index does not reflect an appropriate liquidity risk premium for the junior tranche under current market conditions. Thus, the 50 basis point adjustment is the net of two adjustments.
  1. The first adjustment is a 350 basis point subtraction, which was estimated by comparing the implied yield from the most recent transactions for the residential mortgage-backed security in June 20X8 with the implied yield in the index price on those same dates. There was no information available that indicated that the relationship between Entity A's security and the index has changed.
  2. The second adjustment is a 300 basis point addition, which is Entity A's best estimate of the additional liquidity risk inherent in its security (a cash position) when compared with the index (a synthetic position). This estimate was derived after taking into account liquidity risk premiums implied in recent cash transactions for a range of similar securities.

**820-10-55-96**

As an additional indication of the market rate of return, Entity A also takes into account 2 recent indicative quotes (that is, nonbinding quotes) provided by reputable brokers for the junior tranche of the residential mortgage-backed security that imply yields of 15 to 17 percent. Entity A is unable to evaluate the valuation technique(s) or inputs used to develop the quotes. However, Entity A is able to confirm that the quotes do not reflect the results of transactions.

**820-10-55-97**

Because Entity A has multiple indications of the market rate of return that market participants would take into account when measuring fair value, it evaluates and weights the respective indications of the rate of return, considering the reasonableness of the range indicated by the results.

**820-10-55-98**

Entity A concludes that 13 percent is the point within the range of indications that is most representative of fair value under current market conditions. Entity A places more weight on the 12 percent indication (that is, its own estimate of the market rate of return) for the following reasons:

- a. Entity A concluded that its own estimate appropriately incorporated the risks (for example, default risk, collateral value risk, and liquidity risk) that market participants would use when pricing the asset in an orderly transaction under current market conditions.
- b. The broker quotes were nonbinding and did not reflect the results of transactions, and Entity A was unable to evaluate the valuation technique(s) or inputs used to develop the quotes.

In the example above, Entity A uses an income approach (i.e., discount rate adjustment technique<sup>50</sup>) to estimate the fair value of its residential mortgage-backed security (RMBS), because limited trading activity precluded the use of a market approach as of the measurement date. This example illustrates that the entity's use of an income approach does not change the objective of the fair value measurement, which is a current exit price. Valuation models should take into account all the factors that market participants would consider when pricing an asset or liability.<sup>51</sup> The discount rate used by Entity A, for example, tries to incorporate all of the risks (e.g., liquidity risk, nonperformance risk) market participants would consider in pricing the RMBS under current market conditions.

In its application of the income approach, Entity A prioritized observable inputs (to the extent available) over unobservable inputs. In addition, Entity A assessed market-based data from various sources to estimate the discount rate. For example, the entity estimated the change in the credit spread of the RMBS since its issuance based on spread changes observed from the most comparable index, for which trades continue to occur. Using the best available market information, the entity adjusted this input to account for differences between the observed index and the RMBS. These adjustments include the entity's assessment of the additional liquidity risk inherent in the RMBS compared to the index.

ASC 820 indicates that a company may use its own internal assumptions when relevant observable market data does not exist. However, if reasonably available data indicates that market participant assumptions would differ, the entity should adjust its assumptions to incorporate that information. It is important to note that relevant market data may not be limited to transactions for the identical asset or liability being measured. In the above example, Entity A considered implied liquidity risk premiums from recent transactions for a range of similar securities to estimate the incremental premium market participants would demand for its RMBS in the current market (as compared to the benchmark spread).

In addition, Entity A considered two indicative broker quotes to estimate an appropriate discount rate for its RMBS. Although these quotes are specific to the RMBS being valued, Entity A put less weight on these quotes since they are not binding and are not based on actual transactions. Moreover, Entity A was unable to evaluate the valuation techniques and underlying data used by the brokers.

Importantly, the illustrative example is not intended to imply that an entity's own assumptions carry more weight than non-binding broker quotes. Rather, the example illustrates that each indication of value needs to be assessed based on the extent these indications rely on observable versus unobservable inputs.

Entity A was able to corroborate many of the assumptions used in developing the discount rate with relevant observable market data. As a result, the decision by the entity to place additional weight on its own market-corroborated assumptions (and less on the broker quotes) was warranted. When differences between broker quotes or pricing service data and an entity's own determination of value are significant, management should seek to understand the reasons behind these differences, if possible.

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<sup>50</sup> Section 21 provides a detailed discussion of the discount rate adjustment technique and other present value techniques.

<sup>51</sup> Liquidity, credit or any other risk factors market participants would consider in pricing the asset or liability may require adjustments to model values if such factors are not sufficiently captured in the model.

# 13

## Inputs to valuation techniques



### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Inputs to Valuation Techniques*

#### *General Principles*

#### **820-10-35-36**

Valuation techniques used to measure fair value shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

#### **820-10-35-36A**

Examples of markets in which inputs might be observable for some assets and liabilities (for example, financial instruments) include **exchange markets, dealer markets, brokered markets, and principal-to-principal markets.**

#### **820-10-35-36B**

A reporting entity shall select inputs that are consistent with the characteristics of the asset or liability that market participants would take into account in a transaction for the asset or liability (see paragraphs 820-10-35-2B through 35-2C). In some cases, those characteristics result in the application of an adjustment, such as a premium or discount (for example, a control premium or non-controlling interest discount). However, a fair value measurement shall not incorporate a premium or discount that is inconsistent with the unit of account in the Topic that requires or permits the fair value measurement. Premiums or discounts that reflect size as a characteristic of the reporting entity's holding (specifically, a blockage factor that adjusts the quoted price of an asset or a liability because the market's normal daily trading volume is not sufficient to absorb the quantity held by the entity, as described in paragraph 820-10-35-44) rather than as a characteristic of the asset or liability (for example, a control premium when measuring the fair value of a controlling interest) are not permitted in a fair value measurement. In all cases, if there is a quoted price in an active market (that is, a Level 1 input) for an asset or a liability, a reporting entity shall use that quoted price without adjustment when measuring fair value, except as specified in paragraph 820-10-35-41C.

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A reporting entity shall select inputs that are consistent with the characteristics of the asset or liability that market participants would take into account in a transaction for the asset or liability (see paragraphs 820-10-35-2B through 35-2C). In some cases, those characteristics result in the application of an adjustment, such as a premium or discount (for example, a control premium or noncontrolling interest discount). However, a fair value measurement shall not incorporate a premium or discount that is inconsistent with the unit of account in the Topic that requires or permits the fair value measurement. Premiums or discounts that reflect size as a characteristic of the reporting entity's holding (specifically, a blockage factor that adjusts the quoted price of an asset or a liability because the market's normal daily trading volume is not sufficient to absorb the quantity held by the entity, as described in paragraph 820-10-35-44) rather than as a characteristic of the asset or liability (for example, a control premium when measuring the fair value of a controlling interest) are not permitted in a fair value measurement. Similarly, a discount applied to the price of an equity security because of a contractual sale restriction is inconsistent with the unit of account being the equity security. A contractual sale restriction is a characteristic of the reporting entity holding the equity security rather than a characteristic of the asset and, therefore, is not considered in measuring the fair value of an equity security (see paragraphs 820-10-55-52 through 55-52A). A contractual sale restriction prohibiting the sale of an equity security is a characteristic of the reporting entity holding the equity security and shall not be separately recognized as its own unit of account. In all cases, if there is a quoted price in an active market (that is, a Level 1 input) for an asset or a liability, a reporting entity shall use that quoted price without adjustment when measuring fair value, except as specified in paragraph 820-10-35-41C.

## 13.1 Inputs to valuation techniques

Regardless of the valuation techniques used to estimate fair value, ASC 820 requires that these techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. This requirement is consistent with the notion that fair value is a market-based measurement and, therefore, is determined using market-based observable data, to the extent available and relevant.

ASC 820 clarifies that the relevance of market data must be considered when assessing the priority of inputs in the fair value hierarchy. When evaluating the relevance of market data, the number and range of data points should be considered, as well as whether this data is directionally consistent with pricing trends and indications from other more general market information.

Relevant market data reflects the assumptions that market participants would use in pricing the asset or liability being measured. Recent transaction prices for the reference asset or liability (or similar assets and liabilities) are typically considered to represent relevant market data, unless the transaction is determined not to be orderly. Refer to section 6 for a discussion of factors to consider when determining if a transaction is orderly. However, even in situations where a transaction is considered to be orderly, observable transaction prices from inactive markets may require adjustment to address factors such as timing differences between the transaction date and the measurement date, or differences between the asset being measured and a similar asset that was the subject of the transaction. In those instances where the adjustments to observable data are significant, and are determined using unobservable data, the resulting measurement would be considered a Level 3 measurement.

Whether observable or unobservable, all inputs used in determining fair value should be consistent with a market-based measurement. As such, the use of unobservable inputs is not intended to allow for the inclusion of entity-specific assumptions in a fair value measurement. While ASC 820 acknowledges that unobservable inputs may sometimes be developed using a company's own data, the guidance is clear that these inputs should reflect market participant assumptions.

For example, when valuing an intangible asset using unobservable inputs, a company should take into account the intended use of the asset by market participants, even though this may differ from the company's intended use. The company may use its own data, without adjustment, if it determines that market participant assumptions are consistent with its own assumptions. Refer to section 17.2 for additional discussion on how a company's own assumptions may be applied in a fair value measurement.

The term "input" is used in ASC 820 to refer broadly to the assumptions that market participants would use when pricing an asset or liability, as opposed to the data entered into a pricing model. This important distinction implies that an adjustment to a pricing model's value (e.g., an adjustment to the output of the pricing model to reflect additional risk due to the complexity of the instrument being measured, if market participants would consider such risks when establishing the market price in a transaction) represents an input, which should be evaluated when determining the measurement's category in the fair value hierarchy. For example, when measuring a financial instrument, an adjustment for model risk would be considered an input (most likely a Level 3 input) that, if deemed significant,<sup>52</sup> may render the entire fair value estimate a Level 3 measurement.

## 13.2

### Premiums or discounts (updated September 2022)



#### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

ASC 820 indicates that when measuring fair value, companies should select inputs that: (1) are consistent with the characteristics of the asset or liability being measured; and (2) would be considered by market participants when pricing the asset or liability. In certain instances, these characteristics could result in a premium or discount being incorporated into the fair value measurement.

Determining whether a premium or discount applies to a particular fair value measurement requires judgment and depends on specific facts and circumstances.

Apart from block discounts (discussed in section 13.2.1), ASC 820 generally does not provide explicit guidance on the types of premiums or discounts that may be considered, or when they should be applied, to a fair value measurement. Instead, the guidance indicates that premiums and discounts (e.g., control premiums<sup>53</sup> or discounts for lack of marketability) should be incorporated into non-Level 1 fair value measurements if all of the following conditions are met:

- ▶ The application of the premium or discount reflects the characteristics of the asset or liability being measured.

<sup>52</sup> See discussion on the significance of inputs in section 14.

<sup>53</sup> As defined in the International Glossary of Business Valuation Terms of the AICPA's Statement on Standards for Valuation Services No.1, a control premium is the "amount or percentage by which the pro-rata value of a controlling interest exceeds the pro-rata value of a noncontrolling interest in a business enterprise to reflect the power of control."

- ▶ Market participants, acting in their “economic best interest,” would consider these premiums or discounts when pricing the asset or liability.<sup>54</sup>
- ▶ The inclusion of the premium or discount is not inconsistent with the unit of account in the Topic that requires (or permits) the fair value measurement.

After the adoption of ASU 2022-03, the guidance in ASC 820 clarifies that a contractual restriction on the sale of an equity security is a characteristic of the reporting entity holding that equity security rather than a characteristic of the asset and, therefore, is not considered in measuring the fair value of the equity security. Therefore, applying a discount to reflect a contractual sale restriction that is not a characteristic of the asset would be inconsistent with the unit of account of the equity security. Further, a contractual restriction prohibiting the sale of an equity security should not be separately recognized as its own unit of account. Refer to section 5.2.1A for further discussion of restrictions on assets after the adoption of ASU 2022-03.

ASC 820 emphasizes that prices of instruments that trade in active markets (i.e., Level 1 measurements) should generally not be adjusted and should be measured based on the quoted price of the individual instrument multiplied by the number of shares held (P\*Q).

### 13.2.1

#### Block discounts

ASC 820 explicitly prohibits the consideration of block discounts (or blockage factors) in a fair value measurement. While the term blockage factor may be subject to different interpretations, during deliberations the Board indicated that it views a block discount as an adjustment to the quoted price of an asset or liability because the market’s normal trading volume is not sufficient to absorb the quantity held by a reporting entity.

Regardless of the hierarchy level in which a measurement is categorized, block discounts are excluded from a fair value measurement because such an adjustment is specific to the size of a company’s holding and its decision to transact in a block. That is, the Board believes such an adjustment is entity-specific in nature.

However, ASC 820 clarifies that there is a difference between size being a characteristic of the asset or liability being measured (based on its unit of account) and size being a characteristic of the reporting entity’s holding. While any adjustment for the latter is not permitted, the former should be considered if it is consistent with how market participants would price the asset or liability.

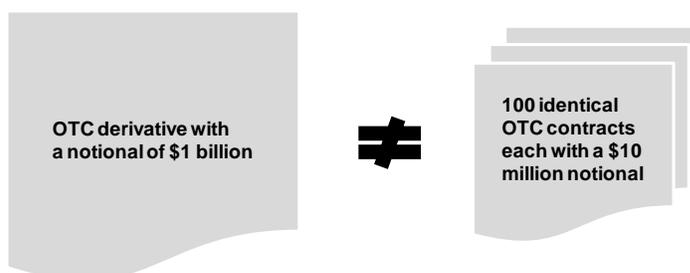
The following example illustrates ASC 820’s distinction between size as a characteristic of the item being measured and size as a characteristic of a reporting entity’s holding.

#### Illustration 13.2-1: Block discounts

- ▶ Bank X has one outstanding OTC derivative contract with Dealer A.
- ▶ The notional amount of this contract is \$1 billion, which is significantly larger than the market norm for these types of contracts.
- ▶ Bank Y has 100 identical OTC derivative contracts outstanding with various dealers (whose risks are not offsetting because all the contracts are assets and therefore are not measured using the measurement exception).
- ▶ Each of the 100 contracts has a notional amount of \$10 million, which is consistent with the market norm for these types of contracts.

<sup>54</sup> See section 7.2 for further discussion on how the concept of “economic best interest” from a market participant perspective is considered in a fair value measurement.

Although Bank X and Bank Y have virtually identical market exposures (credit risk is ignored for simplicity), ASC 820 would allow Bank X to consider a discount for lack of marketability but would preclude Bank Y from applying a similar discount.



For Bank X, the large notional amount (\$1 billion) is a characteristic of the instrument being measured and would likely be considered by market participants when transacting for the derivative based on its unit of account (i.e., the derivative contract). As such, the fair value of the individual derivative should incorporate an adjustment for size if market participants would consider one in pricing the instrument.

In contrast, the unit of account for Bank Y's 100 derivative contracts is the individual OTC contracts, not the aggregate gross exposure stemming from the 100 contracts (i.e., the block). In pricing the individual contracts, market participants would likely not consider a discount associated with the size of the contracts, since the notional amount for each contract is consistent with the market norm. In accordance with ASC 820, Bank Y would be prohibited from applying a discount based on the size of its entire holding (i.e., the 100 contracts) as this would represent a block discount that cannot be considered in a fair value measurement.

## 13.3

### Pricing within the bid-ask spread

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Inputs to Valuation Techniques*

##### *Inputs Based on Bid and Ask Prices*

##### **820-10-35-36C**

If an asset or a liability measured at fair value has a bid price and an ask price (for example, an input from a dealer market), the price within the bid-ask spread that is most representative of fair value in the circumstances shall be used to measure fair value regardless of where the input is categorized within the fair value hierarchy (that is, Level 1, 2, or 3). The use of bid prices for asset positions and ask prices for liability positions is permitted but is not required.

##### **820-10-35-36D**

This Topic does not preclude the use of mid-market pricing or other pricing conventions that are used by market participants as a practical expedient for fair value measurements within a bid-ask spread. For example, paragraphs 820-10-35-25 through 35-26 apply to a change from the use of mid-market pricing or other pricing conventions to another valuation technique. In addition, the disclosure requirements in paragraph 820-10-50-2(bbb) apply to such changes.

The “bid” price represents the price at which a dealer or market-maker is willing to buy an asset (or dispose of a liability). The “ask” (or offer) price represents the price at which a dealer or market-maker is willing to sell an asset (or assume a liability). The spread between these two prices represents the profit a dealer requires for making a market in a particular security (i.e., for providing two-way liquidity).

ASC 820 allows for, but does not require, the use of bid prices to measure assets and ask prices to measure liabilities. Instead, the guidance clarifies that companies should use judgment to determine the price within the bid-ask spread that is most representative of fair value in the circumstances.

This guidance applies to all situations where inputs are determined based on bid and ask prices, regardless of where these inputs are categorized in the fair value hierarchy and should be applied consistently. That is, it would not be appropriate for a company to measure similar assets at different prices within the bid-ask spread, without evidence indicating that the exit prices for those assets would be at different points within the bid-ask spread.

### 13.3.1 Mid-market pricing

ASC 820 allows mid-market pricing or other pricing conventions, as a practical expedient, when measuring fair value within the bid-ask spread. The use of mid-market pricing results in the valuation of an asset or liability based on the midpoint of the bid-ask spread. It is our understanding that the FASB originally included this consideration to enable certain types of investment companies (e.g., mutual funds) to continue their current practice of valuing investments using mid-market prices.

Some constituents perceive an inconsistency in the treatment of transaction costs under ASC 820 (i.e., transaction costs are not considered a characteristic of an asset or liability and, accordingly, are excluded from fair value measurements) and the requirement to use prices within the bid-ask spread that are most representative of fair value. Part of the bid-ask spread is generally believed to represent transaction costs and, therefore, measuring an asset at the bid price would include certain future transaction costs in the asset's fair value. The Board has never addressed this perceived inconsistency. As a result, there may be diversity in practice on how transaction costs are represented when pricing instruments with a bid-ask spread, but a consistent approach should be applied within a particular reporting entity.

### 13.4 Risk premiums

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Fair Value Hierarchy*

##### *Level 3 Inputs*

##### **820-10-35-54**

Assumptions about risk include the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and the risk inherent in the inputs to the valuation technique. A measurement that does not include an adjustment for risk would not represent a fair value measurement if market participants would include one when pricing the asset or liability. For example, it might be necessary to include a risk adjustment when there is significant measurement uncertainty (for example, when there has been a significant decrease in the volume or level of activity when compared with normal market activity for the asset or liability, or similar assets or liabilities, and the reporting entity has determined that the transaction price or quoted price does not represent fair value, as described in paragraphs 820-10-35-54C through 35-54J).

##### ***Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability Has Significantly Decreased***

##### **820-10-35-54E**

This Topic does not prescribe a methodology for making significant adjustments to transactions or quoted prices. See paragraphs 820-10-35-24 through 35-27 and 820-10-55-3A through 55-3G for a discussion of the use of valuation techniques when measuring fair value. Regardless of the valuation technique used, a reporting entity shall include appropriate risk adjustments, including a **risk premium** reflecting the amount that market participants would demand as compensation for the uncertainty

inherent in the cash flows of an asset or a liability (see paragraph 820-10-55-8). Otherwise, the measurement does not faithfully represent fair value. In some cases, determining the appropriate risk adjustment might be difficult. However, the degree of difficulty alone is not a sufficient basis on which to exclude a risk adjustment. The risk adjustment shall be reflective of an orderly transaction between market participants at the measurement date under current market conditions.

ASC 820 defines a risk premium as “compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or a liability.” Regardless of the valuation technique(s) used, a fair value measurement is intended to represent an exit price and, as such, should include a risk premium. While this risk premium should reflect compensation required by market participants in an orderly transaction (not a forced or distressed sale), it should also capture market participant assumptions regarding risk under current market conditions. The example discussed in section 12.4 illustrates that this risk adjustment may include assumptions about liquidity and uncertainty based on relevant market data.

ASC 820-10-55-8 explicitly states that “[a] fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases, determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.”

The objective of a risk premium is often misunderstood. Many incorrectly assume that a risk premium is unnecessary when fair value is determined using probability-weighted cash flows. That is, they believe it is appropriate to discount probability-weighted cash flows using a risk-free rate under the assumption that all uncertainty is captured by probability-weighting the cash flows. While expected cash flows (i.e., the probability-weighted average of possible future cash flows) incorporate the uncertainty in the instrument's cash flows, they do not incorporate the compensation that market participants demand for bearing that uncertainty.<sup>55</sup> In order to capture this required compensation in the measurement, a market risk premium must be added (either as an adjustment to the discount rate or to the expected cash flows). ASC 820's implementation guidance addresses this point when discussing systematic and unsystematic risk and certainty-equivalent cash flows. Refer to section 21 for additional discussion on how risk premiums are applied in a present value technique.

## 13.5

### Broker quotes and pricing services

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Using Quoted Prices Provided by Third Parties*

##### **820-10-35-54K**

This Topic does not preclude the use of quoted prices provided by third parties, such as pricing services or brokers, if a reporting entity has determined that the quoted prices provided by those parties are developed in accordance with this Topic.

##### **820-10-35-54L**

If there has been a significant decrease in the volume or level of activity for the asset or liability, a reporting entity shall evaluate whether the quoted prices provided by third parties are developed using current information that reflects orderly transactions or a valuation technique that reflects market participant assumptions (including assumptions about risk). In weighting a quoted price as an input to a fair value measurement, a reporting entity places less weight (when compared with other indications of fair value that reflect the results of transactions) on quotes that do not reflect the result of transactions.

<sup>55</sup> This concept is noted in paragraph 67 of CON 7 and in ASC 820-10-55-15 through 55-19.

**820-10-35-54M**

Furthermore, the nature of a quote (for example, whether the quote is an indicative price or a binding offer) shall be taken into account when weighting the available evidence, with more weight given to quotes provided by third parties that represent binding offers.

When quoted prices from brokers or pricing services are used to measure fair value, it is the company's responsibility to understand the source and nature of this information. This point was emphasized by the SEC staff from the Office of the Chief Accountant and the Division of Corporation Finance at the 2011 AICPA National Conference on Current SEC and PCAOB Developments.<sup>56</sup> When using third-party sources of fair value information (particularly for instruments classified in Level 2 of the fair value hierarchy), the SEC staff reminded registrants of their obligations to:

- ▶ Comply with GAAP, including disclosure requirements
- ▶ Maintain appropriate internal controls to prevent or detect material misstatements
- ▶ Assess the effectiveness of internal control over financial reporting (ICFR)

In addition, the SEC staff indicated that registrants would be well served to consider the following questions in the preparation of their financial statements and as they develop and assess the effectiveness of their ICFR:

- ▶ Do we have sufficient information about the values provided by pricing services to know that we are complying with GAAP?
- ▶ Have we adequately considered the judgments that have been made by third parties to be comfortable with our responsibility for the reasonableness of such judgments?
- ▶ Do we have a sufficient understanding of the sources of information and the processes used by the pricing services to develop a fair value estimate so that we can identify the risks to reliable financial reporting?
- ▶ Have we identified, documented and tested controls to adequately address the risks to reliable financial reporting?

The need for company management to appropriately assess third-party fair value information is also addressed explicitly in ASC 820. When there has been a significant decrease in the volume or level of activity for the asset or liability, the guidance states that the company should evaluate whether the prices received from brokers or pricing services are based on current information from orderly transactions or valuation techniques that appropriately reflect market participant assumptions regarding risk. ASC 820 also indicates that companies should place less reliance on third-party quotes that are not based on transactions, compared to other value indications that are based on market transactions.

When information from brokers and pricing services is based on transaction data, companies should assess whether, and to what extent, the observed prices are a result of orderly transactions when determining the weight to place on these data points (compared to other value indications). (Refer to section 6.5 for additional information on the factors a company may consider when assessing whether transactions are orderly.) Facts and circumstances will determine the weight that a company should place on a transaction price, including:

- ▶ The comparability of the transaction to the asset or liability being measured at fair value

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<sup>56</sup> As of the date of this publication, the full text of the speech made by the SEC Professional Accounting Fellow from the Office of the Chief Accountant is available at <http://www.sec.gov/news/speech/2011/spch120511jpk.htm>.

- ▶ The proximity of the transaction to the measurement date
- ▶ The size of the transaction
- ▶ The nature of the quote (e.g., binding versus indicative quote) and the number of quotes received

Refer to Question 16.1-2 for additional discussion on fair value hierarchy considerations when using quoted prices from brokers and pricing services.

## Questions and interpretive responses

### Question 13.1-1 How is associated debt treated when estimating the fair value of an equity interest?

When estimating the fair value of an equity interest in an asset (e.g., an equity interest in an entity), valuation specialists commonly use an “indirect method” of the income approach or market approach. An indirect method (also referred to as a debt-free method) considers the cash flows available to all asset stakeholders. Typical indirect methods use a discounted cash flow analysis of debt-free cash flows (i.e., cash flows before debt payments) or a market approach that considers multiples based on pre-interest expense performance metrics such as revenue or earnings before interest and taxes (EBIT). Debt (and other non-operating liabilities) is subtracted from the resulting value under an indirect method to derive the fair value of the equity interest. An indirect approach is often used to mitigate the effect of differences in leverage between the comparable assets used to derive fair value (e.g., guideline companies used to estimate market multiples) and the subject asset.

In contrast, the “direct method” (also referred to as a levered method) incorporates debt explicitly in the cash flows (i.e., interest expense) and provides a direct indication of the equity value, thus requiring no further adjustment. The “indirect” method is more commonly used by valuation specialists because of the difficulty assessing the required rate of return for the levered method.

Refer to the AICPA’s Guide on valuation of portfolio company investments, chapters 4 and 6, for further discussion.

### Question 13.3-1 Are there any limitations on the use of the mid-market pricing convention in ASC 820?

While it is our understanding that the mid-market practical expedient in ASC 820 was included primarily to enable certain types of investment companies (e.g., mutual funds) to maintain the current practice of valuing investments using mid-market prices,<sup>57</sup> the guidance does not limit or restrict the use of mid-market pricing to specific types of instruments or companies. However, consistent with the guidance in section 12.3 of this publication, we generally believe that valuation techniques used to measure fair value should be consistently applied.

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<sup>57</sup> The SEC adopted a new rule under the Investment Company Act of 1940 that modernizes valuation practices for registered investment companies and business development companies (collectively, funds) and clarifies how fund boards and trustees or depositors of unit investment trusts can satisfy their obligation to determine fair value in good faith for portfolio holdings without readily available market quotations. For further details, refer to the final rule on the SEC website at <https://www.sec.gov/rules/final/2020/ic-34128.pdf>.

**Question 13.5-1** How should values provided by central clearing organizations for margining purposes be evaluated when determining the fair value of centrally cleared derivatives for financial reporting?

For OTC derivatives that are centrally cleared, counterparties are typically required to pay or receive variation margin based on the daily change in value of the derivative.<sup>58</sup> As a result, companies with centrally cleared OTC derivatives will periodically receive a “value mark” from a clearing organization that states the amount of variation margin to be posted or received.

However, this value should not be presumed to represent fair value (an exit price) in accordance with ASC 820. Different clearing organizations may have different approaches for calculating variation margin requirements and while practice may continue to evolve, it is our understanding that the “value marks” provided generally do not represent an actual transaction price (i.e., a price at which the reporting entity could execute a trade to buy or sell the contract). Instead, this value may be based on a clearing organization’s analysis of information provided by clearing members and certain of its own assumptions, as well as the time of day (i.e., “snap time”) at which the market data used to prepare such valuations is collected.

Therefore, while the value marks provided by a clearing organization may potentially be an appropriate estimate of fair value in certain instances, the reporting entity should understand how this value is determined and evaluate whether it includes only those factors that would be considered by market participants in an orderly transaction to sell or transfer the derivative and whether these factors are consistent with the entity’s valuation policies and practices. For example, to provide themselves with additional protection, some clearing organizations may include an incremental amount in their variation margin requirement in excess of the “true” change in the value of the derivative.

As with pricing information provided by brokers or third-party pricing services, reporting entities are responsible for understanding the source and nature of information provided by central clearing organizations. A company should assess whether the value indication represents fair value in accordance with ASC 820 or whether an adjustment may be needed.

See Question 16.1-3 for a discussion of the classification of centrally cleared OTC derivatives in the fair value hierarchy.

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<sup>58</sup> Refer to section 8.13.3 of our FRD, *Derivatives and hedging*, for further discussion on centrally cleared derivatives.

# 14

## The fair value hierarchy

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Fair Value Hierarchy*

##### **820-10-35-37**

To increase consistency and comparability in fair value measurements and related disclosures, this Topic establishes a fair value hierarchy that categorizes into three levels (see paragraphs 820-10-35-40 through 35-41, 820-10-35-41B through 35-41C, 820-10-35-44, 820-10-35-46 through 35-51, and 820-10-35-52 through 35-54A) the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (**Level 1 inputs**) and the lowest priority to unobservable inputs (**Level 3 inputs**).

##### **820-10-35-37A**

In some cases, the inputs used to measure the fair value of an asset or a liability might be categorized within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. Assessing the significance of a particular input to the entire measurement requires judgment, taking into account factors specific to the asset or liability. Adjustments to arrive at measurements based on fair value, such as costs to sell when measuring fair value less costs to sell, shall not be taken into account when determining the level of the fair value hierarchy within which a fair value measurement is categorized.

##### **820-10-35-38**

The availability of relevant inputs and their relative subjectivity might affect the selection of appropriate valuation techniques (see paragraph 820-10-35-24). However, the fair value hierarchy prioritizes the inputs to valuation techniques, not the valuation techniques used to measure fair value. For example, a fair value measurement developed using a present value technique might be categorized within Level 2 or Level 3, depending on the inputs that are significant to the entire measurement and the level of the fair value hierarchy within which those inputs are categorized.

##### **820-10-35-38A**

If an observable input requires an adjustment using an unobservable input and that adjustment results in a significantly higher or lower fair value measurement, the resulting measurement would be categorized within Level 3 of the fair value hierarchy. For example, if a market participant would take into account the effect of a restriction on the sale of an asset when estimating the price for the asset, a reporting entity would adjust the quoted price to reflect the effect of that restriction. If that quoted price is a Level 2 input and the adjustment is an unobservable input that is significant to the entire measurement, the measurement would be categorized within Level 3 of the fair value hierarchy.

## 14.1 The fair value hierarchy

ASC 820 establishes a fair value hierarchy that prioritizes the inputs used in valuation techniques into the following three levels:<sup>59</sup>

- ▶ Level 1: Quoted prices (unadjusted) in active markets for identical assets and liabilities that the reporting entity can access at the measurement date
- ▶ Level 2: Inputs other than quoted prices in active markets for identical assets and liabilities that are observable either directly or indirectly
- ▶ Level 3: Unobservable inputs

The fair value hierarchy is intended to increase consistency and comparability among fair value measurements. Classification within the hierarchy also plays a critical role in disclosures by allowing financial statement users to assess the relative subjectivity of the various fair value measurements made by a company.

### 14.1.1 Classification within the fair value hierarchy (updated September 2022)

ASC 820 distinguishes between where in the fair value hierarchy an individual input to a valuation technique may fall as compared to where the entire measurement is categorized for disclosure purposes. Assets and liabilities not traded in active markets will often require multiple inputs to the valuation technique used to determine fair value. For example, an OTC option on a traded equity security measured at fair value using an option pricing model requires the following inputs: (1) the current price of the underlying security, (2) expected volatility, (3) expected dividend yield, (4) the term of the option and (5) the risk-free rate of interest.

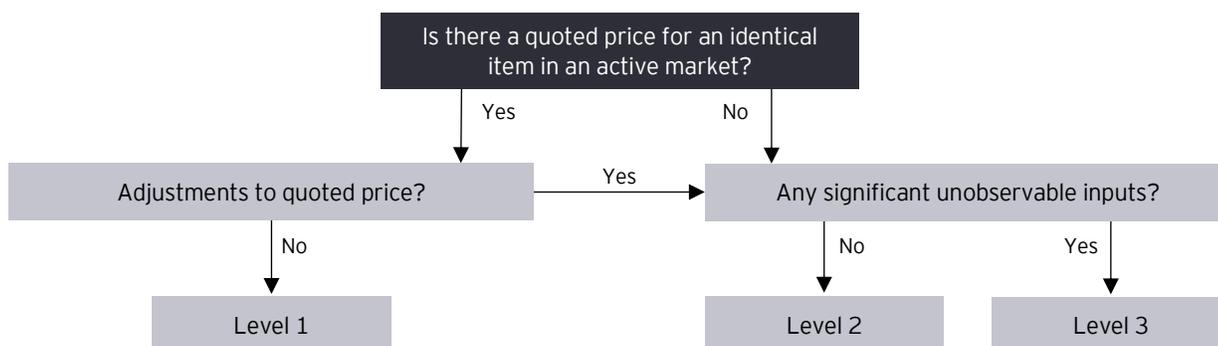
ASC 820 clarifies that the hierarchy classification of a fair value measurement in its entirety (i.e., the fair value of the asset or liability, or the fair value of a group of assets and liabilities, based on their unit of account) is based on the lowest level input that is significant to the fair value measurement. Assume in the example above that the risk-free rate and the dividend yield were determined to be Level 2 inputs, but the expected volatility was determined to be a Level 3 input (as might be the case with a long-dated option). If expected volatility is significant to the overall fair value of the option (which would be typical), the entire measurement would be categorized in Level 3.

ASC 820 also indicates that if an adjustment to an observable input is required and that adjustment is based on an unobservable input and is significant to the overall fair value measurement, the measurement would be categorized in Level 3. Consider a restricted security when the restriction is considered a characteristic of the asset. While the quoted price for the unrestricted security may be observable, if Level 3 inputs are needed to determine the effect of the restriction on the instrument's fair value, and this effect is significant to the measurement, the asset would be categorized in Level 3 of the fair value hierarchy. In addition, as discussed in section 12, in certain situations adjustments to a transaction price in an inactive market may be required. If these adjustments are based on unobservable inputs and significant to the measurement, the item would be categorized in Level 3.

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<sup>59</sup> ASC 820 gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs.

The following flowchart illustrates how the classification within the fair value hierarchy applies:



### 14.1.2 Assessing the significance of inputs

ASC 820 does not provide specific guidance on how companies should evaluate the significance of individual inputs. This determination will require judgment and consideration of factors specific to the asset or liability (or group of assets and liabilities) being measured. In many cases, the use of sensitivity analyses or stress tests might be appropriate to assess the effect of each of the unobservable inputs on the fair value measurement. If more than one unobservable input is used, significance should be analyzed based on the aggregate effect of all the unobservable inputs.

Although ASC 820 does not provide explicit guidance on how companies should assess significance, it specifically requires that significance be determined on the basis of the fair value measurement in its entirety. We believe this implies that significance should generally be considered from a balance sheet perspective.

Companies should have a documented policy with respect to their approach to determining the significance of unobservable inputs on their fair value measurements and apply that policy consistently.

### 14.1.3 The fair value hierarchy and valuation techniques

The fair value hierarchy prioritizes the inputs used in valuation techniques, not the techniques themselves. While the availability of inputs might affect the valuation technique(s) used to measure fair value, ASC 820 does not prioritize one technique over another. Selecting the appropriate valuation technique(s) requires judgment and will depend on the specific characteristics of the asset or liability being measured and the principal (or most advantageous) market for the asset or liability. ASC 820 indicates that all valuation techniques that are appropriate in the circumstances (and for which sufficient data is available) should be applied but does not endorse any one technique over another.

Although the valuation techniques themselves are not considered in the fair value hierarchy, a risk premium that market participants would demand as compensation for the risk inherent in a particular valuation technique (e.g., a model adjustment) is considered an input that must be assessed within the fair value hierarchy. As discussed in section 13, the significance of the model adjustment, along with the observability of the data supporting the adjustment, would be considered when categorizing the entire measurement in the fair value hierarchy.

**Excerpt from Accounting Standards Codification****Fair Value Measurement – Overall***Fair Value Hierarchy**Level 1 Inputs***820-10-35-40**

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

**820-10-35-41**

A quoted price in an active market provides the most reliable evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph 820-10-35-41C.

**820-10-35-41A**

Paragraph superseded by Accounting Standards Update No. 2011-04.

**820-10-35-41B**

A Level 1 input will be available for many financial assets and financial liabilities, some of which might be exchanged in multiple active markets (for example, on different exchanges). Therefore, the emphasis within Level 1 is on determining both of the following:

- a. The principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability
- b. Whether the reporting entity can enter into a transaction for the asset or liability at the price in that market for the asset or liability at the measurement date.

**820-10-35-41C**

A reporting entity shall not make an adjustment to a Level 1 input except in the following circumstances:

- a. When a reporting entity holds a large number of similar (but not identical) assets or liabilities (for example, debt securities) that are measured at fair value and a quoted price in an active market is available but not readily accessible for each of those assets or liabilities individually (that is, given the large number of similar assets or liabilities held by the reporting entity, it would be difficult to obtain pricing information for each individual asset or liability at the measurement date). In that case, as a practical expedient, a reporting entity may measure fair value using an alternative pricing method that does not rely exclusively on quoted prices (for example, matrix pricing). However, the use of an alternative pricing method results in a fair value measurement categorized within a lower level of the fair value hierarchy.

- b. When a quoted price in an active market does not represent fair value at the measurement date. That might be the case if, for example, significant events (such as transactions in a principal-to-principal market, trades in a brokered market, or announcements) take place after the close of a market but before the measurement date. A reporting entity shall establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment results in a fair value measurement categorized within a lower level of the fair value hierarchy.
- c. When measuring the fair value of a liability or an instrument classified in a reporting entity's shareholders' equity using the quoted price for the identical item traded as an asset in an active market and that price needs to be adjusted for factors specific to the item or the asset (see paragraph 820-10-35-16D). If no adjustment to the quoted price of the asset is required, the result is a fair value measurement categorized within Level 1 of the fair value hierarchy. However, any adjustment to the quoted price of the asset results in a fair value measurement categorized within a lower level of the fair value hierarchy.

**820-10-35-42**

Paragraph superseded by Accounting Standards Update No. 2011-04.

**820-10-35-43**

Paragraph superseded by Accounting Standards Update No. 2011-04.

**820-10-35-44**

If a reporting entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity. That is the case, even if a market's normal daily trading volume is not sufficient to absorb the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.

**820-10-35-45**

Paragraph superseded by Accounting Standards Update No. 2011-04.

**820-10-35-46**

Paragraph 820-10-55-42 illustrates the use of Level 1 inputs to measure the fair value of a financial asset that trades in multiple active markets with different prices.

**15.1****Use of Level 1 inputs**

As a general principle, ASC 820 mandates the use of quoted prices in active markets for identical assets and liabilities whenever available. With limited exceptions, quoted prices in active markets should not be adjusted when determining the fair value of identical assets and liabilities, as the FASB believes these prices provide the most reliable evidence of fair value. The exceptions to this principle are discussed in sections 15.1.1, 15.2 and 15.3.

### 15.1.1 Level 1 liabilities and instruments classified in a reporting entity's shareholders' equity

Quoted prices in active markets for identical liabilities and instruments classified in an entity's shareholders' equity are Level 1 measurements. These instruments would likewise be categorized in Level 1 when a quoted price exists for the identical instrument traded as an asset in an active market, and no adjustment to the quoted price is required.

For example, the fair value of corporate debt issued by a reporting entity would be a Level 1 measurement if the asset corresponding to the issuer's liability (i.e., the corporate bond) trades in an active market and no adjustment is made to the quoted price. While the liability itself is not transferred in an active market, the FASB concluded that Level 1 classification is appropriate when the identical instrument trades as an asset in an active market.

If an adjustment to the corresponding asset's price is required to address differences between the asset and the liability or equity instrument (as discussed in section 9), the adjusted price would not be a Level 1 measurement. For example, an adjustment to the quoted price of an asset that includes the effect of a third-party credit enhancement would be warranted when measuring the fair value of the liability. In this case, the corresponding asset and the liability would be deemed to have different units of account (as discussed in section 9.2.2).

## 15.2 Alternative pricing methods

When a company holds a large number of similar assets and liabilities for which quoted prices exist, but are not easily accessible, ASC 820 allows for the use of alternative pricing methods (e.g., matrix pricing) as a practical expedient. The FASB provided this practical expedient to ease the administrative burden associated with obtaining quoted prices for each individual instrument. However, if the practical expedient is used, the resulting fair value measurement would not be considered a Level 1 measurement.

## 15.3 Quoted prices in active markets that are not representative of fair value

ASC 820 recognizes that in certain situations a quoted price in an active market might not faithfully represent the fair value of an asset or liability, such as when significant events occur on the measurement date but after the close of trading. In these situations, companies should adjust the quoted price to incorporate this new information into the fair value measurement. However, if the quoted price is adjusted, the resulting fair value measurement would no longer be considered a Level 1 measurement.

A company's valuation policies and procedures should address how these "after-hour" events will be identified and assessed. Controls should be put in place to ensure that any adjustments made to quoted prices are appropriate under the guidance in ASC 820 and are applied in a consistent manner.

#### **Illustration 15.3-1: Illustrative example of adjustment to a Level 1 measurement**

Quantum Laboratories (QLAB), a large biotech company with Class A common shares (the QLAB shares or the shares) traded publicly in the US, has developed a new Alzheimer's drug that is in the final phase of clinical trials. Company A has an equity investment in the QLAB shares. Company A determines the shares have a readily determinable fair value and accounts for the investment at fair value through profit and loss. Company A assesses the fair value as of the measurement date of 31 December 2X21. Consider the following:

- ▶ On 31 December 2X21, the Food and Drug Administration (FDA) notifies QLAB's management that the drug was not approved.

- ▶ QLAB shares closed at \$36.10 on Friday, 31 December 2X21.
- ▶ QLAB issued a press release after markets closed on 31 December 2X21, announcing the failed clinical trial.
- ▶ QLAB shares opened on Monday, 3 January 2X22 at \$22.50.

The drug failure is a condition (or a characteristic of the asset being measured) that existed as of the measurement date. Company A concludes the \$36.10 closing price on the measurement date does not represent fair value of the QLAB shares at 31 December 2X21 because the price does not reflect the effect of the FDA non-approval.

The subsequent transactions that take place when the market opens on 3 January 2X22 are relevant to the fair value measurement recorded as of the measurement date. The opening price of \$22.50 indicates how market participants have incorporated the effect of the non-approval on QLAB's stock price. Company A adjusts the 31 December 2X21 quoted price for the new information, records the shares at \$22.50 per share at 31 December 2X21 and discloses the investment as a Level 2 measurement.

## 15.4

### Unit of account

Although the unit of account is generally determined in accordance with other Topics, ASC 820 addresses the unit of account for Level 1 instruments. ASC 820-10-35-44 states that if "a reporting entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity." By dictating that fair value be determined based on P\*Q, ASC 820 effectively prescribes the unit of account as the individual instrument in these situations.

# 16

## Level 2 inputs

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Fair Value Hierarchy*

#### *Level 2 Inputs*

#### **820-10-35-47**

**Level 2 inputs** are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

#### **820-10-35-48**

If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following:

- a. Quoted prices for similar assets or liabilities in active markets
- b. Quoted prices for identical or similar assets or liabilities in markets that are not active
- c. Inputs other than quoted prices that are observable for the asset or liability, for example:
  1. Interest rates and yield curves observable at commonly quoted intervals
  2. Implied volatilities
  3. Subparagraph superseded by Accounting Standards Update No. 2011-04.
  4. Subparagraph superseded by Accounting Standards Update No. 2011-04.
  5. Credit spreads.
  6. Subparagraph superseded by Accounting Standards Update No. 2011-04.
- d. **Market-corroborated inputs.**

#### **820-10-35-49**

Paragraph 820-10-55-21 discusses Level 2 inputs for particular assets and liabilities.

#### **820-10-35-50**

Adjustments to Level 2 inputs will vary depending on factors specific to the asset or liability. Those factors include the following:

- a. The condition or location of the asset
- b. The extent to which inputs relate to items that are comparable to the asset or liability (including those factors described in paragraph 820-10-35-16D)
- c. The volume or level of activity in the markets within which the inputs are observed.

**820-10-35-51**

An adjustment to a Level 2 input that is significant to the entire measurement might result in a fair value measurement categorized within Level 3 of the fair value hierarchy if the adjustment uses significant unobservable inputs.

**16.1 Level 2 inputs**

Level 2 inputs include quoted prices (in non-active markets or in active markets for similar assets or liabilities), observable inputs other than quoted prices and inputs that are not directly observable but are corroborated by observable market data.

The inclusion of market-corroborated inputs is significant because it expands the scope of Level 2 inputs beyond those directly observable for the asset or liability. Inputs determined through mathematical or statistical techniques, such as correlation or regression, may be categorized as Level 2 if the inputs into, and/or the results from, these techniques can be corroborated with observable market data.

ASC 820 requires that a Level 2 input be observable (either directly or indirectly through corroboration with market data) for substantially the full contractual term of the asset or liability being measured. Therefore, a long-term input extrapolated from short-term observable market data (e.g., a 30-year yield extrapolated from the observable 5-year, 10-year and 15-year points on the yield curve) would generally not be considered a Level 2 input.

**16.2 Adjustments to Level 2 inputs**

There are a number of reasons why a company may need to make adjustments to Level 2 inputs. For example, adjustments to observable data from inactive markets (as discussed in Question 6.4-2) might be required for timing differences between the transaction date and the measurement date, or differences between the asset being measured and a similar asset that was the subject of the transaction. In addition, factors such as the condition or location of the asset should also be considered when determining if adjustments to Level 2 inputs are warranted. If an adjustment made to a Level 2 input is significant to the fair value measurement in its entirety and is based on unobservable data, the entire measurement would be categorized in Level 3.

**16.3 Examples of Level 2 inputs**

ASC 820 provides the following examples of Level 2 inputs for particular assets and liabilities.

**Excerpt from Accounting Standards Codification****Fair Value Measurement – Overall***Implementation Guidance and Illustrations**Level 2 Inputs***820-10-55-21**

Examples of **Level 2 inputs** for particular assets and liabilities include the following:

- a. Receive-fixed, pay-variable interest rate swap based on the London Interbank Offered Rate (LIBOR) swap rate. A Level 2 input would be the LIBOR swap rate if that rate is observable at commonly quoted intervals for substantially the full term of the swap.

- b. Receive-fixed, pay-variable interest rate swap based on a yield curve denominated in a foreign currency. A Level 2 input would be the swap rate based on a yield curve denominated in a foreign currency that is observable at commonly quoted intervals for substantially the full term of the swap. That would be the case if the term of the swap is 10 years and that rate is observable at commonly quoted intervals for 9 years, provided that any reasonable extrapolation of the yield curve for Year 10 would not be significant to the fair value measurement of the swap in its entirety.
- c. Receive-fixed, pay-variable interest rate swap based on a specific bank's prime rate. A Level 2 input would be the bank's prime rate derived through extrapolation if the extrapolated values are corroborated by observable market data, for example, by correlation with an interest rate that is observable over substantially the full term of the swap.
- d. Three-year option on exchange-traded shares. A Level 2 input would be the implied volatility for the shares derived through extrapolation to Year 3 if both of the following conditions exist:
  1. Prices for one-year and two-year options on the shares are observable.
  2. The extrapolated implied volatility of a three-year option is corroborated by observable market data for substantially the full term of the option.

In that case, the implied volatility could be derived by extrapolating from the implied volatility of the one-year and two-year options on the shares and corroborated by the implied volatility for three-year options on comparable entities' shares, provided that correlation with the one-year and two-year implied volatilities is established.

- e. Licensing arrangement. For a licensing arrangement that is acquired in a **business combination** and was recently negotiated with an unrelated party by the acquired entity (the party to the licensing arrangement), a Level 2 input would be the royalty rate in the contract with the unrelated party at inception of the arrangement.
- f. Finished goods inventory at a retail outlet. For finished goods inventory that is acquired in a business combination, a Level 2 input would be either a price to customers in a retail market or a price to retailers in a wholesale market, adjusted for differences between the condition and location of the inventory item and the comparable (that is, similar) inventory items so that the fair value measurement reflects the price that would be received in a transaction to sell the inventory to another retailer that would complete the requisite selling efforts. Conceptually, the fair value measurement will be the same, whether adjustments are made to a retail price (downward) or to a wholesale price (upward). Generally, the price that requires the least amount of subjective adjustments should be used for the fair value measurement.
- g. Building held and used. A Level 2 input would be the price per square foot for the building (a valuation multiple) derived from observable market data, for example, multiples derived from prices in observed transactions involving comparable (that is, similar) buildings in similar locations.
- h. Reporting unit. A Level 2 input would be a valuation multiple (for example, a multiple of earnings or revenue or a similar performance measure) derived from observable market data, for example, multiples derived from prices in observed transactions involving comparable (that is, similar) businesses, taking into account operational, market, financial, and nonfinancial factors.

## Questions and interpretive responses

**Question 16.1-1** Level 2 of the fair value hierarchy includes inputs that are not directly observable for the asset or liability, but instead are corroborated by observable market data through correlation or other statistical techniques. What types of information should a company consider when attempting to corroborate these inputs to observable market data?

ASC 820 does not provide explicit guidance about the application of statistical techniques (e.g., regression or correlation analyses) when analyzing market-corroborated inputs. Despite the lack of specific guidance or “bright lines” for evaluating the validity of a statistical inference, companies should not assume that the mere use of a statistical analysis is sufficient to support a measurement as Level 2. Any statistical analysis that is relied on for financial reporting purposes should be evaluated for its predictive validity.

For example, the extrapolated volatility described in ASC 820-10-55-21 is considered a Level 2 input only because it was corroborated to the 3-year implied volatility of a comparable entity. In this case, the comparability of the companies was supported by establishing that the implied 1-year and 2-year volatilities of the shares for the two companies was correlated. As such, identifying and evaluating the appropriate proxy (i.e., the comparable entity) was critical to concluding that the implied volatility in the illustrative example represents a market-corroborated (Level 2) input.

In practice, identifying an appropriate benchmark or proxy requires judgment that should appropriately incorporate both qualitative and quantitative factors. For example, when valuing equity-based instruments (e.g., equity options), a company should consider the industry, nature of the business, size, leverage and other factors that would qualitatively support the expectation that the benchmarks are sufficiently comparable to the subject entity. Qualitative considerations may differ depending on the type of input being analyzed or the type of instrument being measured (e.g., a foreign exchange option versus an equity option).

In addition, quantitative measures are used to validate a statistical analysis. For example, if a regression analysis is used as a means of corroborating non-observable market data, the results of the analysis can be assessed based on statistical measures such as R-squared and t-statistics.<sup>60</sup>

**Question 16.1-2** At which level of the fair value hierarchy would information from third-party pricing services or brokers be categorized?

Determining the level in which assets and liabilities are categorized in the fair value hierarchy for disclosure purposes often requires judgment. Information provided by third-party pricing services or brokers could represent Level 1, Level 2 or Level 3 inputs depending on the source of the information and the type of instrument being measured.

For example, pricing services may provide quoted market prices (e.g., closing price) for financial instruments traded in active markets. These prices are Level 1 measurements.

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<sup>60</sup> R-squared (or the coefficient of determination) represents the percentage of the variance in a dependent variable (“y”) that is explained by an independent variable (“x”) and represents a measure of the error that is eliminated by the use of the regression model (as compared to a result that could be obtained by simply observing the variance of “y” around its mean).

The t-statistic measures the degree to which the difference in performance of two variables is attributable to chance, and therefore not of predictive significance. For example, if  $t=1.0$ , the difference in performance between two variables would be the same as what might be expected simply on the basis of chance variations in the data. If  $t=5.0$ , however, the difference in performance of the two variables is five times the amount that might reasonably be attributed to chance—a much more significant result of predictive reliability. A t-statistic in and of itself is of limited use, but when compared to the probabilities of error calculated in a t-table, this measure provides information on whether a desired confidence level has been reached to conclude that a regression coefficient and its variable represent a reliable predictor.

Alternatively, a pricing service may provide a company with consensus pricing information (e.g., information obtained by polling dealers for mid-market price indications for a particular asset class). We believe that the non-binding nature of consensus pricing would generally result in this information being considered as Level 3 inputs, absent additional corroborative evidence.

Pricing services may also utilize valuation models to estimate values for certain instruments. For example, pricing services may use matrix pricing to determine the value of many fixed-income securities. The hierarchy level in which these instruments would be categorized depends on the observability of the valuation model's inputs. Companies that utilize pricing services should therefore understand the data sources and valuation methods used to derive those third-party quotes. This information will determine where the company's instruments would be categorized in the fair value hierarchy.

Similarly, the level within the hierarchy in which a broker quote is categorized depends on the nature of the quote. In certain brokered markets, firm quotes are disclosed, and an entity has the ability to "hit" or execute a transaction at the quoted price. Depending on the level of activity in these markets, those quotes may be categorized as Level 1 or Level 2. When a company has to solicit a quote from a broker, however, the quotes are often non-binding and may include a disclaimer that releases the broker from being held to that price in an actual transaction. We believe non-binding broker quotes are generally Level 3 inputs. In addition, when the quote includes explanatory language or a disclaimer, the company should assess whether the quote represents fair value (exit price) or whether an adjustment is needed.

While multiple quotes within a narrow range likely provide stronger evidence of fair value compared to a single quote (or several quotes that are widely dispersed), the number of quotes does not in and of itself, affect the instrument's classification in the fair value hierarchy. Stated differently, while judgment may be required to determine the appropriate hierarchy level, we do not believe multiple Level 3 inputs within a reasonable range result in a Level 2 measurement, without additional corroborative market evidence.

Quotes from pricing services and brokers are an important source of information many companies consider in their fair value measurements. While ASC 820 is clear that the use of quoted prices provided by third parties is not precluded, it is equally clear that the use of broker quotes, third-party pricing services or third-party valuation specialists does not alleviate management's ultimate responsibility for the fair value measurements (and related disclosures) reported in the company's financial statements. As such, companies should understand the basis for, and source of, any information received from brokers and pricing services. Management should assess the relevance of these quotes especially when the volume or level of activity for an asset or liability has decreased.

As discussed in section 13.5, a company should evaluate whether quotes from brokers and pricing services are based on current information that reflects orderly transactions or were determined using valuation techniques that appropriately reflect market participant assumptions regarding risk. Companies should place less weight on third-party quotes that are not based on transactions compared to fair value indications that are based on market transactions.

**Question 16.1-3 At which level in the fair value hierarchy are OTC derivative instruments usually categorized?**

We generally would not expect non-centrally cleared OTC derivatives to be categorized in Level 1 of the fair value hierarchy. Although these instruments may initially be executed in active markets, quoted prices for the identical asset or liability will often not be available upon subsequent measurement.

Consider a 10-year plain vanilla interest rate swap entered into on 1 January 20X9 that is not centrally cleared. When measuring the fair value of the swap on 31 March 20X9, the subject instrument would represent a 9.75-year swap for which quoted prices are likely not available. Accordingly, most non-centrally cleared OTC derivative contracts are valued using pricing models and are categorized in either Level 2 or Level 3, depending on the observability of the inputs used in those pricing models.

Centrally cleared derivatives would also not be categorized in Level 1 unless their fair value was determined based on unadjusted quoted prices in active markets for the identical instrument. Some have questioned whether a “value mark” periodically provided by a central clearing organization for variation margin purposes represents a Level 1 measurement. As discussed in Question 13.5-1, a reporting entity should not presume that the value provided by a central clearing organization for margining purposes represents a fair value measurement in accordance with ASC 820. Instead, a company should understand the source and nature of the information provided by the central clearing organization and assess whether the value indication is consistent with ASC 820’s requirements or an adjustment may be needed.

Even in those circumstances where a company determines that the information received from the central clearing organization is representative of fair value and does not require adjustment, companies should understand whether the “value marks” provided represent actual trades of the identical instrument. If the “value marks” do not represent actual trades of the identical instrument, they would not be a Level 1 measurement.

See Question 13.5-1 for additional discussion on the consideration of values provided by central clearing organizations when determining the fair value.

**Question 16.2-1 Does ASC 820 require a fair value measurement to be based on the price of the last transaction even when the market is not active?**

No. However, ASC 820 does require that valuation technique(s) used to measure fair value maximize the use of relevant observable inputs and minimize the use of unobservable inputs. As such, transaction data should not be ignored unless the transaction is determined to be disorderly.

The relevance of observable data (e.g., the most recent transaction prices, including transactions occurring after the measurement date that provide valuable insight into the assumptions used in estimating fair value as of the measurement date) must be considered when assessing how much weight to ascribe to this information when estimating fair value. As previously discussed, various factors may require significant adjustments to observed transaction prices, depending on the facts and circumstances. Differences between the asset being measured and a similar asset that is the subject of an observed transaction is a common reason for applying adjustments to Level 2 inputs or prices. As such, it is important to understand the unique characteristics of the item being measured compared to a similar instrument that is used as a benchmark, and to incorporate how market participants would consider these characteristics when pricing the item.

When few, if any, transactions can be observed for an asset or liability, an index may provide relevant pricing information if the underlying risks of the index are similar to the item being measured. While the index price may provide general information about market participant assumptions regarding certain risk features of the asset or liability, adjustments are often required to account for specific characteristics of the instrument being measured or the market in which the instrument would trade (e.g., liquidity considerations). Although general market information will likely not be determinative of fair value for the specific instrument being measured, this information can either support or contest a company’s assessment of the relevance of observable data in markets that are not active.

ASC 820 does not prescribe a methodology for applying adjustments to observable transactions or quoted prices when estimating fair value. Judgment is needed when evaluating the relevance of observable market data and determining what (if any) adjustments should be made to this information. However, the application of this judgment must be within the confines of the stated objective of a fair value measurement within the ASC 820 framework. Because fair value is intended to represent the exit price in a transaction between market participants in the current market, a company’s intent to hold the asset due to current market conditions, or any entity-specific needs, is not relevant to a fair value measurement and is not a valid reason to adjust observable market data.

# 17

## Level 3 inputs

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Fair Value Hierarchy*

##### *Level 3 Inputs*

##### **820-10-35-52**

Level 3 inputs are unobservable inputs for the asset or liability.

##### **820-10-35-53**

Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, that is, an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Therefore, unobservable inputs shall reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk.

##### **820-10-35-54A**

A reporting entity shall develop unobservable inputs using the best information available in the circumstances, which might include the reporting entity's own data. In developing unobservable inputs, a reporting entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the reporting entity that is not available to other market participants (for example, an entity-specific synergy). A reporting entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, a reporting entity shall take into account all information about market participant assumptions that is reasonably available. Unobservable inputs developed in the manner described above are considered market participant assumptions and meet the objective of a fair value measurement.

### 17.1

#### Use of Level 3 inputs

A number of Topics require (or permit) the use of fair value measurements, irrespective of the level of market activity for the asset or liability as of the measurement date (e.g., the re-measurement of derivative instruments under ASC 815 and the initial measurement of intangible assets under ASC 805). As such, ASC 820 allows for the use of unobservable inputs to measure fair value in situations where observable inputs are not available. In these cases, the FASB recognizes that the best information available with which to develop unobservable inputs may be a company's own data. However, ASC 820 is clear that while a company may begin with its own data, this data should be adjusted if reasonably available information dictates that market participants would use different assumptions, or if the company's data pertains to factors specific only to the company.

For example, when measuring the fair value of a reporting unit in accordance with ASC 350, we would expect that a reporting entity with a unique tax position would consider the typical market participant tax rate in its analysis. While this example is simplistic and is meant only to illustrate a concept, in practice significant judgment will be required when evaluating what information about unobservable inputs or market data may be reasonably available.

It is important to note that a company is not required to undertake exhaustive efforts to obtain information about market participant assumptions when pricing an asset or liability. Nor is a company required to establish the absence of contrary data. As a result, in those situations where information about market participant assumptions does not exist or is not reasonably available, a fair value measurement may be based primarily on the reporting entity's own data.

Even in these cases, however, the objective of the fair value measurement remains the same, that is, an exit price from the perspective of a market participant that holds the asset or owes the liability. As such, unobservable inputs should reflect market participant assumptions about risk, both in terms of the inherent risks in a valuation technique as well as the inputs to that valuation technique. For example, if market participants would require a risk premium when pricing an asset or liability—as may be the case when there has been a significant decrease in the volume and level of activity for that asset or liability—the company should incorporate a risk adjustment when measuring the item's fair value, even if this implies using the company's own estimate of the premium market participants would require.

## 17.2 Unobservable inputs versus entity-specific inputs

The FASB's clarification that the objective of a fair value measurement remains unchanged regardless of whether observable or unobservable inputs are used is important because it highlights that unobservable inputs are different from entity-specific inputs. For example, when valuing an intangible asset using unobservable inputs, the assumptions used should take into account the intended use of the asset by market participants, which could differ from the company's intended use. Although the expected cash flows used in determining the fair value of this intangible asset (based on its highest and best use by market participants) may still be estimated using the company's own data, these cash flows are not entity-specific because they do not incorporate the asset's current use or any specific advantages or disadvantages the company derives from the asset.

At the 2009 AICPA National Conference on Current SEC and PCAOB Developments, the SEC staff discussed considerations for developing market participant assumptions when measuring the fair value of assets and liabilities that trade in inactive markets or for which no formalized exit market exists. The SEC staff acknowledged the challenges involved in determining market participant assumptions in those instances where observable market data is not readily available. In these situations, the SEC staff stated it would anticipate that a reporting entity would use its own assumptions as a starting point in developing market participant assumptions and apply reasonable judgment in analyzing whether such assumptions are representative of market participant assumptions.

The SEC staff suggested that reporting entities consider the following questions when performing this analysis and highlighted the importance of documenting how market participant assumptions were developed.

- ▶ What are the potential exit markets for the asset and what is the asset's principal (or most advantageous) market?
  - ▶ The identification of the reference exit market is important because certain defining characteristics of an individual market (e.g., level of activity, nature of competition and the types of market participants) may affect the ultimate price at which willing market participants in that market would transact.
- ▶ What is the highest and best use of the nonfinancial asset?
  - ▶ A reporting entity should understand how the potential uses of the nonfinancial asset may differ between different types of market participants in order to assess the highest and best use and valuation premise for the asset.
- ▶ Who are the potential market participants and what are their distinguishing characteristics?
  - ▶ Characteristics that distinguish market participants from one another can impact the assumptions they would make when pricing the asset and may also affect how these market participants would expect to use a nonfinancial asset in a manner that maximizes its value.

- ▶ How do market participant characteristics compare to the reporting entity's characteristics?
  - ▶ In order to determine what (if any) adjustments need to be made to the reporting entity's own assumptions, it should reconcile the significant distinguishing characteristics between itself and the identified types of market participants.

The items noted above are not intended to be all-inclusive and other factors may need to be considered in developing market participant assumptions. The SEC staff also indicated that determining market participant assumptions can be iterative in nature, and as such, these and other relevant questions may need to be assessed throughout the process and not sequentially. (The iterative nature of the fair value framework is illustrated in section 4.2 of this document.)

## 17.3

### Examples of Level 3 inputs

ASC 820 provides the following examples of Level 3 inputs for particular assets and liabilities.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Implementation Guidance and Illustrations*

##### *Level 3 Inputs*

##### **820-10-55-22**

Examples of **Level 3 inputs** for particular assets and liabilities include the following:

- a. Long-dated currency swap. A Level 3 input would be an interest rate in a specified currency that is not observable and cannot be corroborated by observable market data at commonly quoted intervals or otherwise for substantially the full term of the currency swap. The interest rates in a currency swap are the swap rates calculated from the respective countries' yield curves.
- b. Three-year option on exchange-traded shares. A Level 3 input would be historical volatility, that is, the volatility for the shares derived from the shares' historical prices. Historical volatility typically does not represent current market participants' expectations about future volatility, even if it is the only information available to price an option.
- c. Interest rate swap. A Level 3 input would be an adjustment to a mid-market consensus (nonbinding) price for the swap developed using data that are not directly observable and cannot otherwise be corroborated by observable market data.
- d. Asset retirement obligation at initial recognition. A Level 3 input would be a current estimate using the reporting entity's own data about the future cash outflows to be paid to fulfill the obligation (including market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the asset retirement obligation) if there is no reasonably available information that indicates that market participants would use different assumptions. That Level 3 input would be used in a present value technique together with other inputs, for example, a current risk-free interest rate or a credit-adjusted risk-free rate if the effect of the reporting entity's credit standing on the fair value of the liability is reflected in the discount rate rather than in the estimate of future cash outflows.
- e. Reporting unit. A Level 3 input would be a financial forecast (for example, of cash flows or earnings) developed using the reporting entity's own data if there is no reasonably available information that indicates that market participants would use different assumptions.

# 18 Net asset value as a practical expedient

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Measuring the Fair Value of Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*

##### **820-10-35-59**

A reporting entity is permitted, as a practical expedient, to estimate the fair value of an investment within the scope of paragraphs 820-10-15-4 through 15-5 using the net asset value per share (or its equivalent, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed) of the investment, if the net asset value per share of the investment (or its equivalent) is calculated in a manner consistent with the measurement principles of Topic 946 as of the reporting entity's measurement date.

##### **820-10-35-60**

If the net asset value per share of the investment obtained from the investee is not as of the reporting entity's measurement date or is not calculated in a manner consistent with the measurement principles of Topic 946, the reporting entity shall consider whether an adjustment to the most recent net asset value per share is necessary. The objective of any adjustment is to estimate a net asset value per share for the investment that is calculated in a manner consistent with the measurement principles of Topic 946 as of the reporting entity's measurement date.

##### **820-10-35-61**

A reporting entity shall decide on an investment-by-investment basis whether to apply the practical expedient in paragraph 820-10-35-59 and shall apply that practical expedient consistently to the fair value measurement of the reporting entity's entire position in a particular investment, unless it is probable at the measurement date that the reporting entity will sell a portion of an investment at an amount different from net asset value per share (or its equivalent) as described in the following paragraph. In those situations, the reporting entity shall account for the portion of the investment that is being sold in accordance with this Topic (that is, the reporting entity shall not apply the guidance in paragraph 820-10-35-59).

##### **820-10-35-62**

A reporting entity is not permitted to estimate the fair value of an investment (or a portion of the investment) within the scope of paragraphs 820-10-15-4 through 15-5 using the net asset value per share of the investment (or its equivalent) as a practical expedient if, as of the reporting entity's measurement date, it is probable that the reporting entity will sell the investment for an amount different from the net asset value per share (or its equivalent). A sale is considered probable only if all of the following criteria have been met as of the reporting entity's measurement date:

- a. Management, having the authority to approve the action, commits to a plan to sell the investment.
- b. An active program to locate a buyer and other actions required to complete the plan to sell the investment have been initiated.
- c. The investment is available for immediate sale subject only to terms that are usual and customary for sales of such investments (for example, a requirement to obtain approval of the sale from the investee or a buyer's due diligence procedures).

- d. Actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

#### *Scope and Scope Exceptions*

#### *Fair Value Measurements of Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*

##### **820-10-15-4**

Paragraphs 820-10-35-59 through 35-62 and 820-10-50-6A shall apply only to an investment that meets both of the following criteria as of the reporting entity's measurement date:

- a. The investment does not have a **readily determinable fair value**
- b. The investment is in an investment company within the scope of Topic 946 or is an investment in a real estate fund for which it is industry practice to measure investment assets at fair value on a recurring basis and to issue financial statements that are consistent with the measurement principles in Topic 946.

## 18.1

### Measuring certain alternative investments using net asset value

ASC 820 allows a reporting entity, as a practical expedient, to estimate the fair value of certain investments by using the net asset value (NAV) per share of the investment as of the reporting entity's measurement date. This practical expedient generally deals with investments that permit an investor to redeem its investment directly with, or receive distributions from, the investee at times specified in the investee's governing documents. Examples of these investments (often referred to as alternative investments) may include ownership interests in hedge funds, venture capital funds and private equity (PE) funds. They are commonly in the form of limited partnership interests.

By characterizing the use of NAV in measuring the fair value of alternative investments as a practical expedient, the FASB acknowledged that in certain situations such a measure will likely differ from the price that would be received to sell the asset in an orderly transaction between market participants at the measurement date (i.e., a "true" exit price as contemplated by ASC 820). Examples of these situations could include instances where a reporting entity cannot redeem its investment with the investee at the measurement date or when the investment requires the investor to make additional capital contributions.

As discussed in the Basis for Conclusions of ASU 2009-12,<sup>61</sup> the FASB provided the NAV practical expedient because it viewed NAV as the most relevant estimate of fair value that could be determined without undue cost and effort for an investor that holds investments within the scope of the guidance. In reaching its decision to provide this practical expedient, the FASB concluded that, on balance, the cost and effort involved in evaluating the specific attributes of these types of investments, as well as any principal-to-principal or brokered transactions for these investments, outweighed the benefits. A key determinant in the FASB's conclusion was the fact that substantially all of the underlying assets of the investee are measured at fair value, as discussed in the scope section below. It should be noted, however, that any debt held by the investee would not be recorded at its fair value unless the entity has elected the fair value option in accordance with the Fair Value Option Subsections of ASC 825. Notwithstanding this fact, the FASB did not deem it necessary to preclude the use of the practical expedient when debt held by the investee is measured at its amortized cost (not fair value).

<sup>61</sup> ASU 2009-12, *Accounting Standards Update No. 2009-12, Fair Value Measurements and Disclosures (Topic 820): Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*.

## 18.1.1 Scope of the practical expedient

The scope of the practical expedient is limited to investments without readily determinable fair values in entities that calculate NAV (or its equivalent, such as member units or an ownership interest in partners' capital) consistent with the measurement principles of ASC 946.<sup>62</sup> However, use of the practical expedient is not permitted for in-scope investments if it is probable as of the measurement date that the entity will sell the investment (or a portion of the investment) for an amount other than its NAV.

Use of this practical expedient is permitted rather than required by ASC 820. As such, the decision to apply the practical expedient can be made on an investment-by-investment basis. However, it must be applied consistently to an entity's entire position in a particular investment, unless it is probable at the measurement date that the reporting entity will sell a portion of the investment at an amount other than NAV. In addition, it is important to note that the practical expedient does not alleviate management's responsibility to understand, assess and conclude on the appropriateness of the NAV provided by the investee fund.

### 18.1.1.1 Readily determinable fair value (updated September 2022)

#### Excerpt from Accounting Standards Codification

##### Master Glossary

##### *Readily Determinable Fair Value*

An equity security has a readily determinable fair value if it meets any of the following conditions:

- a. The fair value of an equity security is readily determinable if sales prices or bid-and-asked quotations are currently available on a securities exchange registered with the U.S. Securities and Exchange Commission (SEC) or in the over-the-counter market, provided that those prices or quotations for the over-the-counter market are publicly reported by the National Association of Securities Dealers Automated Quotations systems or by OTC Markets Group Inc. Restricted stock meets that definition if the restriction terminates within one year.
- b. The fair value of an equity security traded only in a foreign market is readily determinable if that foreign market is of a breadth and scope comparable to one of the U.S. markets referred to above.
- c. The fair value of an equity security that is an investment in a mutual fund or in a structure similar to a mutual fund (that is, a limited partnership or a venture capital entity) is readily determinable if the fair value per share (unit) is determined and published and is the basis for current transactions.

##### *Scope and Scope Exceptions*

##### *Fair Value Measurements of Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*

##### **820-10-15-5**

The definition of *readily determinable fair value* indicates that an equity security would have a readily determinable fair value if any one of three conditions is met. One of those conditions is that sales prices or bid-and-asked quotations are currently available on a securities exchange registered with the U.S. Securities and Exchange Commission (SEC) or in the over-the-counter market, provided that those prices or quotations for the over-the-counter market are publicly reported by the National Association of Securities Dealers Automated Quotations systems or by OTC Markets Group Inc. The definition notes that restricted stock meets that definition if the restriction expires within one year. If an investment otherwise would have a readily determinable fair value, except that the investment has a restriction expiring in more than one year, the reporting entity shall not apply paragraphs 820-10-35-59 through 35-62 and 820-10-50-6A to the investment.

<sup>62</sup> ASC 946 requires investment companies to report their investment assets at fair value in accordance with the principles of ASC 820.

The FASB concluded that investments with readily determinable fair values as defined in the ASC Master Glossary would not be eligible for the NAV practical expedient with one exception. Although the Master Glossary notes that a restricted stock would be deemed to have a readily determinable fair value only if the restriction terminated within one year, the guidance in ASC 820 states that the length of an equity security's restriction is not considered when determining whether the investment qualifies for the NAV practical expedient.

For example, most investments in a registered, closed-end investment company whose fair value can be estimated using sales prices that are currently available on a securities exchange would have a readily determinable fair value for purposes of determining whether an investment is eligible to apply the practical expedient, even if the investment has a lockup period expiring in more than one year. These investments would not be eligible for the practical expedient. It would not be appropriate for an entity to disregard observable market data and estimate fair value based on the NAV of the investment.

In determining the fair value for such an investment, we believe a reporting entity should consider whether the effect of any restrictions has been captured in the available sales prices. While most investments in registered closed-end investment companies do not allow for redemptions with the investee, they do not place any restrictions on sales with third parties. In these instances, adjustments to current sales prices to determine fair value would likely not be necessary. However, if, for example, a two-year contractual restriction on sales to third parties did exist for a particular investment in a closed-end investment company, an adjustment to the current sales price of similar non-restricted securities would likely be necessary to account for this restriction when determining the investment's fair value in accordance with ASC 820, prior to the adoption of ASU 2022-03 (refer to section 5.2.1 for further discussion). After the adoption of ASU 2022-03, the two-year contractual restriction on sales to third parties would not be considered part of the unit of account and, therefore, would not result in an adjustment to the current sales price of similar non-restricted securities when measuring the investment's fair value (refer to section 5.2.1A for further discussion).

#### **18.1.1.1.1**

#### ***Applying the third condition of the definition of readily determinable fair value***

The third condition of the readily determinable fair value definition addresses investments in a mutual fund or in a structure similar to a mutual fund and states that these investments have readily determinable fair values if the fair value per share (unit) is determined and published and is the basis for current transactions. The FASB added the reference to an investment in a structure "similar to a mutual fund" to the Master Glossary Definition.

Entities should carefully consider whether their investments have readily determinable fair values. Unlike price quotes for mutual funds, price quotes for investments in most hedge funds, private equity funds, venture capital funds and funds of funds are generally not available on a securities exchange or in an over-the-counter market. Further, the FASB acknowledged in the Basis for Conclusions of ASU 2009-12 that many investments in hedge funds, private equity funds, venture capital funds and funds of funds do not have readily determinable fair values.

In evaluating whether an investment in a mutual fund or alternative investment (including investments in common collective trusts and pooled separate accounts) has readily determinable fair value, an entity should apply judgment to determine, considering the facts and circumstances, whether the investment's NAV is "determined and published" and is the "basis for current transactions" in a manner that is similar to that of a mutual fund. The investment's NAV must meet both conditions to have a readily determinable fair value. The characteristics of the investment should be considered when making such a determination.

For example, indications that an investment's NAV is "determined and published" may be if the NAV is determined daily and if the NAV is made available to its current or prospective investors (e.g., NAV could be made available to investors through accessing their online balances, or could be made more broadly available through publishing publicly). In contrast, if the NAV is determined less frequently, such as monthly or quarterly, and the fund makes the NAV available to current or prospective investors only upon request, the NAV would not likely be "determined and published."

An indicator that an investment's NAV may be the "basis for current transactions" could be if an investor is able to purchase or redeem interests of the fund at its NAV computed shortly after the receipt of the purchase or redemption order. For example, if an investor submits a subscription or redemption order on 1 January before the fund determines its 1 January NAV, the investor would purchase or sell its interest at the 1 January NAV (i.e., the fund's current NAV).

In contrast, if redemptions require advance notice (e.g., 60 days prior to the effective date) and the NAV used for the redemption is not computed shortly after the receipt of the order, the NAV may not be the "basis for current transactions." For example, the NAV would likely not be the "basis for current transactions" if an investor that submits a redemption request on 1 January redeems at the NAV determined on 1 March.

Concluding that an investment has a readily determinable fair value based on the third criteria, and thus is not eligible for the practical expedient, will often only result in a difference in disclosure. That is, for investments in mutual funds (or entities similar to mutual funds) deemed to have a readily determinable fair value because the fair value per share (unit) is considered to be published and the basis for current transactions, the NAV will often represent the fair value. In these situations, the fund stands ready to purchase and sell units of the fund at the NAV. Although the observed transactions are executed with the fund rather than with third parties, given the liquidity provided by the fund, the NAV would presumably represent the price at which the investment would be sold in a transaction between independent market participants. In other words, the fair value of the investment would not be expected to be higher than the amount that a new investor would be required to pay in order to directly invest in the fund. Similarly, the hypothetical seller of the investment would not be expected to accept proceeds in an amount lower than what it could receive by redeeming its investment with the fund directly.

The fair value of an investment measured using the NAV practical expedient typically will not be different than the fair value of an investment measured without the practical expedient. However, the disclosures will be different. Refer to section 20 for information on disclosure requirements.

#### **Illustration 18.1-1: Plan investment in a common collective trust**

Plan ABC holds an investment in Common Collective Trust XYZ (CCT XYZ). CCT XYZ publishes a daily NAV per unit. The daily NAV is available to participants of Plan ABC when they log in to their online account to view their current balance. CCT XYZ allows participants to make daily redemption requests at the current NAV.

Plan ABC determines that its investment in CCT XYZ has a readily determinable fair value because its investment is an equity security in a structure similar to a mutual fund in which the fair value per unit is determined and published and is the basis for current transactions. Plan ABC concludes that the investment is not eligible for the NAV practical expedient. However, Plan ABC measures the investment at the published NAV because it concludes that the quoted NAV per unit represents the price at which the investment would be sold in a transaction between independent market participants. It includes the investment in its fair value measurement disclosures, including the fair value hierarchy table.

## Questions and interpretive responses

**Question 18.1-1** To qualify for the practical expedient, does ASC 820 require that the investment be made in an entity that has all the attributes of an investment company as described in ASC 946?

No. The investment need only be in an entity that calculates NAV in a manner consistent with the measurement principles of ASC 946. That is, the investment must be in an entity that measures investment assets at fair value (in accordance with the principles of ASC 820) on a recurring basis. This would include entities that have all of the attributes specified in ASC 946, as well as those for which it is industry practice to issue financial statements using the measurement guidance in ASC 946. Paragraph 820-10-15-4 clarifies that investments in real estate funds that calculate NAV in a manner consistent with ASC 946 would be eligible for measurement using the practical expedient (assuming that the fair value of these investments is not readily determinable).

**Question 18.1-2** In situations where NAV is calculated in a manner inconsistent with ASC 946, or as of a date that differs from the reporting entity's measurement date, does ASC 820 require fair value to be determined based on a "true" exit price?

While measuring the investment at NAV without adjustment may not be appropriate in these instances, we believe the measurement objective of the practical expedient can still be considered. That is, a reporting entity is not required to consider the effect of restrictions on redemptions or other factors that could cause NAV to differ from a "true" exit price when estimating the fair value of the investments in these instances.

Instead, because the investments meet the criteria to use the practical expedient, the reporting entity is allowed to estimate NAV in accordance with ASC 946 as of the reporting entity's measurement date. ASC 820-10-35-60 clarifies that "if the [NAV] of the investment obtained from the investee is not as of the reporting entity's measurement date or is not calculated in a manner consistent with the measurement principles of [ASC] 946, the reporting entity shall consider whether an adjustment to the most recent [NAV] per share is necessary. The objective of any adjustment is to estimate a [NAV] per share for the investment that is calculated in a manner consistent with the measurement principles of [ASC] 946 as of the reporting entity's measurement date."

In some cases, this may require an investor to make adjustments to the NAV provided by the investee in order to incorporate changes in the underlying investments held by the investee or changes in market conditions that occurred between the date of the most recent NAV calculation and the measurement date. In other instances, a reporting entity may need to make its own determination of the investment's NAV in accordance with ASC 946, such as in those situations where the investment is deemed to be within the scope of the practical expedient but the investee presents financial information on a basis other than US GAAP (e.g., on a tax basis).

**Question 18.1-3** When is the potential sale of an alternative investment deemed to be probable?

A reporting entity is required to estimate the fair value of its investment based on the principles in ASC 820 (i.e., the exit price for the instrument assuming a sale in an orderly transaction at the measurement date) when a sale of the investment at an amount that differs from NAV is probable. In prohibiting the use of the practical expedient in these instances, the FASB stated that it would not be representationally faithful to estimate fair value based on NAV when it is probable that the investment will be sold for an amount that will differ from its NAV.

While determining whether the sale of an investment is deemed to be probable as of the measurement date will require judgment, ASC 820-10-35-62 provides the following criteria (all of which must be met as of the measurement date) to assist reporting entities in making this determination:

- ▶ Management, having the authority to approve the action, commits to a plan to sell the investment
- ▶ An active program to locate a buyer and other actions required to complete the plan to sell the investment have been initiated
- ▶ The investment is available for immediate sale subject only to terms that are usual and customary for sales of such investments (e.g., a requirement to obtain approval of the sale from the investee or a buyer's due diligence procedures)
- ▶ Actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn

If an entity has decided to sell a portion of its alternative investments, but has not identified the specific investments to be sold, continued use of the practical expedient is allowed (e.g., an entity decides to sell 20% of its investments in private equity funds but has not yet determined the individual interests or portions of the individual interests to be sold). While the practical expedient may still be used until the individual instruments have been identified and their sale is determined to be probable based on the factors above, the reporting entity is required to disclose its plans to sell a portion of its investments and any remaining actions required to complete the sale.

**Question 18.1-4** **What factors should a reporting entity consider in estimating the fair value of an investment when its sale at an amount that differs from NAV is probable?**

In some instances, the price in a probable sales transaction may be known with a high level of certainty prior to the transaction being completed. In these instances, assuming the pending transaction is not deemed to be disorderly, the expected sales price is likely to provide a good indication of fair value. In other instances, the sales process may provide indications as to the expected sales price (e.g., when a number of buyers for the investment submit bids for the investments). However, there may be situations where the ultimate transaction price in the probable sale of an investment is unknown as of the measurement date, but it is clear that the price will not approximate NAV. In these instances, an entity must apply judgment when estimating the fair value of its alternative investment.

It is important to note that the asset being measured is the investor's equity interest in the fund, not the underlying assets (and liabilities) of the fund itself. As such, while NAV may represent a good starting point in estimating fair value, adjustments may be required to reflect the specific characteristics that market participants would consider in pricing the investment.

For example, the NAV is generally not intended to represent the exit price an investor would receive for selling its interest in a PE fund. Instead, the NAV represents a calculation of the fair value of the PE fund's net assets and does not consider any of the other attributes associated with investor's interest in the fund. Examples of these attributes include restrictions on the investor's ability to redeem its interest with the fund and any additional capital call requirements related to the interest.

When estimating the fair value of alternative investments, reporting entities may also look to recent market transactions for similar types of interests. While not common, sales of certain alternative investments, such as PE interests, do occur. Premiums to NAV are sometimes observed in these transactions, but discounts on sales of PE fund interests are more common. Premiums or discounts can arise based on various factors, including:

- ▶ The type of fund, specific portfolio investments in the fund, market conditions and the reputation of the PE fund manager

- ▶ The PE fund manager's valuation methodology (e.g., if a PE fund manager's valuation is deemed to be conservative, a lower discount may result)
- ▶ Where the PE fund is in its investment distribution cycle
- ▶ How difficult it is to value the PE fund's underlying portfolio investments given the nature of its private investments
- ▶ Changes in general market conditions and market participants' assessment of (and compensation for) risk

In assessing the relevance of market-based transactions, reporting entities should consider whether there are indications that the sale was distressed or not orderly. Circumstances that may indicate a transaction is not orderly are discussed in section 6.5. As there are many reasons why investors may choose to sell their alternative investments (e.g., change in investment strategy, merger or acquisition, need for enhanced liquidity) entities should not assume that any observed sale at a discount to NAV is of a distressed nature. Refer to Industry Appendix 2 and Industry Appendix 3 for additional fair value measurement considerations for investments in PE funds and hedge funds, respectively.



# 19      **Section not used**

This chapter is no longer used for purposes of this publication. Refer to other chapters throughout this publication for additional details regarding the fair value measurement and disclosure requirements of ASC 820.

# 20 Disclosures

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Disclosure*

#### **820-10-50-1C**

The objective of the disclosure requirements in this Subtopic is to provide users of financial statements with information about assets and liabilities measured at **fair value** in the statement of financial position or disclosed in the notes to financial statements:

- a. The valuation techniques and **inputs** that a reporting entity uses to arrive at its measures of fair value, including judgments and assumptions that the entity makes
- b. The uncertainty in the fair value measurements as of the reporting date
- c. How changes in fair value measurements affect an entity's performance and cash flows.

#### **820-10-50-1D**

When complying with the disclosure requirements of this Subtopic, a reporting entity shall consider all of the following:

- a. The level of detail necessary to satisfy the disclosure requirements
- b. How much emphasis to place on each of the various requirements
- c. How much aggregation or disaggregation to undertake
- d. Whether users of financial statements need additional information to evaluate the quantitative information disclosed.

## 20.1 Disclosure objectives

ASC 820 requires a number of disclosures designed to provide users of financial statements with additional transparency regarding:

- ▶ The valuation techniques and inputs that a reporting entity uses to arrive at its measures of fair value, including judgments and assumptions that it makes
- ▶ The uncertainty in the fair value measurements as of the reporting date
- ▶ How changes in fair value measurements affect an entity's performance and cash flows

The disclosure requirements focus solely on fair value measurements in periods subsequent to initial recognition. Under current US GAAP, many assets and liabilities require measurement at fair value only upon their initial recognition (e.g., intangible assets acquired in a business combination), assuming impairment is not an issue. These assets and liabilities are not subject to the disclosure requirements of ASC 820 and are not required to be categorized by hierarchy level. In addition, ASC 820 does not mandate any separate disclosures of unrealized gains or losses recognized by a company on Day 1, even when the fair value measurement is determined using unobservable inputs.

However, companies are required to disclose the information required in ASC 820-10-50-2 (see section 20.3) for each class of assets and liabilities measured at fair value in the statement of financial position after initial recognition. Companies should use the considerations in ASC 820-10-50-1D to determine whether the nature and extent of the fair value information disclosed are sufficient to meet the disclosure objectives in ASC 820. This assessment requires judgment and will depend on facts and circumstances.

ASC 820 includes the following example to illustrate the type of additional information a company may disclose based on the considerations outlined in ASC 820-10-50-1D. These additional disclosures are intended to help financial statement users better understand and evaluate the quantitative information provided by the company (e.g., the quantitative information the company disclosed regarding the valuation of its RMBS holdings).

### **Excerpt from Accounting Standards Codification**

#### **Fair Value Measurement – Overall**

#### *Implementation Guidance and Illustrations*

#### *Example 9: Fair Value Disclosures*

#### *Case C: Disclosure—Information about Fair Value Measurements Categorized within Level 3 of the Fair Value Hierarchy*

#### *Valuation Techniques and Inputs*

#### **820-10-55-104**

In addition, a reporting entity should provide additional information that will help users of its financial statements to evaluate the quantitative information disclosed. A reporting entity might disclose some or all of the following to comply with paragraph 820-10-50-1D:

- a. The nature of the item being measured at fair value, including the characteristics of the item being measured that are taken into account in the determination of relevant inputs. For example, for residential mortgage-backed securities, a reporting entity might disclose the following:
  1. The types of underlying loans (for example, prime loans or subprime loans)
  2. Collateral
  3. Guarantees or other credit enhancements
  4. Seniority level of the tranches of securities
  5. The year of issue
  6. The weighted-average coupon rate of the underlying loans and the securities
  7. The weighted-average maturity of the underlying loans and the securities
  8. The geographical concentration of the underlying loans
  9. Information about the credit ratings of the securities.
- b. How third-party information such as broker quotes, pricing services, net asset values, and relevant market data was taken into account when measuring fair value.

## 20.2 Level of disaggregation

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Disclosure*

##### **820-10-50-2B**

A reporting entity shall determine appropriate classes of assets and liabilities on the basis of the following:

- a. The nature, characteristics, and risks of the asset or liability
- b. The level of the fair value hierarchy within which the fair value measurement is categorized.

The number of classes may need to be greater for fair value measurements categorized within Level 3 of the fair value hierarchy because those measurements have a greater degree of uncertainty and subjectivity. Determining appropriate classes of assets and liabilities for which disclosures about fair value measurements should be provided requires judgment. A class of assets and liabilities will often require greater disaggregation than the line items presented in the statement of financial position. However, a reporting entity shall provide information sufficient to permit reconciliation to the line items presented in the statement of financial position. If another Topic specifies the class for an asset or a liability, a reporting entity may use that class in providing the disclosures required in this Topic if that class meets the requirements in this paragraph.

ASC 820's fair value disclosures are required to be made separately for each class of assets and liabilities measured at fair value subsequent to initial recognition. As such, the level of disaggregation used for all fair value disclosures, including categorizing the assets and liabilities in the fair value hierarchy, describing the valuation techniques and inputs used in the measurement (including the Level 3 quantitative disclosures of unobservable inputs) and reconciling beginning and ending Level 3 balances (as applicable), should generally be consistent and based on the class of asset or liability.

Determining the appropriate class of assets and liabilities requires judgment. Companies should consider the level of disaggregation users of the financial statements would require to assess the valuation techniques and inputs used to develop the fair value measurement given the nature, characteristics and risks of the assets and liabilities being measured. Given the objectives of the disclosures, the FASB has indicated that the class of assets and liabilities presented for fair value disclosures should generally be at a greater level of disaggregation than a company's line items in its statement of financial position. As such, ASC 820 explicitly requires that sufficient information be provided to permit a reconciliation of the fair value disclosures presented by class to the line items in the statement of financial position. Information allowing for such a reconciliation could be presented through the use of subtotals that agree back to the statement of financial position, but other approaches may be acceptable.

In addition, ASC 820 states that the number of classes may need to be greater for Level 3 fair value measurements because these measurements have a greater degree of uncertainty and subjectivity. This clarification highlights the Board's belief that the usefulness of many of the additional disclosures required exclusively for Level 3 measurements is predicated on companies providing the required information at a sufficient level of disaggregation.

Companies may look to the guidance in other Topics for determining the appropriate class of assets and liabilities, provided that the guidance results in a determination of class consistent with the objectives of ASC 820. The guidance in ASC 320 and ASC 942 is useful in helping companies determine the appropriate level of disaggregation at which to make fair value disclosures for debt and equity securities. For example, companies that measure their debt securities at fair value may look to the guidance in ASC 320-10-50-1B when determining the appropriate class of investments. This guidance states that “in determining whether disclosure for a particular security type is necessary and whether it is necessary to further separate a particular security type into greater detail, an entity shall consider all of the following:

- a. (Shared) activity or business sector
- b. Vintage
- c. Geographic concentration
- d. Credit quality
- e. Economic characteristic”

The above guidance would be applicable to reporting entities that measure debt securities at fair value, regardless of whether the securities are accounted for under ASC 320. For example, we would expect that investment companies, not-for-profit entities and pension plans would all consider this guidance, irrespective of the fact that these types of entities are not subject to ASC 320.

The guidance in other Topics pertaining to the level of disaggregation for debt securities held by financial institutions is more prescriptive. ASC 942-320-50-2 requires these institutions to include all of the following major security types in their investments disclosures (to the extent applicable), although additional categories also may be necessary:

- ▶ Equity securities (segregated by any one of the following: industry type, company size or investment objective)<sup>63</sup>
- ▶ Debt securities issued by the US Treasury and other US government corporations and agencies
- ▶ Debt securities issued by states of the United States and political subdivisions of the states
- ▶ Debt securities issued by foreign governments
- ▶ Corporate debt securities
- ▶ Residential mortgage-backed securities
- ▶ Commercial mortgage-backed securities
- ▶ Collateralized debt obligations
- ▶ Other debt obligations

Although ASC 942 pertains specifically to financial institutions, this list of security types may be useful to other entities in determining the appropriate level of disaggregation to meet the disclosure requirements of ASC 820 with respect to debt and equity securities.

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<sup>63</sup> ASC 942-320-50-2A states, “Investments in mutual funds that invest only in US government debt securities may be shown separately rather than grouped with other equity securities in the disclosures by major security type required by ASC 942-320-50-2.”

## 20.3 Disclosures for assets and liabilities measured at fair value in the statement of financial position

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### Disclosure

##### 820-10-50-2

A reporting entity shall disclose the following information for each class of assets and liabilities (see paragraph 820-10-50-2B for information on determining appropriate classes of assets and liabilities) measured at fair value (including measurements based on fair value within the scope of this Topic) in the statement of financial position after initial recognition. These disclosure requirements shall not apply to an investment within the scope of paragraphs 820-10-15-4 through 15-5 for which fair value is measured using net asset value per share (or its equivalent, for example, member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed) as a practical expedient, in accordance with paragraph 820-10-35-59.

- a. For recurring fair value measurements, the fair value measurement at the end of the reporting period, and for nonrecurring fair value measurements, the fair value measurement at the relevant measurement date and the reasons for the measurement. Recurring fair value measurements of assets or liabilities are those that other Topics require or permit in the statement of financial position at the end of each reporting period. Nonrecurring fair value measurements of assets or liabilities are those that other Topics require or permit in the statement of financial position in particular circumstances (for example, when a reporting entity measures a long-lived asset or disposal group classified as held for sale at fair value less costs to sell in accordance with Topic 360 because the asset's fair value less costs to sell is lower than its carrying amount). For nonrecurring measurements estimated at a date during the reporting period other than the end of the reporting period, a reporting entity shall clearly indicate that the fair value information presented is not as of the period's end as well as the date or period that the measurement was taken.
- b. For recurring and nonrecurring fair value measurements, the level of the fair value hierarchy within which the fair value measurements are categorized in their entirety (Level 1, 2, or 3).
- bb. Subparagraph superseded by Accounting Standards Update No. 2018-13.
- bbb. The information shall include:
  1. For recurring and nonrecurring fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy, a description of the valuation technique(s) and the inputs used in the fair value measurement. If there has been a change in either or both a valuation approach and a valuation technique (for example, changing from matrix pricing to the binomial model or the use of an additional valuation technique), the reporting entity shall disclose that change and the reason(s) for making it.
  2. For recurring and nonrecurring fair value measurements categorized within Level 3 of the fair value hierarchy, a reporting entity shall provide quantitative information about the significant **unobservable inputs** used in the fair value measurement. A reporting entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the reporting entity when measuring fair value (for example, when a reporting entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure, a reporting entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the reporting entity. Employee

benefit plans, other than those plans that are subject to the U.S. Securities and Exchange Commission's (SEC) filing requirements, are not required to provide this disclosure for investments held by an employee benefit plan in their plan sponsor's own nonpublic equity securities, including equity securities of their plan sponsor's nonpublic affiliated entities.

- i. In complying with (bbb)(2), a reporting entity shall provide the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. A reporting entity shall disclose how it calculated the weighted average (for example, weighted by relative fair value). For certain unobservable inputs, a reporting entity may disclose other quantitative information, such as the median or arithmetic average, in lieu of the weighted average, if such information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop the Level 3 fair value measurement. An entity does not need to disclose its reason for omitting the weighted average in these cases.
- ii. A nonpublic entity is not required to provide the information described in (bbb)(2)(i), but is required to provide quantitative information about the significant unobservable inputs used in the fair value measurement in accordance with (bbb)(2).
- c. For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a reconciliation from the opening balances to the closing balances, disclosing separately changes during the period attributable to the following:
  1. Total gains or losses for the period recognized in earnings (or changes in net assets), and the line item(s) in the statement of income (or activities) in which those gains or losses are recognized
  - 1a. Total gains or losses for the period recognized in other comprehensive income, and the line item(s) in other comprehensive income in which those gains or losses are recognized
  2. Purchases, sales, issues, and settlements (each of those types of changes disclosed separately)
  3. The amounts of any transfers into or out of Level 3 of the fair value hierarchy and the reasons for those transfers. Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3. See paragraph 820-10-50-2C for additional guidance.
- d. For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the amount of the total gains or losses for the period in (c)(1) included in earnings (or changes in net assets) and in (c)(1a) included in other comprehensive income that is attributable to the change in unrealized gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in the statement(s) of comprehensive income (or activities) in which those unrealized gains or losses are recognized.
- e. Subparagraph superseded by Accounting Standards Update No. 2011-04.
- f. Subparagraph superseded by Accounting Standards Update No. 2018-13.
- g. For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a narrative description of the uncertainty of the fair value measurement from the use of significant unobservable inputs if those inputs reasonably could have been different at the reporting date. For example, how a change in those significant unobservable inputs to a different amount might result in a significantly higher or lower fair value measurement at the reporting date. If there are interrelationships between those inputs and other unobservable inputs used in the fair value measurement, a reporting entity shall also provide a description of those interrelationships and of how

they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement. To comply with that disclosure requirement, the narrative description of the uncertainty of the fair value measurement that would result from using unobservable inputs shall include the unobservable inputs disclosed when complying with paragraph 820-10-50-2(bbb).

- h. For recurring and nonrecurring fair value measurements, if the **highest and best use** of a nonfinancial asset differs from its current use, a reporting entity shall disclose that fact and why the nonfinancial asset is being used in a manner that differs from its highest and best use.

#### **820-10-50-2C**

A reporting entity shall consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred. The policy about the timing of recognizing transfers shall be the same for transfers into the levels as for transfers out of the levels. Examples of policies for determining the timing of transfers include the following:

- a. The date of the event or change in circumstances that caused the transfer
- b. The beginning of the reporting period
- c. The end of the reporting period.

#### **820-10-50-2F**

A **nonpublic entity** is not required to disclose the information required by paragraph 820-10-50-2(bbb)(2)(i), (d), and (g) and paragraph 820-10-50-2E unless required by another Topic.

#### **820-10-50-2G**

In lieu of paragraph 820-10-50-2(c), a nonpublic entity shall disclose separately changes during the period attributable to the following:

- a. Purchases and issues (each of those types of changes disclosed separately)
- b. The amounts of any transfers into or out of Level 3 of the fair value hierarchy and the reasons for those transfers. Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3. See paragraph 820-10-50-2C for additional guidance.

### **Pending Content:**

**Transition Date:** (P) June 16, 2021; (N) June 16, 2021 | **Transition Guidance:** 958-10-65-4

#### **820-10-50-2H**

See paragraph 958-605-50-1A(d) through (e), which provides disclosures for a **not-for-profit entity (NFP)** that recognizes contributed nonfinancial assets within the scope of Subtopic 958-605. Paragraph 958-605-50-1A(d) requires that an NFP disclose a description of the valuation techniques and inputs used in fair value measurement of those assets in accordance with paragraph 820-10-50-2(bbb)(1) at initial recognition.

#### **820-10-50-3**

For derivative assets and liabilities, the reporting entity shall present both of the following:

- a. The fair value disclosures required by paragraph 820-10-50-2(a) through (b) on a gross basis (which is consistent with the requirement of paragraph 815-10-50-4B(a))
- b. The reconciliation disclosure required by paragraph 820-10-50-2(c) through (d) on either a gross or a net basis.

***Liability Issued with an Inseparable Third-Party Credit Enhancement******820-10-50-4A***

For a liability measured at fair value and issued with an inseparable third-party credit enhancement, an issuer shall disclose the existence of that credit enhancement.

***Tabular Format Required******820-10-50-8***

A reporting entity shall present the quantitative disclosures required by this Topic in a tabular format.

Although generally consistent, the extent of required fair value disclosures will differ depending on whether (1) the reporting entity is a public or nonpublic entity and (2) the fair value measurement is recurring or nonrecurring in nature. Irrespective of the type of reporting entity or the frequency at which the measurements are made, the disclosures under ASC 820 are intended to provide financial statement users with additional insight into the relative subjectivity of various fair value measurements and enhance their ability to broadly assess a reporting entity's quality of earnings.

### 20.3.1 Scope exception for nonpublic entities

While the FASB believes that the principles in ASC 820 are equally applicable to public and nonpublic entities, it acknowledged that different cost-benefit considerations may exist for nonpublic entities. In light of these considerations, the FASB decided to exclude nonpublic entities from certain of the disclosure requirements in ASC 820. In reaching this decision, the FASB noted that the users of the financial statements of nonpublic entities often have a greater ability to access information about the financial position of the company than their public company counterparts.

Specifically, nonpublic entities<sup>64</sup> are not required to disclose the following:

- ▶ A narrative description of the uncertainty of Level 3 fair value measurements from the use of significant unobservable inputs if those inputs reasonably could have been different at the reporting date
- ▶ Information about fair value measurements that are made solely for disclosure purposes (not in the statement of financial position), as discussed in section 20.4
- ▶ The requirement to disclose changes in unrealized gains and losses for the period included in earnings (or changes in net assets) and other comprehensive income for recurring Level 3 fair value measurements
- ▶ The range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements
- ▶ Quantitative information about the significant unobservable inputs used when subsequently measuring the fair value of indefinite-lived intangible assets categorized within Level 3 of the fair value hierarchy (i.e., for impairment purposes)<sup>65</sup>

<sup>64</sup> Based on the ASC Master Glossary, a nonpublic entity does not meet any of the following conditions: (a) its debt or equity securities trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally, (b) it is a conduit bond obligor for conduit debt securities that are traded in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local or regional markets), (c) it files with a regulatory agency in preparation for the sale of any class of debt or equity securities in a public market, (d) it is required to file or furnish financial statements with the Securities and Exchange Commission and (e) it is controlled by an entity covered by criteria (a) through (d).

<sup>65</sup> ASC 350-30-50-3A.

The existing guidance does not require employee benefit plans, other than those plans that are subject to SEC filing requirements, to disclose quantitative information about the significant unobservable inputs used to measure the fair value of Level 3 equity investments in their nonpublic plan sponsor and the sponsor's nonpublic affiliates. Quantitative information about the significant unobservable inputs used to determine the fair value of all other Level 3 investments continues to be required for all employee benefit plans if this information is reasonably available to the reporting entity as discussed further in section 20.3.5.

Refer to section 20.3.6 for the disclosure requirements in lieu of ASC 820-10-50-2(c).

ASC 815 allows certain private companies to apply a simplified hedge accounting approach for interest rate swaps used to economically convert certain variable-rate debt to fixed-rate debt. Under the simplified hedge accounting approach, companies may elect to measure the designated swap at settlement value instead of fair value (i.e., settlement value does not require an adjustment for the risk an entity or its counterparty will not perform on their respective obligations).

While the fair value disclosure requirements in ASC 820 continue to apply to interest rate swaps measured at settlement value, the guidance in ASC 815-10-50-3 indicates that the settlement value may be used in place of fair value. Any amounts disclosed at settlement value are subject to all of the same disclosure requirements as amounts disclosed at fair value (e.g., fair value hierarchy classification) and should be clearly stated as settlement values and disclosed separately from amounts disclosed at fair value. Refer to section 6 of our FRD, *Derivatives and hedging*, for additional discussion on the simplified hedge accounting approach.

## 20.3.2

### Nonrecurring measurements

Regardless of whether a company is public or nonpublic, certain disclosure requirements in ASC 820 do not apply to fair value measurements that are nonrecurring in nature (e.g., impaired assets). Specifically, the following fair value disclosures are not required for nonrecurring measurements:

- ▶ A reconciliation of the opening balances to the closing balances for Level 3 measurements (generally referred to as the Level 3 rollforward)
- ▶ A narrative description of the uncertainty of Level 3 fair value measurements from the use of significant unobservable inputs

Information regarding the Level 3 rollforward and the changes in unrealized gains and losses for the period do not lend themselves to nonrecurring measurements and are therefore not required. While discussing the uncertainty of Level 3 measurements due to the use of significant unobservable inputs might provide financial statement users with some information about how the selection of these inputs affects nonrecurring valuations, the Board ultimately decided that this information is most relevant for recurring measurements.

However, companies are required to disclose the reason for any nonrecurring fair value measurements made subsequent to the initial recognition of an asset or liability. For example, the asset may be impaired or the company may intend to sell or otherwise dispose of it, thereby resulting in the need for its measurement at fair value based on the requirements of other Topics.

Similarly, when nonrecurring measurements occur at a date during the reporting period that differs from the balance sheet date, companies are required to disclose that the fair value information presented is not as of the balance sheet date and indicate the date or period that the fair value measurement was taken. For example, this may occur when a calendar year-end public company is reporting its Form 10-Q for the second quarter and had taken an impairment charge on a long-lived asset during the first quarter.

### 20.3.3 Fair value hierarchy classification

ASC 820 requires companies to disclose the fair value hierarchy level in which each fair value measurement is categorized. As noted in section 14.1.1, the classification of an asset or liability in the fair value hierarchy is based on the lowest level input that is significant to the fair value measurement in its entirety. Although the hierarchy disclosure is presented by class of asset or liability, it is important to understand that the determination of the hierarchy level in which a fair value measurement falls (and therefore the category in which it will be disclosed) is based on the fair value measurement for the specific item being measured and is therefore driven by the unit of account for the asset or liability.

For example, in situations where the unit of account for a financial instrument is the individual item, but the measurement exception for financial instruments is used, companies may need to allocate portfolio-level adjustments to the various instruments that make up the net exposure for purposes of hierarchy classification.

This may seem inconsistent to certain constituents given the discussion in section 10 about the consideration of size as a characteristic of the net risk exposure when the measurement exception for financial instruments is used. However, the FASB and IASB staff have indicated that the determination of the net risk exposure as the unit of measurement applies only for measurement considerations and was not intended to change current practice with respect to disclosures. As such, the entire net exposure would not be categorized in a single level of the fair value hierarchy (e.g., Level 2), unless all of the individual items that make up the net exposure would fall into that level.

To illustrate, consider an individual derivative that is valued using the measurement exception as part of a group of derivative instruments with offsetting credit risk (due to the existence of a legally enforceable netting agreement). Assuming the portfolio included instruments that on their own would be categorized in different levels of the fair value hierarchy (i.e., Level 2 and Level 3), for disclosure purposes, the portfolio-level adjustment for credit risk (considering the effect of master netting agreements) may need to be attributed to the individual derivative transactions within the portfolio or to the group of transactions that fall within each of the levels of the hierarchy.<sup>66</sup>

The following example from ASC 820 illustrates how a company might disclose, in tabular format, the fair value hierarchy category for each class of assets and liabilities measured at fair value at the end of each reporting period.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Implementation Guidance and Illustrations*

##### *Example 9: Fair Value Disclosures*

##### *Case A: Disclosure—Assets Measured at Fair Value*

##### **820-10-55-100**

For assets and liabilities measured at fair value at the reporting date, this Topic requires quantitative disclosures about the fair value measurements for each class of assets and liabilities at the end of the reporting period. Sufficient information must be provided to permit reconciliation of the fair value of assets categorized within the fair value hierarchy to the amounts presented in the statement of financial position. A reporting entity might disclose the following for assets to comply with paragraph 820-10-50-2(a) through (b) and paragraph 820-10-50-2B.

<sup>66</sup> This example assumes that the portfolio-level adjustment for credit risk is based on observable market data. If the portfolio-level adjustment was determined using unobservable inputs, the significance of the adjustment to the measurement of the individual derivative instruments would need to be considered in order to determine if classification in Level 2 or Level 3 was appropriate.

(\$ in millions)	Fair Value Measurements at the End of the Reporting Period Using				Total Gains (Losses)
	12/31/X9	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
<b>Description</b>					
<b>Recurring fair value measurements</b>					
<b>Equity securities<sup>(a)</sup></b>					
Equity securities—real estate industry	\$ 93	\$ 70	\$ 23		
Equity securities—oil and gas industry	45	45			
Equity securities—financial services industry	150	150			
Equity securities—healthcare industry	110	110			
Equity securities—other	30	30			
Total equity securities	<u>\$ 428</u>	<u>\$ 405</u>	<u>\$ 23</u>		
<b>Available-for-sale debt securities</b>					
Residential mortgage-backed securities	\$ 149		\$ 24	\$ 125	
Commercial mortgage-backed securities	50			50	
Collateralized debt obligations	35			35	
U.S. Treasury securities	85	\$ 85			
Corporate bonds	93		93		
Total available-for-sale debt securities	<u>\$ 412</u>	<u>\$ 85</u>	<u>\$ 117</u>	<u>\$ 210</u>	
<b>Hedge fund investments</b>					
Equity long/short	\$ 55		\$ 55		
Global opportunities	35		35		
High-yield debt securities	90			\$ 90	
Hedge fund investments measured at net asset value <sup>(f)</sup>	30				
Total hedge fund investments	<u>\$ 210</u>		<u>\$ 90</u>	<u>\$ 90</u>	
<b>Other investments</b>					
Private equity fund investments <sup>(b)</sup>	\$ 25			\$ 25	
Direct venture capital: healthcare <sup>(a)</sup>	53			53	
Direct venture capital: energy <sup>(a)</sup>	32			32	
Other investments measured at net asset value <sup>(f)</sup>	45				
Total other investments	<u>\$ 155</u>			<u>\$ 110</u>	
<b>Derivatives</b>					
Interest rate contracts	\$ 57		\$ 57		
Foreign exchange contracts	43		43		
Credit contracts	38			\$ 38	
Commodity futures contracts	78	\$ 78			
Commodity forward contracts	20		20		
Total derivatives	<u>\$ 236</u>	<u>\$ 78</u>	<u>\$ 120</u>	<u>\$ 38</u>	
Total recurring fair value measurements	<u>\$1,441</u>	<u>\$ 568</u>	<u>\$ 350</u>	<u>\$ 448</u>	
<b>Nonrecurring fair value measurements</b>					
Long-lived assets held and used <sup>(c)</sup>	\$ 75		\$ 75		\$ (25)
Goodwill <sup>(d)</sup>	30			\$ 30	(35)
Long-lived assets held for sale <sup>(e)</sup>	26		26		(15)
Total nonrecurring fair value measurements	<u>\$ 131</u>		<u>\$ 101</u>	<u>\$ 30</u>	<u>\$ (75)</u>

(a) On the basis of its analysis of the nature, characteristics, and risks of the securities, the reporting entity has determined that presenting them by industry is appropriate.

(b) On the basis of its analysis of the nature, characteristics, and risks of the investments, the reporting entity has determined that presenting them as a single class is appropriate.

(c) At 9/30/X9, in accordance with Subtopic 360-10, long-lived assets held and used with a carrying amount of \$100 million were written down to their fair value of \$75 million, resulting in an impairment charge of \$25 million, which was included in earnings for the period.

(d) At 11/30/X9, in accordance with Subtopic 350-20, goodwill with a carrying amount of \$65 million was written down to its implied fair value of \$30 million, resulting in an impairment charge of \$35 million, which was included in earnings for the period.

(e) At 5/1/X9, in accordance with Subtopic 360-10, long-lived assets held for sale with a carrying amount of \$35 million were written down to their fair value of \$26 million, less costs to sell of \$6 million (or \$20 million), resulting in a loss of \$15 million, which was included in earnings for the period.

(f) In accordance with Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the statement of financial position.

(Note: For liabilities, a similar table should be presented.)

In the above example, the gain or loss recognized during the period for assets and liabilities measured at fair value on a nonrecurring basis is separately disclosed and discussed in the footnotes.

Because ASC 820 requires companies to disclose the fair value hierarchy level at the end of each reporting period, public entities would disclose hierarchy information for each balance sheet presented in their financial statements. For example, a public calendar year-end company would present the fair value hierarchy for the periods ending 31 March 20X3 and 31 December 20X2, in its first-quarter Form 10-Q.

#### Investments in certain entities that calculate net asset value per share (or its equivalent)

##### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Fair Value Hierarchy*

##### *Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*

##### **820-10-35-54B**

An investment within the scope of paragraphs 820-10-15-4 through 15-5 for which fair value is measured using **net asset value per share** (or its equivalent, for example member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed) as a practical expedient, as described in paragraph 820-10-35-59, shall not be categorized within the fair value hierarchy. In addition, the disclosure requirements in paragraph 820-10-50-2 do not apply to that investment. Disclosures required for an investment for which fair value is measured using net asset value per share (or its equivalent) as a practical expedient are described in paragraph 820-10-50-6A. Although the investment is not categorized within the fair value hierarchy, a reporting entity shall provide the amount measured using the net asset value per share (or its equivalent) practical expedient to permit reconciliation of the fair value of investments included in the fair value hierarchy to the line items presented in the statement of financial position in accordance with paragraph 820-10-50-2B.

Although ASC 820 allows for the measurement of certain investments at an amount (i.e., NAV) that may differ from the exit price for practicability reasons, the measurement still constitutes a fair value measurement under the guidance.

Investments measured using the NAV practical expedient are not categorized within the fair value hierarchy. Because excluding these investments from the fair value hierarchy results in differences between subtotals in the tabular fair value hierarchy table and specific line items on the balance sheet, an entity is required to disclose the amounts of the excluded investments so that a financial statement user can reconcile amounts reported in the table to amounts reported on the balance sheet.

Additionally, while certain disclosure requirements in ASC 820 do not apply to investments measured using the NAV practical expedient, ASC 820 includes certain specific disclosure requirements for investments that are measured using the NAV practical expedient. These disclosures, which are discussed in section 20.6, are intended to assist financial statement users in better understanding the nature and risk of these investments, including whether the investments, if sold, are probable of being sold at amounts different from their NAV.

## 20.3.4

### Transfers between hierarchy levels for recurring fair value measurements

Entities are not required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

Information regarding transfers into or out of Level 3 is captured in the Level 3 reconciliation (discussed in section 20.3.6) as these amounts are needed to roll forward Level 3 balances from the beginning to the end of the period being disclosed. Transfers into Level 3 and the reasons for those transfers are disclosed and discussed separately from transfers out of Level 3 for recurring fair value measurements.

ASC 820 also requires that companies consistently follow their policy for determining when transfers into or out of Level 3 of the fair value hierarchy are deemed to have occurred in accordance with paragraph 820-10-50-2 (c)(3). That is, a company's policy about the timing of recognizing transfers shall be the same for transfers in as for transfers out. ASC 820-10-50-2C includes the following examples of potential policies<sup>67</sup>:

- ▶ The actual date of the event or change in circumstances that caused the transfer
- ▶ The beginning of the reporting period
- ▶ The end of the reporting period

#### **Illustration 20.3-1: Comparison of policies for recognizing transfers**

The following illustrative example demonstrates the differences between the three methods noted above.

Assume an entity acquires an asset at 31 December 20X8 for \$1,000 that was categorized in Level 2 of the fair value hierarchy at year end 20X8 and throughout Q1 20X9. At the end of Q1 20X9, the fair value of the asset based on market observable information was \$950, and, as such, the asset was excluded from the Level 3 reconciliation. During Q2 20X9, observable market information was no longer available, so the entity categorized the asset in Level 3 at the end of Q2 20X9. During Q2 20X9, the fair value of the asset decreased from \$950 to \$750, with \$50 of the change in fair value arising subsequent to the time when market observable information was no longer available.

Under the three approaches described above, the Level 3 reconciliation for Q2 20X9 would be as follows:

#### **Reconciliation for the quarter ended Q2 20X9**

	<b>Transferred to Level 3 at:</b>		
	<b>Beginning of period</b>	<b>Actual date</b>	<b>End of period</b>
Beginning fair value	\$ 0	\$ 0	\$ 0
Purchases, issuances and settlements	0	0	0
Transfers in	950	800	750
Total losses	<u>(200)</u>	<u>(50)</u>	<u>0</u>
Ending fair value	<u>\$ 750</u>	<u>\$ 750</u>	<u>\$ 750</u>

As previously noted, the disclosures under ASC 820 are intended to provide information that enables financial statement users to identify the effects of fair value measurements that are more subjective in nature on reported earnings, and thereby enhance their ability to make their own assessment regarding earnings quality. We believe that this objective is best met by considering the level of observability associated with the fair value measurement made at the end of the reporting period (i.e., the observability of the inputs used to determine fair value on the last day in the period). As such, while no specific approach is required under US GAAP, we believe a beginning-of-period approach for recognizing transfers provides greater transparency on the effect that unobservable inputs have on fair value measurements and reported earnings. Under this view, all changes in fair value that arise during the reporting period of the transfer are disclosed as a component of the Level 3 reconciliation.

<sup>67</sup> In practice, some variation of these approaches may also be used by companies. For example, some companies may use an intra-period approach using a transfer amount based on the fair value as of the month-end in which the transfer occurred, as opposed to the actual date within the month.

While the “actual date” approach more precisely captures the date on which a change in the observability of inputs occurred, its application can be more operationally complex. In addition, we do not believe it necessarily provides more decision-useful information than the beginning-of-period approach. This is because, for a given period, the intra-period approach results in an allocation of the fair value changes between hierarchy levels that is inconsistent with the actual categorization of the item as of the end of the reporting period. As such, the intra-period approach implies that a portion of the earnings recognized during the period is of a higher (or lower) quality solely because there was observable information regarding the value of the instrument at some point during the period.

To further illustrate this point, assume a company makes an investment in a private company in Q1 for \$1,000. In the middle of Q2, the private company completes an initial public offering that values the investment at \$1,500. At the end of Q2, the fair value of the investment is \$2,200 based on a quoted market price. Under the intra-period approach for the six-month period ended Q2, \$500 would be included as an unrealized gain in the Level 3 reconciliation, despite the fact that the entire \$1,200 unrealized gain recognized during the six-month period is supported by observable market information (i.e., a quoted price less cash paid).

Of the three alternatives, we believe the end-of-period approach is the least effective in achieving ASC 820’s disclosure objectives. Under this approach, the Level 3 reconciliation would not reflect any unrealized gains or losses for items that move from Level 2 to Level 3 during the reporting period. Our views with respect to this approach appear to be consistent with the SEC staff’s suggested disclosures regarding transfers into Level 3 using an end-of-period approach.<sup>68</sup>

### 20.3.5 Disclosure of valuation techniques and inputs

Companies are required to describe the valuation techniques and inputs used to measure the fair value of items categorized in Level 2 or Level 3 of the fair value hierarchy for recurring and nonrecurring fair value measurements. In addition, companies are required to disclose instances where there has been a change in the valuation technique(s) or approach(es) used during the period, and the reason for making the change.

For Level 3 measurements, ASC 820 specifically requires that companies provide quantitative information about the significant unobservable inputs used in the fair value measurement. For example, a company with asset-backed securities categorized in Level 3 would be required to quantitatively disclose the inputs used in its valuation models related to prepayment speed, probability of default, loss given default and discount rate (assuming these inputs were all unobservable and deemed to be significant to the valuation). These quantitative disclosures would be provided for each balance sheet date presented in the financial statements consistent with the disclosure of fair value hierarchy levels discussed previously. For example, a public calendar year-end company would disclose this information for the periods ending 31 March 20X3 and 31 December 20X2, in its first quarter Form 10-Q.

As with all of the disclosures in ASC 820, companies are required to present quantitative information about significant unobservable inputs separately for each class of assets or liabilities based on the nature, characteristics and risks of their Level 3 measurements. As such, companies should assess whether the level of disaggregation at which this information is provided results in meaningful information to financial statement users, consistent with the objectives of ASC 820.

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<sup>68</sup> The SEC staff’s letter issued in March 2008 indicates that if material assets and liabilities are transferred into Level 3 during the period, a company should discuss any material gain or loss excluded from the realized/unrealized gains or losses line item in the Level 3 reconciliation.

In addition, public companies are required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements and how weighted average was calculated. For derivative instruments and certain other assets and liabilities, public companies are permitted to disclose other quantitative information such as the median or arithmetic average if doing so provides a more reasonable and rational reflection of the distribution of unobservable inputs than the weighted average. An entity that discloses other quantitative information will not have to disclose its reason for omitting the weighted average.

Although nonpublic companies are exempt from the requirement to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements, they are not exempt from the requirement to disclose quantitative information about significant unobservable inputs used in the fair value measurements. Therefore, a nonpublic entity may find it necessary to disclose the range and/or weighted average to comply with this requirement.

Importantly, the disclosures related to valuation techniques and inputs (including the requirement to disclose quantitative information about unobservable inputs) apply to both recurring and nonrecurring fair value measurements. However, goodwill and the subsequent measurement of goodwill (i.e., for impairment purposes) have been excluded from the quantitative disclosure requirement for Level 3 measurements in accordance with ASC 350-20-50-3. We believe the FASB reached this decision based on the fact that the fair value of goodwill is determined on a residual basis. In addition, as previously noted, nonpublic companies do not need to provide quantitative information about the significant unobservable inputs used when subsequently measuring the fair value of indefinite-lived intangible assets. In reaching this decision, the FASB stated its belief that users of nonpublic entity financial statements often have increased access to management and are generally informed of a significant impairment loss and the underlying reasons before the US GAAP financial statements are finalized, which often occurs at least four to six months after a nonpublic entity's fiscal year-end.<sup>69</sup>

In some situations, significant unobservable inputs may not be developed by the reporting entity itself, such as when a company uses third-party pricing information without adjustment. In these instances, ASC 820 states that a company is not required to create quantitative information to comply with its disclosure requirements. However, when making these disclosures, companies cannot ignore information about significant unobservable inputs that is "reasonably available."

We would expect significant unobservable inputs to be reasonably available when a third-party valuation expert is engaged to help a company determine the fair value of its assets or liabilities. In these instances, the company would likely receive a valuation report that summarizes the techniques and assumptions the valuation specialist used. In some cases, company management may actually provide the specialist with the key assumptions to be used in the valuation.

In contrast, when a company receives price quotes or other valuation information from a third-party pricing service or broker, the specific unobservable inputs underlying this information may not always be reasonably available to the company. While determining whether information is reasonably available in these instances will require judgment, we would expect companies to make good-faith efforts to obtain the information needed to meet the disclosure requirements in ASC 820. In addition, some diversity in practice may stem from differences in companies' access to information and the nature of information that various vendors may be willing or able to provide. However, in all cases, any adjustments made by a company to the pricing data received from a third party should be disclosed if these adjustments are not based on observable market data and are deemed to be significant to the overall measurement.

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<sup>69</sup> Paragraph BC22 of ASU 2012-02.

The following example from ASC 820 illustrates the type of information a company might provide to comply with the requirement to disclose quantitative information about Level 3 fair value measurements.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### Example 9: Fair Value Disclosures

#### Case C: Disclosure—Information about Fair Value Measurements Categorized within Level 3 of the Fair Value Hierarchy

#### Valuation Techniques and Inputs

#### 820-10-55-103

For fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy, this Topic requires a reporting entity to disclose a description of the valuation technique(s) and the inputs used in the fair value measurement. For fair value measurements categorized within Level 3 of the fair value hierarchy, information about the significant unobservable inputs used must be quantitative. A reporting entity might disclose the following for assets to comply with the requirement to disclose the significant unobservable inputs used in the fair value measurement in accordance with paragraph 820-10-50-2(bbb).

#### Quantitative Information about Level 3 Fair Value Measurements

(\$ in millions)

	Fair Value at 12/31/X9	Valuation Technique(s)	Unobservable Input	Range (Weighted Average) <sup>(e)</sup>
Residential mortgage-backed Securities	125	Discounted cash flow	Constant prepayment rate	3.5% - 5.5% (4.5%)
			Probability of default	5% - 50% (10%)
			Loss severity	40% - 100% (60%)
Commercial mortgage-backed Securities	50	Discounted cash flow	Constant prepayment rate	3.0% - 5.0% (4.1%)
			Probability of default	2% - 25% (5%)
			Loss severity	10% - 50% (20%)
Collateralized debt obligations	35	Consensus pricing	Offered quotes	20 - 45
			Comparability adjustments (%)	-10% - +15% (+5%)
Direct venture capital investments: healthcare	53	Discounted cash flow	Weighted average cost of capital	7% - 16% (12.1%)
			Long-term revenue growth rate	2% - 5% (4.2%)
			Long-term pretax operating margin	3% - 20% (10.3%)
			Discount for lack of marketability <sup>(a)</sup>	5% - 20% (17%)
			Control premium <sup>(a)</sup>	10% - 30% (20%)
			Market comparable companies	EBITDA multiple <sup>(b)</sup>
	Revenue multiple <sup>(b)</sup>	1.5 - 2.0 (1.7)		
Direct venture capital investments: energy	32	Discounted cash flow	Weighted average cost of capital	8% - 12% (11.1%)
			Long-term revenue growth rate	3% - 5.5% (4.2%)
			Long-term pretax operating margin	7.5% - 13% (9.2%)
			Discount for lack of marketability <sup>(a)</sup>	5% - 20% (10%)
			Control premium <sup>(a)</sup>	10% - 20% (12%)
			Market comparable companies	EBITDA multiple <sup>(b)</sup>
	Revenue multiple <sup>(b)</sup>	1.0 - 3.0 (2.0)		
Credit contracts	38	Option model	Annualized volatility of credit <sup>(c)</sup>	10% - 20%
			Counterparty credit risk <sup>(d)</sup>	0.5% - 3.5%
			Own credit risk <sup>(d)</sup>	0.3% - 2.0%

(a) Represents amounts used when the reporting entity has determined that market participants would take into account these premiums and discounts when pricing the investments.

(b) Represents amounts used when the reporting entity has determined that market participants would use such multiples when pricing the investments.

(c) Represents the range of the volatility curves used in the valuation analysis that the reporting entity has determined market participants would use when pricing the contracts.

(d) Represents the range of the credit default swap spread curves used in the valuation analysis that the reporting entity has determined market participants would use when pricing the contracts.

(e) Unobservable inputs were weighted by the relative fair value of the instruments. For credit contracts, the average represents the arithmetic average of the inputs and is not weighted by the relative fair value or notional amount.

(Note: For liabilities, a similar table should be presented.)

## 20.3.6 Level 3 reconciliation

For public companies, ASC 820 requires a reconciliation (often referred to as the Level 3 rollforward) of the beginning and ending balances for any recurring fair value measurements that utilize significant unobservable inputs (i.e., Level 3 inputs). Therefore, any asset or liability (measured at fair value on a recurring basis) that was determined to be a Level 3 measurement at either the beginning or the end of a reporting period would need to be considered in the Level 3 rollforward.

To reconcile Level 3 balances for the period presented, companies must present the following information for each class of assets and liabilities:

- ▶ Balance of Level 3 assets or liabilities (as of the beginning of the period)
- ▶ Total gains or losses
- ▶ Purchases, sales, issues and settlements (presented separately)
- ▶ Transfers in and/or out of Level 3 (presented separately)
- ▶ Balance of Level 3 assets or liabilities (as of the end of the period)

In addition, companies are required to separately present gains or losses included in earnings from those gains or losses recognized in other comprehensive income, and to describe in which line items these gains or losses are reported on the statement of income or in other comprehensive income.

To enhance the ability of financial statement users to assess the quality of a company's earnings, for recurring fair value measurements categorized within Level 3 of the fair value hierarchy, ASC 820 requires public companies to disclose the amount of the total gains or losses for the period included in earnings (or changes in net assets) and other comprehensive income that is attributable to the change in unrealized gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in the statement(s) of comprehensive income (or activities) in which those unrealized gains or losses are recognized.

The following example from ASC 820 illustrates how a public company could comply with the Level 3 rollforward requirements.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Example 9: Fair Value Disclosures*

#### *Case B: Disclosure—Reconciliation of Fair Value Measurements Categorized within Level 3 of the Fair Value Hierarchy*

#### 820-10-55-101

For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, this Topic requires a reconciliation from the opening balances to the closing balances for each class of assets and liabilities, except for derivative assets and liabilities, which may be presented net. A reporting entity might disclose the following for assets to comply with paragraph 820-10-50-2(c) through (d).

Fair Value Measurements Using Significant Unobservable Inputs (Level 3)									
	Available-for-Sale Debt Securities			Hedge Fund Investments	Other Investments			Derivatives	Total
	Residential Mortgage-Backed Securities	Commercial Mortgage-Backed Securities	Collateralized Debt Obligations	High-Yield Debt Securities	Private Equity Fund	Direct Venture Capital: Healthcare	Direct Venture Capital: Energy	Credit Contracts	
Opening balance	\$ 105	\$ 39	\$ 25	\$ 145	\$ 20	\$ 49	\$ 28	\$ 30	\$ 441
Transfers into Level 3	60 <sup>(a)</sup> <sup>(b)</sup>								60
Transfers out of Level 3	(5) <sup>(b)</sup> <sup>(c)</sup>								(5)
Total gains or losses for the period									
Included in earnings (or changes in net assets)	(8)			7	5	3	1	5	13
Included in other comprehensive income	(15)	(5)	(7)					(5)	(32)
Purchases, issues, sales, and settlements									
Purchases		16	17			5	3	18	59
Issues									
Sales	(12)			(62)		(4)			(78)
Settlements								(10)	(10)
Closing balance	<u>\$ 125</u>	<u>\$ 50</u>	<u>\$ 35</u>	<u>\$ 90</u>	<u>\$ 25</u>	<u>\$ 53</u>	<u>\$ 32</u>	<u>\$ 38</u>	<u>\$ 448</u>
Change in unrealized gains or losses for the period included in earnings (or changes in net assets) for assets held at the end of the reporting period				<u>\$ (5)</u>	<u>\$ 5</u>	<u>\$ 3</u>	<u>\$ 1</u>	<u>\$ 2</u>	<u>\$ 6</u>
Change in unrealized gains or losses for the period included in other comprehensive income for assets held at the end of the reporting period	<u>\$ (10)</u>	<u>\$ (5)</u>	<u>\$ (7)</u>						<u>\$ (24)</u>

(a) Transferred from Level 2 to Level 3 because of a lack of observable market data, resulting from a decrease in market activity for the securities.

(b) Footnote superseded by Accounting Standards Update No. 2018-13.

(c) Transferred from Level 3 to Level 2 because observable market data became available for the securities.

(Note: For liabilities, a similar table should be presented.)

ASC 820 also provides the following example to illustrate how a public company could comply with the requirements to separately disclose the amount of total gains and losses reported in earnings that are attributable to changes in unrealized gains and losses for assets and liabilities categorized in Level 3 and are still held at the reporting date.

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### Implementation Guidance and Illustrations

#### Example 9: Fair Value Disclosures

#### Case B: Disclosure—Reconciliation of Fair Value Measurements Categorized within Level 3 of the Fair Value Hierarchy

#### 820-10-55-102

Gains and losses included in earnings (or changes in net assets) for the period (above) are presented in trading revenues and in other revenues as follows.

	Trading revenues	Other revenues
Total gains or losses for the period included in earnings (or changes in net assets)	<u>\$ 5</u>	<u>\$ 8</u>
Change in unrealized gains or losses for the period included in earnings (or changes in net assets) for assets held at the end of the reporting period	<u>\$ 2</u>	<u>\$ 4</u>

(Note: For liabilities, a similar table should be presented.)

Because the Level 3 rollforward focuses on changes in fair value for the reporting period, public entities provide multiple reconciliations in their interim and annual financial statements. For example, in its second quarter Form 10-Q, a public calendar year-end company shows separate reconciliations for the periods 1 January to 30 June, and 1 April to 30 June for both current and prior years.

Nonpublic entities are not required to reconcile the opening balances to the closing balances of recurring Level 3 fair value measurements. In lieu of Level 3 rollforward disclosures, a nonpublic entity separately discloses changes during the period attributable to the following:

- ▶ Purchases and issues (each of those types of changes disclosed separately)
- ▶ The amounts of any transfers into or out of Level 3 of the fair value hierarchy and the reasons for those transfers (transfers into Level 3 are disclosed and discussed separately from transfers out of Level 3)

## 20.3.7

### Uncertainty of recurring Level 3 fair value measurements from the use of significant unobservable inputs

ASC 820 requires public companies to provide a narrative description of the uncertainty of recurring Level 3 fair value measurements from the use of significant unobservable inputs if those inputs reasonably could have been different at the reporting date. However, there is no requirement to quantify the extent of the change to the unobservable input, or the quantitative effect of this change on the measurement (i.e., only discuss directional change).

The unobservable inputs quantitatively disclosed based on the requirements described in section 20.3.5 must be addressed in the narrative description. In addition, public companies are required to describe any interrelationships between the unobservable inputs and discuss how they might magnify or mitigate the effect of changes on the fair value measurement.

This disclosure, combined with the quantitative disclosure of significant unobservable inputs, is designed to enable financial statement users to understand the directional effect of certain inputs on an item's fair value and to evaluate whether the company's views about individual unobservable inputs differ from their own. The Board believes these disclosures can provide meaningful information to financial statement users who are not familiar with the pricing models and valuation techniques used to measure a particular class of assets or liabilities (e.g., complex structured instruments).

The following example from ASC 820 illustrates how a public company could comply with the ASC 820 disclosure requirements related to the uncertainty of Level 3 measurements from the use of significant unobservable inputs.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### *Implementation Guidance and Illustrations*

##### *Example 9: Fair Value Disclosures*

##### *Case C: Disclosure—Information about Fair Value Measurements Categorized within Level 3 of the Fair Value Hierarchy*

##### *Information about Uncertainty of Fair Value Measurements*

##### **820-10-55-106**

For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, this Topic requires a reporting entity to provide a narrative description of the uncertainty of the fair value measurement at the reporting date from the use of significant unobservable inputs, if those inputs reasonably could have been different at the reporting date, and a description of any interrelationships

among the unobservable inputs used in the fair value measurement, which might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement. A reporting entity might disclose the following about its residential mortgage-backed securities to comply with paragraph 820-10-50-2(g).

The significant unobservable inputs used in the fair value measurement of the reporting entity's residential mortgage-backed securities are prepayment rates, probability of default, and loss severity in the event of default. Significant increases (decreases) in any of those inputs in isolation would have resulted in a significantly lower (higher) fair value measurement. Generally, a change in the assumption used for the probability of default would have been accompanied by a directionally similar change in the assumption used for the loss severity and a directionally opposite change in the assumption used for prepayment rates.

We note that the above example is fairly general in nature, because no numbers relating to how the unobservable inputs might be changed, or how such a change would affect fair value, are required to be disclosed. However, in making this disclosure we caution companies to avoid over-generalizations that may not hold true in all cases.

### 20.3.8 Highest and best use

If the highest and best use of a nonfinancial asset differs from its current use, companies are required to disclose this fact and why the nonfinancial asset is being used in a manner that differs from its highest and best use. The Board believes this information is useful to financial statement users who project expected cash flows based on how an asset is actually being used.

## 20.4 Assets and liabilities for which fair value is only disclosed

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Disclosure*

##### **820-10-50-2E**

For each class of assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed, a reporting entity shall disclose the information required by paragraph 820-10-50-2(b) and (h). However, a reporting entity is not required to provide the quantitative disclosures about significant unobservable inputs used in fair value measurements categorized within Level 3 of the fair value hierarchy required by paragraph 820-10-50-2(bbb)(2). For such assets and liabilities, a reporting entity does not need to provide the other disclosures required by this Topic.

For each class of assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed (e.g., loans carried at amortized cost whose fair values are required to be disclosed in accordance with ASC 825), public business entities are required to disclose the following:

- ▶ The level of the fair value hierarchy within which the fair value measurements are categorized in their entirety (Level 1, 2 or 3)
- ▶ The reason why the highest and best use of a nonfinancial asset differs from its current use (if applicable)

None of the other ASC 820 disclosures are required for assets and liabilities whose fair value is only disclosed. For example, even though certain fair value disclosures are categorized in Level 3, companies are not required to provide quantitative information about the unobservable inputs used in their valuation because these items are not measured at fair value in the statement of financial position.

## 20.5 Disclosure of the use of the fair value measurement exception

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Disclosure*

##### **820-10-50-2D**

If a reporting entity makes an accounting policy decision to use the exception in paragraph 820-10-35-18D, it shall disclose that fact.

As discussed in section 10, ASC 820 allows companies to measure the fair value of a group of financial assets, financial liabilities, nonfinancial items accounted for as derivatives in accordance with ASC 815 or a combination of these items based on the price that would be received to sell a net long position or transfer a net short position for a particular risk exposure (if certain criteria are met). If a company elects to use the portfolio approach measurement exception, it must disclose that fact.

## 20.6 Fair value measurements of investments in certain entities that calculate NAV

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### *Disclosure*

##### ***Fair Value Measurements of Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)***

##### **820-10-50-6A**

For investments that are within the scope of paragraphs 820-10-15-4 through 15-5 and that are measured using the practical expedient in paragraph 820-10-35-59 on a recurring or nonrecurring basis during the period, a reporting entity shall disclose information that helps users of its financial statements to understand the nature and risks of the investments and whether the investments, if sold, are probable of being sold at amounts different from **net asset value per share** (or its equivalent, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed). A reporting entity shall disclose the following information for each class of investment:

- a. The fair value measurement (as determined by applying paragraphs 820-10-35-59 through 35-62) of the investments in the class at the reporting date and a description of the significant investment strategies of the investee(s) in the class.
- b. For each class of investment that includes investments that can never be redeemed with the investees, but the reporting entity receives distributions through the liquidation of the underlying assets of the investees, the period of time over which the underlying assets are expected to be liquidated by the investees if the investee has communicated the timing to the reporting entity or announced the timing publicly. If the timing is unknown, the reporting entity shall disclose that fact.
- c. The amount of the reporting entity's unfunded commitments related to investments in the class.
- d. A general description of the terms and conditions upon which the investor may redeem investments in the class (for example, quarterly redemption with 60 days' notice).
- e. The circumstances in which an otherwise redeemable investment in the class (or a portion thereof) might not be redeemable (for example, investments subject to a lockup or gate). Also, for those otherwise redeemable investments that are restricted from redemption as of the reporting entity's measurement date, the reporting entity shall disclose when the restriction from

redemption might lapse if the investee has communicated that timing to the reporting entity or announced the timing publicly. If the timing is unknown, the reporting entity shall disclose that fact and how long the restriction has been in effect.

- f. Any other significant restriction on the ability to sell investments in the class at the measurement date.
- g. Subparagraph superseded by Accounting Standards Update No. 2015-07.
- h. If a group of investments would otherwise meet the criteria in paragraph 820-10-35-62 but the individual investments to be sold have not been identified (for example, if a reporting entity decides to sell 20 percent of its investments in private equity funds but the individual investments to be sold have not been identified), so the investments continue to qualify for the practical expedient in paragraph 820-10-35-59, the reporting entity shall disclose its plans to sell and any remaining actions required to complete the sale(s).

As discussed in section 18, ASC 820 allows reporting entities to estimate the fair value of certain alternative investments using NAV as a practical expedient. The guidance includes certain specific disclosure requirements for investments that are measured using the practical expedient. These disclosures are intended to assist financial statement users in better understanding the nature and risk of these investments, including whether the investments, if sold, are probable of being sold at amounts different from their NAV. These disclosures apply regardless of whether the investment is measured at fair value on a recurring basis (e.g., the investment is held by an investment company) or a nonrecurring basis (e.g., impairment of an investment accounted for under the equity method).

Alternative investments deemed to have a readily determinable fair value are not subject to these specific disclosure requirements, as these investments do not qualify for use of the practical expedient. As such, the specific disclosures are not required for open-ended mutual funds (where the NAV is published and is the basis for transactions executed with the fund) or investments in registered closed-end investment companies whose fair value can be estimated using sales prices that are currently available on a securities exchange.

Similar to other fair value disclosure requirements of ASC 820, the disclosures required by ASC 820-10-50-6A are to be made separately for each class of investments. The appropriate classes of investments are determined on the basis of the nature and risks of the investments, as discussed in section 20.2.

The following example in ASC 820 illustrates the disclosure requirements related to investments that are measured using the NAV practical expedient on a recurring or nonrecurring basis during the period.

### **Excerpt from Accounting Standards Codification**

#### **Fair Value Measurement – Overall**

#### *Implementation Guidance and Illustrations*

#### *Example 9: Fair Value Disclosures*

#### ***Case D: Disclosure—Fair Value Measurements of Investments That Are Measured at Net Asset Value per Share (or Its Equivalent) as a Practical Expedient***

#### **820-10-55-107**

For investments that are within the scope of paragraphs 820-10-15-4 through 15-5 and that are measured at fair value using net asset value per share as a practical expedient, this Topic requires a reporting entity to disclose information that helps users to understand the nature, characteristics, and risks of the investments by class and whether the investments, if sold, are probable of being sold at amounts different from net asset value per share (or its equivalent, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed) (see paragraph 820-10-50-6A). That information may be presented as follows. (The classes presented below are provided as examples only and are not intended to be treated as a template. The classes disclosed should be tailored to the nature, characteristics, and risks of the reporting entity's investments.)

	<b>Fair value (in millions)</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency (if Currently Eligible)</b>	<b>Redemption Notice Period</b>
Equity long/short hedge funds (a)	\$ 55		quarterly	30-60 days
Event driven hedge funds (b)	45		quarterly, annually	30-60 days
Global opportunities hedge funds (c)	35		quarterly	30-45 days
Multi-strategy hedge funds (d)	40		quarterly	30-60 days
Real estate funds (e)	<u>47</u>	\$ <u>20</u>		
Total	<u>\$ 222</u>	<u>\$ 20</u>		

- a. This class includes investments in hedge funds that invest both long and short primarily in U.S. common stocks. Management of the hedge funds has the ability to shift investments from value to growth strategies, from small to large capitalization stocks, and from a net long position to a net short position. The fair values of the investments in this class have been estimated using the net asset value per share of the investments. Investments representing approximately 22 percent of the value of the investments in this class cannot be redeemed because the investments include restrictions that do not allow for redemption in the first 12 to 18 months after acquisition. The remaining restriction period for these investments ranged from three to seven months at December 31, 20X3.
- b. This class includes investments in hedge funds that invest in approximately 60 percent equities and 40 percent bonds to profit from economic, political, and government driven events. A majority of the investments are targeted at economic policy decisions. The fair values of the investments in this class have been estimated using the net asset value per share of the investments.
- c. This class includes investments in hedge funds that hold approximately 80 percent of the funds' investments in non-U.S. common stocks in the healthcare, energy, information technology, utilities, and telecommunications sectors and approximately 20 percent of the funds' investments in diversified currencies. The fair values of the investments in this class have been estimated using the net asset value per share of the investments. For one investment, valued at \$8.75 million, a gate has been imposed by the hedge fund manager and no redemptions are currently permitted. This redemption restriction has been in place for six months and the time at which the redemption restriction might lapse is unknown.
- d. This class invests in hedge funds that pursue multiple strategies to diversify risks and reduce volatility. The hedge funds' composite portfolio for this class includes investments in approximately 50 percent U.S. common stocks, 30 percent global real estate projects, and 20 percent arbitrage investments. The fair values of the investments in this class have been estimated using the net asset value per share of the investments. Investments representing approximately 15 percent of the value of the investments in this class cannot be redeemed because the investments include restrictions that do not allow for redemption in the first year after acquisition. The remaining restriction period for these investments ranged from four to six months at December 31, 20X3.
- e. This class includes several real estate funds that invest primarily in U.S. commercial real estate. The fair values of the investments in this class have been estimated using the net asset value of the Company's ownership interest in partners' capital. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. Twenty percent of the total investment in this class is planned to be sold within the next three years. However, the individual investments that will be sold have not yet been determined. Because it is not probable that any individual investment will be sold, the fair value of each individual investment has been estimated using the net asset value of the Company's ownership interest in partners' capital. Once it has been determined which investments will be sold and whether those investments will be sold individually or in a group, the investments will be sold in an auction process. The investee fund's management must approve of the buyer before the sale of the investments can be completed.

## 20.7 Pension and other postretirement benefit plan assets disclosures

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### Disclosure

##### 820-10-50-10

Plan assets of a defined benefit pension or other postretirement plan that are accounted for in accordance with Topic 715 are not subject to the disclosure requirements in paragraphs 820-10-50-1C through 50-8. Instead, the disclosures required in paragraphs 715-20-50-1(d)(iv) and 715-20-50-5(c)(iv) shall apply for fair value measurements of plan assets of a defined benefit pension or other postretirement plan.

ASC 715 requires the use of fair value in accordance with ASC 820 when measuring the plan assets for pensions and postretirement benefits other than pensions (collectively, postretirement benefits). However, the disclosure requirements of ASC 820 are required for postretirement benefit plan assets only in the financial statements of the benefit plan. These disclosure requirements do not apply to the financial statements of an employer that sponsors a postretirement benefit plan. The FASB stated the following two primary reasons in reaching this conclusion:

1. In an employer's statement of financial position, plan assets measured at fair value are presented net of benefit obligations. Because the benefit obligations are not measured at fair value, the net amount presented on the face of the employer's financial statements is not a fair value measurement.
2. Gains or losses in plan assets do not directly affect net income. As such, the FASB noted that employers would find it difficult to disclose the gains or losses included in earnings attributable to the change in realized or unrealized gains or losses relating to Level 3 assets.

Notwithstanding the above conclusions, ASC 715 requires employers to annually disclose fair value information for each class of plan asset that is very similar to the information required to be disclosed under ASC 820. See chapter 13 of our FRD, *Postretirement benefits*, for the disclosures required under ASC 715.

## 20.8 Equity securities subject to contractual sale restrictions (updated September 2022)

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

##### Disclosure

##### Equity Securities Subject to Contractual Sale Restrictions

##### 820-10-50-6B

#### Pending Content:

Transition Date: (P) December 16, 2023; (N) December 16, 2024 | Transition Guidance: 820-10-65-13

An entity shall disclose the following information for equity securities subject to contractual sale restrictions:

- a. The fair value of equity securities subject to contractual sale restrictions
- b. The nature and remaining duration of the restriction(s)
- c. Circumstances that could cause a lapse in the restriction(s).

If an entity has multiple investments in equity securities subject to contractual sale restrictions, the entity shall consider the guidance in paragraph 820-10-50-1D when disclosing the information required in (a) through (c). Equity securities restricted from sale because they are pledged as collateral and included in other disclosures required by other Topics shall not be included in the information required in (a) through (c).

ASU 2022-03 requires entities that hold equity securities subject to contractual sale restrictions to disclose the following:

- ▶ The fair value of equity securities subject to contractual sale restrictions
- ▶ The nature and remaining duration of the restriction(s)
- ▶ The circumstances that could cause a lapse in the restriction(s)

Entities that have multiple investments subject to contractual sale restrictions should consider the guidance in ASC 820-10-50-1D when making judgments about the level of aggregation or disaggregation to provide in their disclosures (see section 20 and section 20.1 for further discussion). Entities should exclude from these disclosures equity securities that are restricted from sale because they are pledged as collateral and already subject to other disclosure requirements (i.e., requirements outside of ASC 820). Refer to section 5.2.1A for additional discussion of restrictions on assets after the adoption of ASU 2022-03.

## Questions and interpretive responses

### Question 20.1-1 **Is an entity required to disclose the effect of nonperformance risk on its derivative instruments measured at fair value?**

While ASC 820 indicates that the fair value of a liability reflects the nonperformance risk relating to that liability, the guidance does not have any specific disclosure requirements related to nonperformance risk.<sup>70</sup> In contrast, ASC 825-10-50-30(d) requires disclosure of the amount of change, during the period and cumulatively, of the fair value of the liability that is attributable to changes in the instrument-specific credit risk, how gains and losses attributable to changes in instrument-specific credit risk were determined and, if a liability is settled during the period, the amount recognized in OCI that was recognized in net income at settlement. However, these disclosure requirements apply only to those items elected to be measured at fair value under the fair value option, and not instruments that are required to be measured at fair value, such as derivatives accounted for under ASC 815.

While disclosure of the effect of nonperformance risk on the change in the fair value of derivative instruments is not explicitly required under US GAAP, this information enables users of financial statements to understand the possible drivers of changes in fair value and better assess earnings quality. For example, we understand that some financial statement users will “back out” gains related to changes in the reporting entity’s nonperformance risk when evaluating earnings.

In its September 2008 “Dear CFO” letter, the SEC staff encouraged entities to disclose information regarding the effect of credit risk in the valuation of their derivatives when the effect is deemed to be significant. In addition, because ASC 820 requires entities to disclose information regarding the inputs and valuation techniques used to measure fair value, when credit risk (either the company’s own or that of its counterparty) is significant to the fair value of a derivative, companies should discuss the methodology and inputs used to estimate the effect of credit risk.

<sup>70</sup> Refer to Questions 9.2-1 through 9.2-3 for further discussion regarding the need to consider the effect of credit risk (both counterparty credit risk and own credit risk) in accounting for derivative contracts that are required to be measured at fair value in accordance with ASC 815.

Note also that in March 2008, the SEC staff issued a “Dear CFO” letter that primarily addressed disclosures related to fair value measurements for financial instruments that are not actively traded and whose effects have had, or are reasonably likely to have, a material effect on the financial condition or results of operations of certain registrants. We encourage companies to consider both of the SEC staff’s letters in the preparation of their MD&A discussion, as certain of the suggested disclosures in these letters are arguably necessary to comply with the MD&A requirements, or if the registrant has identified fair value as a critical accounting policy. The SEC staff’s illustrative letters are available on the SEC’s website through the following links:

- ▶ <http://www.sec.gov/divisions/corpfin/guidance/fairvalueltr0308.htm>
- ▶ <http://www.sec.gov/divisions/corpfin/guidance/fairvalueltr0908.htm>

**Question 20.1-2 Are investments presented as cash equivalents subject to the fair value measurement disclosure requirements in ASC 820?**

Cash equivalents are defined in the ASC Master Glossary as short-term, highly liquid investments that are both readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Common examples of cash equivalents include US Treasury bills, commercial paper and money market funds.

The disclosure requirements in ASC 820 apply to those cash equivalents that are measured at fair value after initial recognition, even when cost is considered to approximate fair value. For example, this would include investments in securities within the scope of ASC 320 that are classified as available for sale. In contrast, a three-month certificate of deposit may not fall within the scope of ASC 320 (because it may not be a security).

In addition, ASC 820-10-50-2E requires public entities to disclose the hierarchy classification for cash equivalents that are not measured at fair value but for which the fair value is disclosed (e.g., investments in debt securities that are classified as held to maturity).

Judgment is required when determining the appropriate hierarchy level for cash equivalents. For considerations regarding classification within the fair value hierarchy refer to section 14.

**Question 20.3-1 How is the change in unrealized gains and losses required by ASC 820-10-50-2(d) determined for Level 3 derivative instruments that have periodic (interim) cash settlements?**

As previously discussed, ASC 820 requires entities to separately disclose the amount of total gains and losses reported in earnings and other comprehensive income included in the Level 3 rollforward that are attributable to changes in unrealized gains and losses. For assets and liabilities still held at the reporting date that have periodic cash settlements (e.g., interest rate swaps with quarterly payments exchanged between the counterparties during the period), identifying the change in unrealized gains or losses that were reported in earnings and other comprehensive income during the period may be operationally difficult.

In certain instances, periodic cash flows may represent the realization of obligations or receivables that, in part, arose in prior periods. That is, although the actual cash receipt (or payment) occurs in one period, an entity may have previously recognized a portion of the gain or loss associated with the cash flow in a prior period. Since the disclosure requirements solely relate to the change in unrealized gains and losses during the current reporting period, an entity will need to determine what portion of the gains and losses recognized during this period represent unrealized gains or losses for instruments still held at the end of the period. ASC 820 does not specify how such unrealized gains and losses should be calculated.

We understand that diversity in practice exists regarding the manner in which unrealized gains and losses are determined when interim cash flows occur. We are aware of the following three alternative views for determining and disclosing unrecognized gains and losses as required by ASC 820, although other views may exist.<sup>71</sup>

**View A** – Under View A, unrealized gains and losses for the period are determined based on changes in the fair value of the instrument related to future expected cash flows associated with the asset or liability. That is, cash receipts serve to reduce the carrying value of an asset measured at fair value, as an expected cash flow that previously contributed to the fair value of the asset has now been settled. Proponents of View A also acknowledge that a portion of the cash settlement received (paid) in a particular period may relate to profit and loss that has been recognized in a prior period.

**View B** – Under View B, interim cash settlements are deemed to have no effect on the split between realized and unrealized profit or loss. That is, interim cash settlements are considered to be solely a balance sheet event and, as such, all gains and losses recognized during the period are deemed to be unrealized until the derivative contract is completely settled.

**View C** – Under View C, all cash received or paid during the period is deemed to represent realized gains or losses. As such, the amount of unrealized gains or losses disclosed in accordance with ASC 820 is calculated as the difference between total gains or losses recognized for the period and the cash settlement amounts received or paid during the period.

The following example illustrates the application of the three views described above.

Assume a calendar year-end company executes an interest rate swap in Q1 20X8. The interest rate swap has a one-year term, and the fair value at inception and transaction price are both zero. The interest rate swap is determined to be a Level 3 measurement and requires quarterly settlements that occur at the midpoint of the quarters (i.e., first settlement would be 15 May).

**Fair value by reporting period by swaplet:**

Fair value at:	Swap Leg				Total
	Leg 1	Leg 2	Leg 3	Leg 4	
Q1 20X8	\$ 100	\$ 100	\$ 100	\$ 100	\$ 400
Q2 20X8		160	150	140	450
Q3 20X8			200	220	420
Q4 20X8				190	190
Q1 20X9					0

**Cash settlements by quarter:**

<u>Date</u>	<u>Settlements</u>
Q1 20X8	\$ 0
Q2 20X8	125
Q3 20X8	180
Q4 20X8	250
Q1 20X9	190

<sup>71</sup> In practice, some variation of these approaches may also be used by companies.

Given the above facts, the quarterly Level 3 reconciliations required by ASC 820 would be identical under all three approaches as follows:<sup>72</sup>

	Q1 20X8	Q2 20X8	Q3 20X8	Q4 20X8
Beginning fair value	\$ 0	\$ 400	\$ 450	\$ 420
Total gains or losses included in earnings	400	175	150	20
Purchases, issuances and settlements	0	(125)	(180)	(250)
Ending fair value	\$ 400	\$ 450	\$ 420	\$ 190

Following View A, the allocation of total gains or losses between changes in unrealized gains or losses and amounts realized would be as follows:

	Q1 20X8	Q2 20X8	Q3 20X8	Q4 20X8
<b>View A</b>				
Unrealized gains/losses	\$ 400	\$ 150	\$ 130	\$ (30)
Realized gains/losses	0	25	20	50
Total gains/losses	\$ 400	\$ 175	\$ 150	\$ 20

As previously discussed, under View A, unrealized gains and losses for the period are determined based on changes in the fair value of the instrument related to future expected cash flows associated with the asset or liability. At the end of Q1, the fair value of the swap is \$400. Given a transaction price of zero and the fact that none of the legs of swap were settled, the entire fair value change for the period (\$400) represents an unrealized gain.<sup>73</sup>

At the end of Q2, the fair value of the swap is \$450. During the period the company reported a total gain of \$175 on the swap, determined as the difference between the ending balance (\$450) and the beginning balance less cash settlement received ( $\$400 - \$125 = \$275$ );  $\$450 - \$275 = \$175$ . In determining the unrealized gain for the period, the company would consider the change in the fair value of all the legs of the swap that remained outstanding at the end of the period (i.e., legs 2, 3 and 4). In this example, the aggregate fair value of legs 2, 3 and 4 changed from \$300 at the end of Q1 to \$450 at the end of Q2. As such, the unrealized gain recognized during Q2 would be \$150 ( $\$450 - \$300$ ). Given that the company recognized total gains during the period (Q2) of \$175, \$25 ( $\$175 - \$150$ ) of the total gain represents a realized gain. This conclusion would seem appropriate based on the interim settlement amount received during the period. Although \$125 in cash was received related to the settlement of leg 1, \$100 represented the realization of the unrealized gain on leg 1 that had been previously recognized in Q1. As such, only \$25 represented an incremental gain in Q2. Under View A, given that the swap represents a Level 3 measurement, the portion of the reported gain for the period that remains unrealized is \$150.

Similar calculations would be made for Q3 and Q4.

It is important to note that because the Level 3 reconciliation focuses on changes in fair value for the reporting period, public companies may need to determine unrealized gains and losses for both the quarterly and year-to-date periods. Under View A, the classification of unrealized gains and losses versus realized gains and losses may be reflected differently in the quarterly and year-to-date disclosures.

<sup>72</sup> While the interest rate swap completely settles in Q1 20X9, for simplicity the remainder of this example excludes presentation of 20X9 disclosures; however, such disclosures would be computed in a manner consistent with the 20X8 disclosures.

<sup>73</sup> Because no settlement occurred in Q1, this result would be identical for View B and View C.

Continuing with the example above, under View B and View C, the allocation of total gains or losses between changes in unrealized and realized would be as follows:

	Q1 20X8	Q2 20X8	Q3 20X8	Q4 20X8
<b>View B</b>				
Unrealized gains/losses	\$ 400	\$ 175	\$ 150	\$ 20
Realized gains/losses	0	0	0	0
Total gains/losses	\$ 400	\$ 175	\$ 150	\$ 20
<b>View C</b>				
Unrealized gains/losses	\$ 400	\$ 50	\$ (30)	\$ (230)
Realized gains/losses	0	125	180	250
Total gains/losses	\$ 400	\$ 175	\$ 150	\$ 20

While the application of any of the three approaches described may not be specifically precluded by ASC 820, we believe View A provides the most meaningful information based on the objectives of the disclosure requirements. A primary objective of the disclosure requirements in ASC 820 is to provide financial statement users with additional transparency regarding the extent to which gains or losses recognized during the period due to changes in fair value were determined using unobservable inputs. We believe View A most appropriately captures this information.

However, given certain operational challenges associated with isolating unrealized gains or losses by individual legs of a derivative transaction, we understand that many entities are currently using either View B or View C for their disclosures. As remedies to these operational challenges are identified, practice may evolve to apply View A.

Regardless of the approach used, we believe a reporting entity should document its accounting policy for determining unrealized gains and losses and apply this approach consistently. In addition, we recommend that entities with significant Level 3 assets and liabilities disclose their policy for determining their unrealized gain or loss position in the notes to the financial statements.

#### Question 20.3-2 **Should interest income and expense be included as part of gains or losses in the Level 3 reconciliation?**

The illustrative example of the Level 3 rollforward in ASC 820-10-55-101 and 55-102 do not provide much insight into this question. However, the illustrative disclosures related to the fair value option in ASC 825-10-55-10 and 55-12 appear to indicate that the FASB considers interest income and expense to be a component of the change in the fair value of certain interest-bearing assets and liabilities. The Fair Value Option Subsections of ASC 825 require the disclosure of gains and losses from changes in fair value for all items elected to be measured at fair value, as well as the line item in the income statement in which the components are reported. Those illustrative examples in ASC 825 show interest income and expense as a component of the change in fair value of interest-bearing instruments, such as loans or debt instruments that were elected under the fair value option.

While interest income and expense could be deemed a component of the change in fair value of an interest-bearing instrument that is part of the total gains and losses recognized in a given period, it is our understanding, based on discussions with the FASB staff, that the FASB had no specific intent to require the inclusion of interest income and expense in the Level 3 reconciliation. Instead, one of the primary objectives of the Level 3 reconciliation is to provide financial statement users with additional information and transparency regarding unrealized gains and losses included in earnings during the periods based on measurements determined using significant unobservable inputs.

Because interest income and expenses recognized in earnings in a specific period are typically determined based on rates that have been set previously, we do not believe that companies are required to include these items in the Level 3 reconciliation. For certain types of assets and liabilities, market convention dictates whether the price of the instrument is quoted inclusive or exclusive of accrued interest income or expense. For example, some fixed income bonds are quoted using a “dirty price” (i.e., the quoted price includes accrued interest). For these instruments, the inclusion of interest income or expense in the Level 3 reconciliation may be appropriate and could be necessary in order to reconcile beginning and ending balances. In addition, we believe a company’s disclosures should be clear as to how interest is reflected in the Level 3 reconciliation.



# 21 Present value techniques

This section focuses on the implementation guidance in ASC 820 regarding the use of present value techniques in estimating fair value.

## 21.1 Present value techniques

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Present Value Techniques*

##### **820-10-55-4**

Paragraphs 820-10-55-5 through 55-20 describe the use of present value techniques to measure fair value. Those paragraphs focus on a **discount rate adjustment technique** and an **expected cash flow** (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (for example, whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.

#### *The Components of a Present Value Measurement*

##### **820-10-55-5**

**Present value** (that is, an application of the **income approach**) is a tool used to link future amounts (for example, cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all of the following elements from the perspective of market participants at the measurement date:

- a. An estimate of future cash flows for the asset or liability being measured.
- b. Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.
- c. The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (that is, a risk-free interest rate). For present value computations denominated in nominal U.S. dollars, the yield curve for U.S. Treasury securities determines the appropriate risk-free interest rate.
- d. The price for bearing the uncertainty inherent in the cash flows (that is, a **risk premium**).
- e. Other factors that market participants would take into account in the circumstances.
- f. For a liability, the **nonperformance risk** relating to that liability, including the reporting entity's (that is, the obligor's) own **credit risk**.

### ***General Principles***

#### **820-10-55-6**

Present value techniques differ in how they capture the elements in the preceding paragraph. However, all of the following general principles govern the application of any present value technique used to measure fair value:

- a. Cash flows and discount rates should reflect assumptions that market participants would use when pricing the asset or liability.
- b. Cash flows and discount rates should take into account only the factors attributable to the asset or liability being measured.
- c. To avoid double counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (that is, a discount rate adjustment technique). That same rate should not be used if using expected (that is, probability-weighted) cash flows (that is, an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.
- d. Assumptions about cash flows and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pretax cash flows should be discounted at a rate consistent with those cash flows.
- e. Discount rates should be consistent with the underlying economic factors of the currency in which the cash flows are denominated.

### ***Risk and Uncertainty***

#### **820-10-55-7**

A fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases, both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.

#### **820-10-55-8**

Market participants generally seek compensation (that is, a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases, determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

#### **820-10-55-9**

Present value techniques differ in how they adjust for risk and in the type of cash flows they use. For example:

- a. The discount rate adjustment technique (see paragraphs 820-10-55-10 through 55-12) uses a risk-adjusted discount rate and contractual, promised, or most likely cash flows.

- b. Method 1 of the expected present value technique (see paragraph 820-10-55-15) uses risk-adjusted expected cash flows and a risk-free rate.
- c. Method 2 of the expected present value technique (see paragraph 820-10-55-16) uses expected cash flows that are not risk adjusted and a discount rate adjusted to include the risk premium that market participants require. That rate is different from the rate used in the discount rate adjustment technique.

### 21.1.1 General principles for use of present value techniques

A present value technique is an application of the income approach, which is one of the three valuation approaches prescribed by ASC 820. Valuation techniques under the income approach, such as present value techniques or option pricing models, convert expected future amounts to a single present amount. That is, a present value technique uses the projected future cash flows of an asset or liability and discounts those cash flows at a rate of return commensurate with the risk(s) associated with those cash flows. Present value techniques, such as discounted cash flow analyses, are frequently used to estimate the fair value of business entities, nonfinancial assets and nonfinancial liabilities, but are also useful for valuing financial instruments that do not trade in active markets.

ASC 820 specifically discusses three present value techniques:<sup>74</sup>

- ▶ Discount rate adjustment technique
- ▶ Method 1 of the expected present value technique (i.e., a technique that incorporates the risk premium directly into the expected cash flows, resulting in certainty-equivalent cash flows)
- ▶ Method 2 of the expected present value technique (i.e., a technique that considers expected cash flows, but incorporates the risk premium into the discount rate)

### 21.1.2 Components of a present value technique

Present value techniques can vary in complexity depending on the facts and circumstances of the item being measured. Nevertheless, all present value techniques used to estimate fair value under US GAAP should contain the following fundamental elements from the perspective of market participants at the measurement date (outlined in ASC 820-10-55-5):

- ▶ An estimate of the future cash flows associated with the item being measured
- ▶ Expectations about possible variations in the amount and/or the timing of those cash flows
- ▶ The time value of money
- ▶ A risk premium<sup>75</sup>
- ▶ Nonperformance risk, including own credit risk (when measuring the fair value of a liability)<sup>76</sup>
- ▶ Other factors that market participants would take into account in the circumstances

<sup>74</sup> Under CON 7, the discount rate adjustment technique was referred to as the "traditional approach" and the expected present value technique was called "the expected cash flow approach." Although the terminology has been updated, the concepts underlying the present value techniques in both ASC 820 and CON 7 are identical.

<sup>75</sup> Defined in ASC 820's Glossary as compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or liability.

<sup>76</sup> Refer to section 9 for further detail on how nonperformance risk is considered in the fair value measurement of a liability.

### 21.1.2.1 Time value of money

Because the objective of a present value technique is to convert future cash flows into a present amount (i.e., a value as of the measurement date), time value of money is a fundamental element of any present value technique. A basic principle in finance theory, time value of money holds that “a dollar today is worth more than a dollar tomorrow,” because the dollar today can be invested and earn interest immediately. The discount rate in a present value technique therefore must capture, at a minimum, the time value of money. For example, a discount rate equal to the risk-free rate of interest encompasses only the time value element of a present value technique. If the risk-free rate is used as a discount rate, the expected cash flows must be adjusted into certainty-equivalent cash flows to capture any uncertainty associated with the item being measured and the compensation market participants would require for this uncertainty.

### 21.1.2.2 Risk and uncertainty in a present value technique

At its core, the concept of value measures expected rewards against the risks of realizing those rewards. One of these risks is the uncertainty inherent in most cash flows used in present value techniques, as these cash flows are estimates, not known amounts. ASC 820 notes that even contractually fixed amounts are uncertain if there is a risk of default.

ASC 820 states that in order to faithfully represent fair value, a present value technique should include a risk premium, reflecting compensation that market participants would demand for bearing the uncertainty in the cash flows. While acknowledging the potential difficulty in quantifying a risk premium in certain instances, the guidance concludes that the degree of difficulty in determining this premium is not a sufficient basis to exclude a risk adjustment if market participants would demand one.

Depending on the present value technique used, risk may be incorporated in the cash flows or in the discount rate. However, identical risks should not be captured in both the cash flows and the discount rate in the same valuation analysis. For example, if the probability of default and loss given default for a liability is already incorporated in the discount rate (i.e., a risk-adjusted discount rate), the projected cash flows should not be further adjusted for the expected losses.

If the risks are accounted for fully and appropriately, the three present value techniques noted above should all produce an identical fair value measurement, regardless of whether risk is captured in the cash flows or the discount rate. (Refer to section 21.3.2 for a numerical example illustrating this point.)

## 21.2 Discount rate adjustment technique

### Excerpt from Accounting Standards Codification

#### Fair Value Measurement – Overall

#### *Implementation Guidance and Illustrations*

#### *Discount Rate Adjustment Technique*

#### **820-10-55-10**

The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (for example, contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised, or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (that is, a market rate of return).

**820-10-55-11**

The discount rate adjustment technique requires an analysis of market data for comparable assets or liabilities. Comparability is established by considering the nature of the cash flows (for example, whether the cash flows are contractual or noncontractual and are likely to respond similarly to changes in economic conditions), as well as other factors (for example, credit standing, collateral, duration, restrictive covenants, and liquidity). Alternatively, if a single comparable asset or liability does not fairly reflect the risk inherent in the cash flows of the asset or liability being measured, it may be possible to derive a discount rate using data for several comparable assets or liabilities in conjunction with the risk-free yield curve (that is, using a build-up methodology). Paragraph 820-10-55-33 illustrates the build-up methodology.

**820-10-55-12**

When the discount rate adjustment technique is applied to fixed receipts or payments, the adjustment for risk inherent in the cash flows of the asset or liability being measured is included in the discount rate. In some applications of the discount rate adjustment technique to cash flows that are not fixed receipts or payments, an adjustment to the cash flows may be necessary to achieve comparability with the observed asset or liability from which the discount rate is derived.

The discount rate adjustment technique attempts to capture all of the risk associated with the item being measured in the discount rate and is most commonly used to value assets and liabilities with contractual payments, such as debt instruments. This technique uses a single set of cash flows (whether contractual or most likely) and discounts these cash flows using a discount rate that reflects all of the risk related to the cash flows. This technique derives the discount rate from observable rates of return for comparable assets and liabilities.

The discount rate in the discount rate adjustment technique incorporates the following:

- ▶ The risk-free interest rate
- ▶ Market participants' expectations about possible variations in the amount or timing of the cash flows
- ▶ The price for bearing the uncertainty inherent in these cash flows (or risk premium)
- ▶ Other risk factors specific to the asset or liability

Although ASC 820 does not prescribe when a particular present value technique should be used, the extent of market data available for a specific type of asset or liability will influence when the use of the discount rate adjustment technique is appropriate. ASC 820-10-55-11 states that "[t]he discount rate adjustment technique requires an analysis of market data for comparable assets and liabilities." Although comparable market data can generally be used to derive discount rates even when no single observable rate of return reflects the risk inherent in the item being measured, certain assets and liabilities do not lend themselves to the use of the discount rate adjustment technique.

While not specifically addressed in ASC 820, other Topics may indicate a preference for one present value technique over another when measuring fair value. For example, ASC 410-20-30-1 states that when measuring an asset retirement obligation at initial recognition, "rarely, if ever, would there be an observable rate of interest for a liability that has cash flows similar to an asset retirement obligation being measured. In addition, an asset retirement obligation usually will have uncertainties in both timing and amount. In that circumstance, employing a discount rate adjustment technique, where uncertainty is incorporated into the rate, will be difficult, if not impossible."

Estimating a market yield that appropriately captures the risk inherent in the asset or liability being measured is often the most challenging aspect of applying the discount rate adjustment technique. Understanding the various risk factors for certain types of assets and liabilities and quantifying those risks can be complex. Deconstructing the discount rate into its components can help in this process, beginning with the risk-free rate, which represents the time value of money. In addition to the risk-free rate, companies should consider credit or nonperformance risk, if the subject asset or liability requires performance in the future (including, but not limited to, a cash payment). For example, in the case of an asset, the discount rate would include compensation required by market participants to assume the risk that the counterparty will be unable to fulfill its obligation.<sup>77</sup>

When applying the discount rate adjustment technique, the credit spread (above the risk-free rate) implicitly incorporates assumptions about default probabilities and losses given default, without requiring any further adjustment to the projected cash flows. However, a credit adjusted risk-free rate may not sufficiently capture all the risk related to the subject asset or liability. For example, adjustments to the discount rate may be required to appropriately incorporate (1) the potential variability around the timing and amount of the cash flows (e.g., the prepayment risk for mortgage-backed securities) and (2) the price for bearing such uncertainty (risk premium).

In all cases, companies should adhere to the exit price objective in ASC 820 when assessing discount rates. Because the discount rate represents the rate of return required by market participants in the current market, it should also incorporate factors such as illiquidity and the current risk appetite of market participants.

### 21.2.1 Illustrative example of the discount rate adjustment technique

The following example from ASC 820 illustrates how a build-up approach is applied when using the discount rate adjustment technique.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### Implementation Guidance and Illustrations

##### Example 2: Discount Rate Adjustment Technique—The Build-Up Approach

##### 820-10-55-33

To illustrate a build-up methodology (as discussed in paragraph 820-10-55-11), assume that Asset A is a contractual right to receive \$800 in 1 year (that is, there is no timing uncertainty). There is an established market for comparable assets, and information about those assets, including price information, is available. Of those comparable assets:

- a. Asset B is a contractual right to receive \$1,200 in 1 year and has a market price of \$1,083. Thus, the implied annual rate of return (that is, a 1-year market rate of return) is 10.8 percent  $[(\$1,200/\$1,083) - 1]$ .
- b. Asset C is a contractual right to receive \$700 in 2 years and has a market price of \$566. Thus, the implied annual rate of return (that is, a 2-year market rate of return) is 11.2 percent  $[(\$700/\$566)^{0.5} - 1]$ .
- c. All three assets are comparable with respect to risk (that is, dispersion of possible payoffs and credit).

<sup>77</sup> Not all discount rates require an explicit adjustment for credit (or nonperformance) risk. Equity interests, for example, may assume perpetual residual cash flows from the operations of a business, rather than a contractual future payment. In this case, an additional component of risk is captured through an equity risk premium, instead of a credit risk adjustment. The long-term incremental rate of return of equity interests over long-term risk-free interest rates may generally represent an identifiable component of risk.

**820-10-55-34**

On the basis of the timing of the contractual payments to be received for Asset A relative to the timing for Asset B and Asset C (that is, one year for Asset B versus two years for Asset C), Asset B is deemed more comparable to Asset A. Using the contractual payment to be received for Asset A (\$800) and the 1-year market rate derived from Asset B (10.8 percent), the fair value of Asset A is \$722 ( $\$800/1.108$ ). Alternatively, in the absence of available market information for Asset B, the one-year market rate could be derived from Asset C using the build-up methodology. In that case, the 2-year market rate indicated by Asset C (11.2 percent) would be adjusted to a 1-year market rate using the term structure of the risk-free yield curve. Additional information and analysis might be required to determine whether the risk premiums for one-year and two-year assets are the same. If it is determined that the risk premiums for one-year and two-year assets are not the same, the two-year market rate of return would be further adjusted for that effect.

As evidenced in the example above, using a build-up approach requires that market data for comparable assets is available. In addition, when applying the build-up approach, significant judgment may be required in determining comparability between the item being measured and the available benchmarks, as well as quantifying the appropriate adjustments necessary to account for any differences that may exist between the item being measured and the applicable benchmark (e.g., differences in credit risks, nature of the cash flows).

**21.3****Expected present value technique****Excerpt from Accounting Standards Codification****Fair Value Measurement – Overall***Implementation Guidance and Illustrations**Expected Present Value Technique***820-10-55-13**

The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).

**820-10-55-14**

In making an investment decision, risk-averse market participants would take into account the risk that the actual cash flows may differ from the expected cash flows. Portfolio theory distinguishes between two types of risk:

- a. **Unsystematic (diversifiable) risk**
- b. **Systematic (nondiversifiable) risk.**

**820-10-55-15**

Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (that is, market) risk by subtracting a cash risk premium (that is, risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty equivalent cash flow, which is discounted at a risk-free interest rate. A certainty equivalent cash flow refers to an expected cash flow (as defined), adjusted for risk so that a market participant is indifferent to trading a certain cash flow for an expected cash flow. For example, if a market participant was willing to trade an expected

cash flow of \$1,200 for a certain cash flow of \$1,000, the \$1,000 is the certainty equivalent of the \$1,200 (that is, the \$200 would represent the cash risk premium). In that case, the market participant would be indifferent as to the asset held.

### **820-10-55-16**

In contrast, Method 2 of the expected present value technique adjusts for systematic (that is, market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (that is, an expected rate of return). Models used for pricing risky assets, such as the capital asset pricing model, can be used to estimate the expected rate of return. Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it is likely to be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.

The expected present value technique is prevalent in the valuation of business entities, assets and liabilities with contingent or conditional payouts and items for which discount rates cannot be readily implied from observable transactions. Whereas the discount rate adjustment technique uses contractual, or most likely, cash flows in estimating fair value, expected present value techniques consider probability-weighted cash flows. Expectations about possible variations in the amount and/or timing of the cash flows are explicitly incorporated in the expected cash flows, instead of the discount rate.

In theory, these expected cash flows are intended to represent the probability-weighted average of all possible cash flows associated with the asset or liability. In practice, however, only a discrete number of scenarios are usually considered to capture the probability distribution of the cash flows. The number of outcomes (or scenarios) considered generally depends on the characteristics of the asset or liability being measured. For example, while the cash flows under certain guarantee obligations are based on the binary outcome of a specified contingency and therefore are valued based on only two potential outcomes, certain complex financial instruments are valued using option pricing models, such as Monte Carlo simulations, that generate thousands of possible outcomes.

The extent of judgment involved in estimating the probability distribution of potential outcomes will vary depending on the nature of the item being measured. Historical performance, current and expected market environments (including expectations of volatility) and a reporting entity's budgetary considerations (assuming the entity's use of the asset is consistent with that of market participants) may help to inform expectations about future cash flows and appropriate weightings.

The concept of a risk premium is just as important under an expected present value technique as it is under the discount rate adjustment technique. ASC 820 clarifies that the use of probability-weighted cash flows under an expected present value technique does not obviate the need to consider a risk premium when estimating fair value. Although "expected cash flows" include the potential variability (or uncertainty) in the amount and timing of future cash flows, the probability weighting, in and of itself, does not incorporate the compensation market participants would demand for bearing this uncertainty.

To help illustrate this point, consider the difference between Asset A and Asset B in the following simplified example:

- ▶ Asset A is a contractual right to receive \$10,000.
- ▶ Asset B has a payout that is conditional upon the outcome of a coin flip. If "heads," Asset B pays out \$20,000; if "tails," the asset pays nothing.
- ▶ The expected value for both assets is \$10,000 ( $\$10,000 * 100\%$  for Asset A, and  $\$20,000 * 50\% + \$0 * 50\%$  for Asset B), assuming no risk of default.

In this example, risk-averse market participants would pay more for Asset A than Asset B, as the cash-certain payout of \$10,000 for Asset A is less risky than the expected cash flow of \$10,000 for Asset B.<sup>78</sup> Although the variability in the cash flows of Asset B has been appropriately captured by probability-weighting all the possible cash flows (i.e., there is no subjectivity involved in the determination of the probability weighting in the simplified example since the payout is based on a coin flip), Asset B's expected value does not capture the compensation market participants would require for bearing the uncertainty in the cash flows. As such, all else being equal, the price for Asset B would be lower than the price for Asset A. Said another way, the required rate of return for Asset B would be higher than that for Asset A, in order to compensate the holder for the incremental risk in Asset B's cash flows (relative to Asset A).

### 21.3.1 Method 1 versus Method 2 of the expected present value technique

The key difference between Method 1 and Method 2 of the expected present value technique is the treatment of the risk premium. Under Method 1, the expected cash flows are directly adjusted for the risk premium, resulting in risk-adjusted expected cash flows, which are certainty-equivalent cash flows. In this case, a risk-free discount rate is appropriate because all of the risk has already been incorporated into the cash flows (assuming credit risk is not relevant or has already been accounted for in the cash flows). The discount rate used in Method 1 – the risk-free rate – represents the time value of money.

In contrast, Method 2 incorporates the risk premium in the discount rate. A risk-free discount rate would not be appropriate under this method because the expected cash flows, while probability weighted, do not represent certainty-equivalent cash flows.

Capturing the risk premium in the cash flows versus the discount rate has no effect on relative fair values under each method. That is, Method 1 and Method 2 should result in the same fair value measurement, all else being equal.

### 21.3.2 Illustrative example of the expected present value technique

The following example from ASC 820 illustrates Method 1 and 2 of the expected present value technique and demonstrates how both methods result in identical fair value measurements.

#### Excerpt from Accounting Standards Codification

##### Fair Value Measurement – Overall

##### Implementation Guidance and Illustrations

##### Expected Present Value Technique

##### 820-10-55-17

To illustrate Methods 1 and 2, assume that an asset has expected cash flows of \$780 in 1 year determined on the basis of the possible cash flows and probabilities shown below. The applicable risk-free interest rate for cash flows with a 1-year horizon is 5 percent, and the systematic risk premium for an asset with the same risk profile is 3 percent.

<u>Possible Cash Flows</u>	<u>Probability</u>	<u>Probability-Weighted Cash Flows</u>
\$ 500	15%	\$ 75
\$ 800	60%	\$ 480
\$ 900	25%	\$ 225
Expected cash flows		<u>\$ 780</u>

<sup>78</sup> This point is articulated in paragraph 65 of CON 7 which noted that given a choice between (1) an asset with expected cash flows that are uncertain (Asset B in our example), and (2) another asset with cash flows of the same expected amount but no uncertainty (Asset A in our example), marketplace participants will place a higher value on (2) than (1).

**820-10-55-18**

In this simple illustration, the expected cash flows (\$780) represent the probability-weighted average of the 3 possible outcomes. In more realistic situations, there could be many possible outcomes. However, to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, a reporting entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (for example, changes in external factors, including economic or market conditions, industry trends, and competition as well as changes in internal factors affecting the reporting entity more specifically), taking into account the assumptions of market participants.

**820-10-55-19**

In theory, the present value (that is, the fair value) of the asset's cash flows is the same whether determined using Method 1 or Method 2, as follows:

- a. Using Method 1, the expected cash flows are adjusted for systematic (that is, market) risk. In the absence of market data directly indicating the amount of the risk adjustment, such adjustment could be derived from an asset pricing model using the concept of certainty equivalents. For example, the risk adjustment (that is, the cash risk premium of \$22) could be determined using the systematic risk premium of 3 percent ( $\$780 - [\$780 \times (1.05/1.08)]$ ), which results in risk-adjusted expected cash flows of \$758 ( $\$780 - \$22$ ). The \$758 is the certainty equivalent of \$780 and is discounted at the risk-free interest rate (5 percent). The present value (that is, the fair value) of the asset is \$722 ( $\$758/1.05$ ).
- b. Using Method 2, the expected cash flows are not adjusted for systematic (that is, market) risk. Rather, the adjustment for that risk is included in the discount rate. Thus, the expected cash flows are discounted at an expected rate of return of 8 percent (that is, the 5 percent risk-free interest rate plus the 3 percent systematic risk premium). The present value (that is, the fair value) of the asset is \$722 ( $\$780/1.08$ ).

**820-10-55-20**

When using an expected present value technique to measure fair value, either Method 1 or Method 2 could be used. The selection of Method 1 or Method 2 will depend on facts and circumstances specific to the asset or liability being measured, the extent to which sufficient data are available, and the judgments applied.

Below, we expanded the example from ASC 820 to include the discount rate adjustment technique (described in section 21.2). The following example shows how all three techniques converge to the same fair value measurement, while highlighting the difference in the discount rates applied under each approach.

**Illustration 21.3-1: Comparison between present value techniques**

A reporting entity is estimating the fair value of an asset that will expire in one year and has determined that the probability distribution of the future cash flows is as follows:

Possible outcome [A]	Probability [B]	Probability-weighted value [A*B]
\$500	15%	\$ 75
\$800	60%	\$480
\$900	25%	\$225
Expected value		\$780

Assume that the risk-free interest rate is 5% and the risk premium is 3%. The table below shows that all three present value techniques yield identical results.

Method	Contractual CF	Most likely CF	Expected CF	Certainty-equivalent adjustment	Certainty-equivalent CF	Discount rate	PV
Discount rate adjustment technique	n/a	\$800	n/a	n/a	n/a	10.8%	\$722
EPV Method 1 – Adjust expected cash flows for risk premium	n/a	n/a	\$780	(\$22)	\$758	5.0%	\$722
EPV Method 2 – Adjust discount rate for risk premium	n/a	n/a	\$780	n/a	n/a	8.0%	\$722

Method	Fair value	Calculation
Discount rate adjustment	\$722	= Most likely cash flow / (1 + risk-free rate + adjustment for cash flow uncertainty + risk premium)
EPV Method 1	\$722	= (Expected cash flow – certainty-equivalent adjustment*) / (1 + risk-free rate)
EPV Method 2	\$722	= Expected cash flow / (1 + risk-free rate + risk premium)

\* Certainty-equivalent adjustment = Expected CF – [Expected CF \* (1 + risk-free rate) / (1 + risk-free rate + risk premium)]

The three techniques differ in the manner in which the risks in the cash flows are captured, but not the level of the risk inherent in those cash flows. In the discount rate adjustment technique, the most likely cash flow (\$800) is discounted at a rate that reflects all the risk inherent in the investment (i.e., time value of money, possible variations in the amount of cash flows, risk premium).

Method 1 of the expected present value technique incorporates asset-specific and systematic uncertainty directly into the cash flows (certainty-equivalent cash flow of \$758) and therefore uses the risk-free rate for discounting, as all the risks associated with the investment are incorporated in the cash flows. The adjustment to the cash flows for systematic risk is based on the 3% risk premium.

Instead of using the risk premium to estimate a certainty-equivalent cash flow, Method 2 of the expected present value technique incorporates the risk premium in the discount rate. The difference between the discount rate in Method 1 and Method 2 is the risk premium.

# IA Industry Appendix

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# IA.1 Fair value measurement considerations for the banking industry

This appendix provides a series of questions and interpretive responses addressing considerations related to the application of ASC 820 and the Fair Value Option Subsections of ASC 825 for the banking industry.

## Questions and interpretive responses (updated September 2023)

### Scope

**Question IA.1-1** ASC 310-30<sup>79</sup> addresses accounting for differences between contractual cash flows and cash flows expected to be collected from an investor's initial investment in loans acquired in a transfer, including a business combination, if those differences are attributable, at least in part, to credit quality. How are loans accounted for under ASC 310-30 affected by the guidance in ASC 820?

We believe different measurement objectives exist depending on whether a loan or a debt security within the scope of ASC 310-30 is acquired in a business combination or in an asset acquisition.

ASC 805-20-30-1 requires all identifiable assets acquired in a business combination to be measured at their acquisition-date fair values. ASC 805-20-30-4 further clarifies that acquired loans are measured at acquisition-date fair value, with no valuation allowance. Therefore, the initial recognition of loans and debt securities acquired in a business combination, regardless of whether they are within the scope of ASC 310-30, should be measured at fair value in accordance with the principles of ASC 820.

However, in an asset acquisition where the consideration given is cash, the initial measurement of the asset is at the amount of cash paid, which generally includes transaction costs.<sup>80</sup> Therefore, loans and debt securities within the scope of ASC 310-30 and acquired by paying cash are recorded at their acquisition price (an entry price). While the acquisition price may represent fair value, we do not believe there is a requirement for these loans and debt securities to be measured at fair value in accordance with ASC 820 if fair value differs from the acquisition price.

ASC 820 does not affect the subsequent measurement of loans and debt securities within the scope of ASC 310-30 unless (1) an acquired debt security is designated upon acquisition as available-for-sale in accordance with ASC 320, (2) an acquirer elects to apply the fair value option to an acquired loan or (3) a loan or debt security not measured at fair value due to (1) or (2) is determined to be impaired and the impairment is measured based on the fair value of the debt security or loan or the fair value of the debt security or loan's collateral, if it is collateral-dependent, under the practical expedients in ASC 310-10. The FASB concluded that the use of a practical expedient (observable market price or the fair value of the collateral if the loan is collateral-dependent<sup>81</sup>) is a fair value measurement and, therefore, is included in the scope of ASC 820. Refer to Question 3.2-1 in section 3 for additional discussion.

<sup>79</sup> This reference applies before an entity has adopted ASU 2016-13. Refer to section 5 of our FRD, *Credit impairment under ASC 326*, for additional guidance on the accounting for financial assets purchased with credit deterioration after the adoption of ASU 2016-13.

<sup>80</sup> ASC 805-50-30-2.

<sup>81</sup> ASC 310-10-35-22 applies if the entity has not yet adopted ASU 2016-13. If the entity has adopted ASU 2016-13, then ASC 326-20-35-5 applies.

**Question IA.1-2 How does ASC 820 affect a creditor's accounting for collateral repossessed in a lending relationship? (updated September 2023)**

When repossessing collateral in a lending relationship, a creditor may (1) receive assets in full satisfaction of a receivable, (2) modify the terms of the receivable or (3) receive assets in partial satisfaction of the receivable and then modify the terms of the remaining receivable. A creditor should measure and recognize assets received in full or partial satisfaction of a receivable (including equity interests in the debtor) at fair value (less cost to sell, if applicable). These fair value measurements should be determined in accordance with ASC 820. If the entity has previously written off portions of the amortized cost basis and the fair value of the collateral increases such that it is greater than the current amortized cost basis of the financial asset, a "negative allowance" may be recognized. The resulting negative allowance should not exceed the total amount previously written off.

If a creditor modifies the terms of a receivable, any impairment associated with the modification is to be accounted for in accordance with ASC 310-10-35.<sup>82</sup> As discussed in Question IA.1-1, loans measured for impairment using a practical expedient (observable market price of the receivable or the fair value of the receivable's collateral, if the receivable is collateral-dependent) under ASC 310-10-35-22<sup>83</sup> are deemed to be fair value measurements and, therefore, are within the scope of ASC 820.

## Measurement

**Question IA.1-3 Can the fair value of a group of loans be determined on a pool basis under the guidance in ASC 820?**

As discussed in section 10, ASC 820 provides a measurement exception that allows companies to determine the fair value of a group of financial assets and liabilities with offsetting risks based on the sale or transfer of its net exposure to a particular risk (or risks), if certain criteria are met. However, this measurement exception does not apply to a portfolio of only financial assets (e.g., a group of loans) as these instruments do not have offsetting risks.

Although use of the measurement exception is not appropriate, we do not believe the general principles in ASC 820 preclude companies from measuring the fair value of a group of loans with similar risk characteristics as a pool given that market participants acting in their "economic best interest" generally transact for these types of loans in this manner and that this approach is not inconsistent with the unit of account guidance in other Topics. For example, with respect to mortgage loans held for sale, ASC 948-310-35-3 states that "either the aggregate or individual loan basis may be used to determine the lower of cost or fair value" for each loan type. In addition, before the adoption of ASU 2016-13, ASC 310-10-35-21 indicates that a creditor may aggregate loans with similar risk characteristics when measuring impairment. After the adoption of ASU 2016-13, ASC 326-20-30-2 indicates that an entity should measure expected credit losses of financial assets on a collective (pool) basis when similar risk characteristics exist (as described in ASC 326-20-55-5).

Even in a situation where a single mortgage loan was being transacted for, we believe the likely market participants would be financial institutions that would incorporate the individual loan into a portfolio of loans with similar risk characteristics, and price the loan accordingly.

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<sup>82</sup> This reference applies before an entity has adopted ASU 2016-13. Refer to section 2.4.2 of our FRD, *Credit impairment under ASC 326*, for additional guidance on the accounting for measuring the allowance of a troubled debt restructuring (before the adoption of ASU 2022-02) after the adoption of ASU 2016-13. In March 2022, the FASB issued ASU 2022-02 amending ASC 310 to eliminate the recognition and measurement guidance for a TDR for creditors that have adopted the credit losses guidance in ASC 326. ASU 2022-02 also requires PBEs to present current-period gross write-offs (on a current year-to-date basis for interim-period disclosures) by year of origination in their vintage disclosures.

<sup>83</sup> This reference applies before an entity has adopted ASU 2016-13. Refer to section 2.7.2 of our FRD, *Credit impairment under ASC 326*, for additional guidance on the practical expedient for financial assets secured by collateral after the adoption of ASU 2016-13.

However, measuring the fair value on a pool basis for loans that do not have similar risk characteristics is likely not appropriate under ASC 820, as this would not be consistent with the approach and assumptions used by market participants when transacting for these instruments. Further, as discussed in the following questions, regardless of whether loans are considered individually or as part of a pool, a fair value measurement is based on the loan commitments or receivables in their current form, not a transformed or modified form.

**Question IA.1-4 In determining the fair value of a single loan or a portfolio of loans, is it appropriate to use a securitization price or should a company look to the whole loan market?**

As discussed in section 5.2, a fair value measurement is based on a particular asset or liability as it currently exists, and not in a transformed or modified form. For example, in a situation where a market exists only for the asset in a transformed or modified form, the price from that market should be adjusted to determine the price a market participant would pay for the asset in its current form.

Loans may be aggregated and, through a securitization transaction, transformed into securities and other interests in the pool (e.g., residual interests). In certain instances, the proceeds received from securitizing a pool of loans into component parts may exceed the proceeds that would be received from selling the loans on a whole loan basis because of (1) credit enhancements (e.g., the tranching or bifurcation of credit risk) that may be provided or retained by the transferor or (2) differences in the liquidity or marketability of the securities issued by the securitization entity as compared to the underlying loans.

However, the objective of the fair value measurement is to determine the exit price for the asset in its current form (i.e., from a whole loan perspective). As such, we do not believe the fair value of an individual loan or a pool of loans should be determined using an unadjusted securitization price.<sup>84</sup> Instead, a company may determine the fair value of loans through observable whole loan market transactions, broker quotes, pricing services or its own pricing models with appropriate consideration given to the reliability and observability of the pricing inputs (i.e., in accordance with the fair value hierarchy) with the objective of determining the price that would be received if the whole loan(s) were sold on the measurement date.

In certain situations, it may be appropriate to determine the fair value of loans by starting with the price in the securitization market but adjusting that price for items such as transformation costs and a normal profit margin associated with the securitization transaction. The adjustments to the securitization price are necessary to determine the exit price for the loans in their current form at the measurement date, and the adjustments effectively should result in the loans being measured at a whole loan price.

For example, certain market participants in the whole loan market may acquire whole loans with the intent of securitizing the loans. In determining the price they would be willing to pay for the whole loans, these market participants likely would consider any additional costs to securitize the loans, as well as their required profit margin upon ultimate securitization.

**Question IA.1-5 Should expected cash flows related to servicing be considered in determining the fair value of a loan commitment?**

Pursuant to SAB Topic 5DD, the expected net future cash flows related to loan servicing should be included in the fair value measurement of a written loan commitment. By including the expected net cash flows related to loan servicing in the fair value measurement, a company continues to value the loan commitment in its current form (i.e., as it exists at the measurement date), but considers the value market participants would ascribe to the loan commitment based on the expected cash flows associated

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<sup>84</sup> This view is consistent with those expressed by the FASB staff at the 2007 AICPA National Conference on Banks & Savings Institutions.

with the underlying loan that may result from the funding of the loan commitment. This would include compensation (and the profit) that the lender would require for its underwriting and origination efforts as well as the benefits of servicing expected to exceed adequate compensation (i.e., the spread of the contractual servicing fees over the market estimate of costs to service).

SAB Topic 5DD applies to all written loan commitments measured at fair value, including derivative loan commitments under ASC 815 (i.e., written loan commitments that relate to the origination of mortgage loans that will be held for resale upon loan funding), other written loan commitments that are measured at fair value under industry-specific accounting guidance, those accounted for under the Fair Value Option Subsections of ASC 825 and the financial instrument disclosure guidance in ASC 825.

Accordingly, the fair value of written loan commitments should consider the value market participants would place on the expected net future cash flows related to servicing the loan if the commitment were transferred at the measurement date. SAB Topic 5DD indicates that the expected net future cash flows related to the associated servicing included in the fair value measurement should be determined in the same manner in which the fair value of a recognized servicing asset or liability is measured under ASC 860.<sup>85</sup> When estimating the fair value of loan commitments, a company would need to consider market participant assumptions with respect to the expected “pull-through” (or conversely, “fall-out”) rate associated with loan commitments that are expected to result in funded loans.

Similarly, a company would consider the expected net future cash flows related to servicing in determining the fair value of a funded loan or portfolio of loans (e.g., on a whole loan, servicing-released basis).

While SAB Topic 5DD is a requirement only for SEC registrants, we believe it would be a leading practice for non-SEC registrants to also follow the guidance in SAB Topic 5DD.

#### Question IA.1-6

**Under ASC 820, is it appropriate to recognize inception (i.e., “Day 1”) gains or losses on loan commitments accounted for at fair value?**

ASC 820 allows for Day 1 gains or losses to be recorded when the transaction price (entry price) is not deemed to represent the fair value (exit price) of the asset acquired or liability assumed at initial recognition. As discussed in section 11, ASC 820 provides certain factors that a company should consider in determining whether a transaction price represents the fair value of an instrument at initial recognition.

Inception gains or losses on loan commitments could result for several reasons. For example, the inclusion of the expected net future cash flows related to the associated servicing of the loan (i.e., the benefits of servicing are expected to exceed adequate compensation) in the fair value measurement of a loan commitment under SAB Topic 5DD may result in the recognition of a Day 1 gain. In addition, Day 1 gains or losses may arise if a loan commitment’s terms are “off-market” and such terms are not reflected in the transaction price.

We do not believe the fair value of a loan commitment or the determination as to whether a Day 1 gain or loss is recognized on a loan commitment is dependent on management’s intent with respect to the loan, if the commitment is ultimately funded. That is, the fair value of a loan commitment should be the same whether management intends to exit the loan through (1) the whole loan market on either a servicing-retained or servicing-released basis or (2) the securitization market.

If a company determines that the transaction price does not represent the fair value of the loan commitment issued, the factors considered in making this determination should be appropriately documented. To the extent a company uses a model to determine the fair value of a loan commitment, the model value should

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<sup>85</sup> While the expected net future cash flows related to servicing the loan would be considered in valuing the loan commitment, the guidance in ASC 860 still would preclude the recognition of a separate and distinct servicing asset or liability for accounting purposes until the servicing rights have been contractually separated from the underlying loan by sale or securitization of the loan with servicing retained.

incorporate all of the assumptions that market participants would use in pricing the loan commitment, including assumptions about risk (i.e., any risk premium that market participants would require given the inherent uncertainty in the cash flows, risk in the pricing model or the unobservability of the inputs used in the pricing model), as well as profit margin.

Alternatively, if the transaction price of a loan commitment is determined to represent the fair value of the commitment, the company's model for valuing the loan commitment generally should be calibrated to the transaction price as discussed in ASC 820-10-35-24C. As a result of the calibration process, the company would recognize only subsequent gains or losses ("Day 2" gains or losses) as a result of changes in factors such as underlying market conditions (e.g., interest rates), market participant assumptions (e.g., pull-through rates) or borrower-specific creditworthiness.

Finally, a company also should determine that it has appropriately expensed costs associated with underwriting and origination efforts related to loan commitments measured and reported at fair value as these costs are not an attribute of the assets or liabilities being measured. While these costs would be recognized in earnings as incurred, the exit price of a loan commitment may implicitly include compensation to the lender for the value of its underwriting and origination efforts.

#### Question IA.1-7

**When in the life cycle of a mortgage loan originated for sale and elected to be accounted for at fair value under the Fair Value Option Subsections of ASC 825 will gains or losses be recognized in the income statement?**

Depending on the specific facts and circumstances, gains or losses on a mortgage loan originated for sale and elected to be accounted for at fair value under ASC 825 may be recognized at various stages in the life cycle of the loan, as discussed below. In our view, the life cycle of a loan held for sale would typically include the commitment date, the period between the commitment date and the funding date, the funding date, the period between the funding date and the date of sale, and the date of sale.

As discussed in Question IA.1-6, a gain or loss may be recognized on a loan commitment at inception for several reasons, including:

- ▶ The loan commitment terms are off-market and the off-market terms are not reflected in the transaction price
- ▶ Market participants would be willing to pay for (or require payment for) the expected net future cash flows related to the associated servicing of the loan based on the probability that the loan will be funded (i.e., if the benefits of servicing are determined to be more or less than adequate compensation, as that term is defined in ASC 860)

The initial measurement of a loan commitment and the related gain or loss to be recognized should consider the expected pull-through (or conversely, fall-out) rate associated with loan commitments that are expected to result in funded loans.

Between the loan commitment date and the funding date, gains or losses may be recognized on a loan commitment due to a number of factors, including, but not limited to, changes in underlying market conditions (e.g., interest rates), changes in market participant assumptions (e.g., pull-through rates or expected servicing costs) or changes in the underlying borrower's creditworthiness.

Upon funding the loan, the form of the instrument being measured changes. The exit price for a funded loan may exceed the exit price for a loan commitment for a number of reasons, including the completion of the underwriting process and the elimination of the risk of borrower fall-out. Accordingly, gains or losses may be recognized upon loan funding. Judgment will need to be applied regarding the determination of whether the act of funding, in and of itself, is a value-creating event or, instead, value is created incrementally as the loan commitment moves through the pipeline. A company's accounting policy with respect to value creation during the commitment period should be documented and applied consistently.

Gains or losses may be recognized between the date a loan is funded and the date it is sold for a number of reasons, including, but not limited to, changes in market interest rates, changes in market participant assumptions about servicing costs, changes in the underlying borrower's creditworthiness and loan seasoning.

As discussed further in Question IA.1-8, a gain or loss also may be recognized upon the sale of a loan measured at fair value depending on whether the loan is actually sold through securitization or as a whole loan, and whether the loan is sold at a current market price.

**Question IA.1-8 If a loan receivable is measured at fair value, will a company necessarily record a gain or loss upon the sale of the loan?**

Whether a gain or loss is recognized upon the sale of a loan measured at fair value depends on the market in which the sale occurs and whether the loan is sold at a current market price.

As discussed in Question IA.1-4, the fair value measurement of a loan should be based on the current form of the loan (i.e., from a whole loan perspective), even if the company's intent is to exit the loan through a securitization transaction. If a company values a loan based on the whole loan market, but exits the loan through a securitization transaction, the company may recognize a gain (or potentially a loss) as the total proceeds received in this transaction (i.e., cash plus the fair value of any residual interest) may differ from the price market participants would pay for the whole loan.

If the company exits a loan receivable measured at fair value in the whole loan market at a current market rate, a gain or loss on the sale of the loan theoretically would not result as the loan would have been measured based on whole loan pricing information prior to the sale.

A company also may be party to a forward loan sale agreement under which it has committed to deliver a certain principal amount of loans to an investor at a specified price on or before a specified date. While a forward loan sale agreement may be effective as an economic hedge of a loan receivable measured at fair value, it is a separate transaction and is accounted for separately from the loan receivable. As such, the specified price under a forward loan sale agreement does not represent the fair value of the loan (or loans) that may be sold to fulfill that contract. However, a forward loan sale agreement may meet the definition of a derivative under ASC 815 and, therefore, be measured and reported at fair value. Alternatively, if a forward loan sale agreement does not meet the definition of a derivative but is a firm commitment that involves only financial instruments, a company may elect to fair value the agreement in accordance with the Fair Value Option Subsections of ASC 825.

As discussed in section 6.3.1, any transaction costs related to the sale of a loan receivable measured at fair value should be considered separately as transaction costs are not a characteristic of the instrument being measured.

**Question IA.1-9 What factors should be considered in determining the fair value of collateral in a collateral-dependent loan?**

Before the adoption of ASU 2016-13, the practical expedient in ASC 310-10-35-22 allows a company to measure impairment of a loan based on the fair value of collateral if the loan is collateral-dependent (i.e., if repayment of the loan is expected to be provided solely by the collateral). In addition, when it is probable that a creditor will take possession of the collateral, impairment must be based on the fair value of the collateral. A fair value measurement of the collateral in either instance should be determined in accordance with the principles of ASC 820.

After the adoption of ASU 2016-13, the guidance in ASC 326-20-35-5 allows an entity to use, as a practical expedient, the fair value of the collateral at the reporting date when recording the net carrying amount of the asset and determining the allowance for credit losses for a financial asset for which the repayment is expected to be provided substantially through the operation or sale of the collateral when

the borrower is experiencing financial difficulty based on the entity's assessment as of the reporting date (collateral-dependent financial asset). If the repayment or satisfaction of the asset depends on the sale of the collateral, the fair value of the collateral is adjusted for estimated costs to sell.

The Uniform Standards of Professional Appraisal Practice (USPAP) are the generally accepted standards for professional appraisal practice in North America. The USPAP include standards for real estate, personal property and business appraisals. Although certain of the concepts in ASC 820 may be similar to concepts in the USPAP, an assessment of the appraisal should still be performed to determine that the appraised value is an appropriate measure of fair value for financial reporting purposes (i.e., the appraisal has been performed in accordance with the principles of ASC 820).

The use of a third-party valuation specialist does not alleviate management's ultimate responsibility for the fair value measurement (and related disclosures) reported in the company's financial statements. Management must understand the assumptions used in the valuations, including those performed in accordance with the USPAP, and determine if the assumptions are consistent with the principles of ASC 820. This due diligence also enables management to assess the observability of the inputs for purposes of determining the level of the fair value measurement within the fair value hierarchy. Further, management may determine that an adjustment to the valuation may be necessary to comply with ASC 820.

For example, traditional real estate appraisal procedures and reports may not anticipate or explicitly address the requirements of ASC 820. It is possible that an appraisal report (or a reporting entity's internal estimate of collateral value) includes assumptions that are not consistent with the principles of ASC 820. The appraisal should be evaluated to determine whether the appraisal process and report meet the requirements of ASC 820. Such an evaluation would include, but not be limited to, whether:

- ▶ The principal or most advantageous market has been appropriately considered
- ▶ Market participant characteristics have been identified and the assumptions market participants would utilize in pricing the asset were used
- ▶ All appropriate valuation approaches and techniques have been used
- ▶ Inputs to the valuation approaches maximize the use of observable data to the extent possible
- ▶ Any adjustments to the data used are (1) based on observable inputs or (2) significant to the overall fair value measurement (adjustments to Level 2 inputs may be required as a result of concluding that there has been a significant decrease in the volume and level of activity for the asset)

If multiple approaches were used, the merits of each valuation technique applied and the underlying assumptions embedded in each of the techniques should be considered in evaluating and assessing the results. For example, inputs used for one valuation technique may be more readily observable or require fewer adjustments than those used in another valuation technique. Accordingly, results under the approach that maximizes the use of relevant observable inputs would generally be given additional weight. Section 12 provides further discussion on evaluating valuation techniques.

Consider the example of a commercial loan collateralized by an office building. If an appraisal of the office building is performed in accordance with the USPAP, the appraiser should analyze the relevant legal, physical and economic factors to the extent necessary to support a conclusion as to the highest and best use of the building. The appraisal of the office building may incorporate assumptions about the future state of the building, rather than the building's condition at the measurement date. For example, expectations about future improvements or modifications to be made to the building may be considered, such as the renovation of the building or the conversion of the office building into condominiums. This method of calculating fair value then might use the expected future cash flows of the "renovated asset"

or the “transformed asset” (i.e., the condominium) to value the asset in its current form (i.e., the office building). The expected future cash flows of a “renovated asset” or a “transformed asset” would need to be adjusted for renovation or transformation costs (e.g., legal, re-zoning and remodeling costs) and a profit margin in determining whether an alternative use of the asset would maximize the value of the asset. Accordingly, if an appraisal incorporates assumptions about the alternative use of the asset, management should determine whether transformation costs also have been considered in the appraisal.

An appraisal also may assume the asset has to be sold immediately and, therefore, reflects a “fire sale” value. Under ASC 820, a fair value measurement assumes the asset is exchanged in an orderly transaction between market participants at the measurement date, which, by definition, is not a forced liquidation or distressed sale at the measurement date. The concept of an orderly transaction distinguishes a fair value measurement from the exit price in a distressed sale or a forced liquidation. As such, an orderly transaction assumes that the collateral is exposed to the market prior to the measurement date for a period that is usual and customary to allow for information dissemination and marketing.

The orderly transaction notion in ASC 820 does not mean that the exchange should be considered to occur at some future date. Instead, an assumption inherent in the fair value measurement as of the measurement date is that market participants have the knowledge and awareness of the asset that would be customary in a market transaction, despite the fact that this process may not have yet begun. As such, management should understand if the appraisal incorporates “fire sale” assumptions instead of customary knowledge that would be obtained by market participants in an orderly transaction and, if so, should adjust the valuation accordingly.

**Question IA.1-10 What are some of the considerations for determining the fair value of debt of a non-consolidated trust in a trust preferred security structure?**

ASC 820 indicates that a fair value measurement should consider the specific attributes of the asset or liability being measured. In estimating the fair value of debt of a non-consolidated trust in a trust preferred security structure, the company should consider the distinguishing features of the debt, including call features, interest deferral options and the nonperformance risk associated with the obligation. A company may consider how the credit spread on the debt obligation compares to credit spreads on other similar callable debt obligations (e.g., those with similar issuance dates, call dates and maturity dates) in determining how any interest deferral feature may affect the fair value of the debt.

Generally, it would not be appropriate to assume that market participants would place zero value on an interest deferral option solely because a dealer that is party to an interest rate swap entered into by the trust preferred structure may place little value on the deferral feature. The company also should consider that certain economic conditions may indicate the interest deferral feature is more likely to be exercised, which may affect the value of the debt from a market participant perspective.

## Disclosure and presentation

**Question IA.1-11 Do the disclosure requirements of ASC 820 apply when an impaired loan is measured at an observable market price (if available) or at the fair value of the loan’s collateral (less costs to sell, if the repayment or satisfaction of the asset depends on the sale of the collateral), if the loan is collateral-dependent?**

As previously discussed, the practical expedient provided in ASC 310-10 before the adoption of ASU 2016-13 or in ASC 326-20 after the adoption of ASU 2016-13 (i.e., use of an observable market price or the fair value of the collateral if the loan is collateral-dependent) is a fair value measurement and, therefore, is included in the scope of ASC 820. Accordingly, we believe that the nonrecurring disclosure requirements of ASC 820 apply when an impaired loan is measured at an observable market price (if available) or at the fair value of the loan’s collateral (if the loan is collateral-dependent) less costs to sell (if the repayment

or satisfaction of the asset depends on the sale of the collateral).<sup>86</sup> In our view, the nonrecurring disclosure requirements apply regardless of whether a lender chooses to recognize the impairment by creating a valuation allowance or through a direct write-down of the recorded investment in the loan.

ASC 310-10-35-23 before the adoption of ASU 2016-13, or ASC 326-20-35-5 after the adoption of ASU 2016-13, states that a creditor should consider estimated costs to sell in the measurement of impairment if those costs are expected to reduce the cash flows available to repay or otherwise satisfy the loan. As discussed in Question 6.3-1, the measurement and disclosure requirements in ASC 820 apply to both fair value measurements and measurements based on fair value, such as fair value less costs to sell.

**Question IA.1-12 Do the recurring or nonrecurring disclosure requirements of ASC 820 apply to loans held for sale?**

Unless a company elects the fair value option provided in ASC 825, before the adoption of ASU 2016-13, loans held for sale are reported at the lower of cost or fair value in accordance with ASC 310-10-35-48 or ASC 948-310-35-1 for non-mortgage loans and mortgage loans, respectively. After the adoption of ASU 2016-13, loans held for sale are reported at the lower of amortized cost or fair value. The amount by which cost exceeds fair value is to be accounted for as a valuation allowance rather than as an adjustment of a loan's cost basis. Changes in the valuation allowance are recorded in earnings in the period in which the change occurs.

The fair value measurement guidance in ASC 820 applies when determining the fair value of loans held for sale. However, because a lower of cost or fair value measurement objective precludes an instrument from being measured at an amount in excess of its cost basis, the instrument may not be reported at fair value at each measurement date. Therefore, a lower of cost or fair value measurement is considered a nonrecurring measurement for purposes of applying ASC 820.

For example, a loan held for sale may be recognized at fair value in one period (e.g., due to an increase in interest rates) and at cost in the next period (e.g., due to a decrease in interest rates). Even though a loan held for sale may be reported at fair value for consecutive reporting periods, the measurement objective remains the lower of cost or fair value, and the measurement at fair value is considered a nonrecurring event. ASC 820's nonrecurring disclosure requirements apply in periods in which a loan is measured at fair value because fair value is less than the cost basis of the loan.

However, if a company elects to measure its loans held for sale at fair value by applying the Fair Value Option Subsections of ASC 825, the measurement objective of the loans is fair value. As a result, any loans, including loans held for sale, for which the fair value option has been elected are considered recurring measurements at fair value, and therefore, all of the disclosures required by ASC 820 for recurring measurements would apply.

**Question IA.1-13 If a company elects to account for an interest-bearing instrument at fair value under the Fair Value Option Subsections of ASC 825, should the company apply the effective yield method in determining interest income or expense or may the company recognize interest income or expense based solely on the stated coupon rate of the interest-bearing instrument?**

The Fair Value Option Subsections of ASC 825 do not address the methods used for recognizing and measuring the amount of interest income or expense for items for which the fair value option has been elected. As discussed in paragraph A41 of the Basis for Conclusions in Statement 159, the FASB considered whether to provide guidance on how reported interest should be determined for items elected

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<sup>86</sup> This view is consistent with the view expressed by the FASB at the 6 February 2008 Board meeting. The minutes to the 6 February 2008 Board meeting note that the FASB agreed that the nonrecurring fair value disclosure requirements apply when using fair value as a practical expedient to measure loan impairment.

under the fair value option but decided this issue would best be resolved in a different project. Instead, the FASB decided to rely on disclosures to provide information as to how interest income or expense is determined and where these amounts are reported.

Since the FASB did not provide specific guidance on how reported interest should be determined for receivables and payables reported at fair value pursuant to the fair value option, we believe companies have a certain amount of flexibility in making this determination. In addition, we note that the guidance in ASC 310-20 on nonrefundable fees and other costs specifically excludes from its scope loans and debt securities measured at fair value with changes reported in earnings.

In practice, we have observed interest recognition methods based solely on the stated coupon rate of the instrument as well as those that consider the effective yield of the instrument. If the effective yield method is applied, an effective yield based solely on the original premium or discount paid for an instrument or a quarterly (or more frequent) recalculation of a market yield based on changes in the instrument's fair value, among others, may be appropriate. We believe the methodology chosen is an accounting policy election that should be documented and applied consistently. In addition, the Fair Value Option Subsections of ASC 825 require a company to disclose its methodology for measuring interest and where interest is reported in the income statement.

However, as the Fair Value Option Subsections of ASC 825 do not amend or nullify existing guidance on interest income recognition in ASC 325-40, instruments that fall under the scope of ASC 325-40 should continue to apply ASC 325-40's interest income recognition model, irrespective of whether the fair value option has been elected.

**Question IA.1-14** For loans elected to be measured at fair value under the Fair Value Option Subsections of ASC 825, loan origination fees and costs should not be deferred under ASC 310-20, but instead should be recognized in earnings as incurred. Should these fees and costs be reported on a gross or net basis in the income statement?

The Fair Value Option Subsections of ASC 825 do not provide specific guidance on the income statement geography for loan origination fees and costs, stating only that up-front costs and fees related to items for which the fair value option has been elected shall be recognized in earnings as incurred. However, absent any specific guidance in US GAAP that would allow for net presentation, we believe origination fees and costs related to loans elected to be accounted for at fair value under the Fair Value Option Subsections of ASC 825 should be presented on a gross basis on the income statement. For example, loan fees would be reported as a component of non-interest income and direct compensation costs associated with the origination of a loan would be reported as a component of non-interest expense.

# IA.2 Fair value measurement considerations for the private equity industry

This appendix includes considerations in applying ASC 820 to the private equity industry. While this appendix discusses common features or terms in typical private equity funds, different private equity fund structures exist. Their specific terms should be understood before applying ASC 820's provisions.

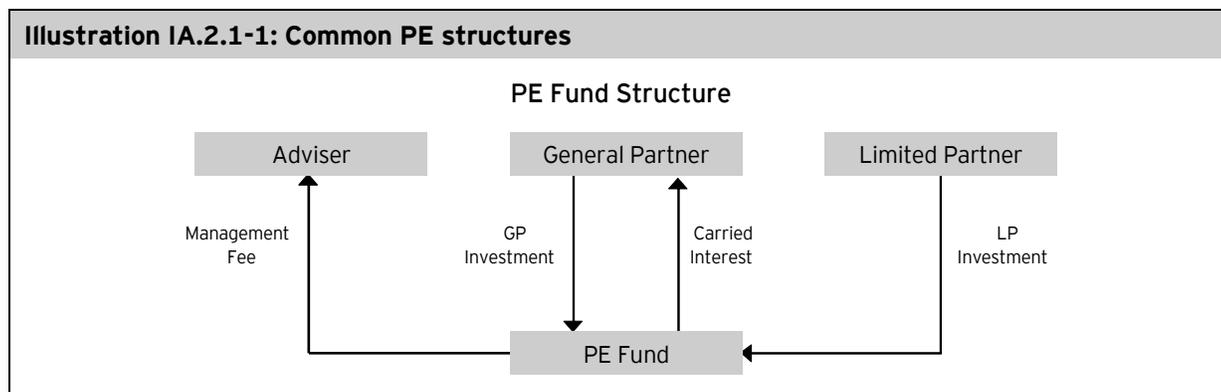
## IA.2.1 Background

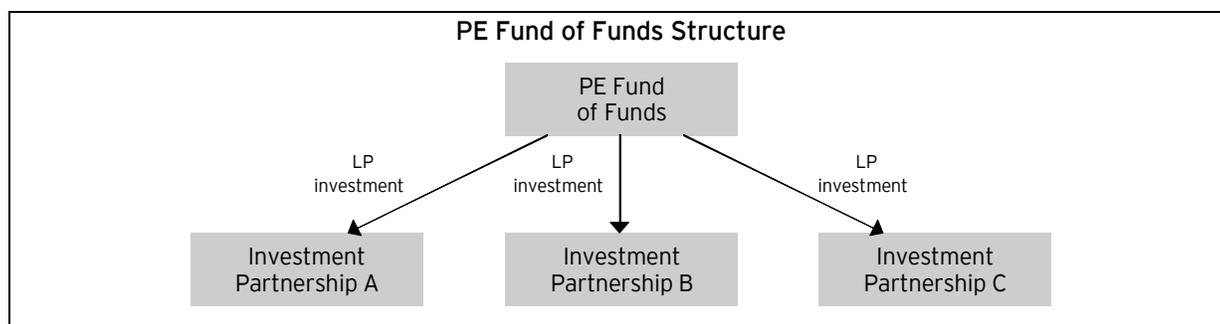
A PE fund, typically organized as a partnership, obtains commitments from certain qualified investors such as pension funds, financial institutions and high net worth individuals to invest a specified amount as a limited partner (LP). The general partner (GP) calls the required equity capital when it identifies an investment opportunity, and the LPs fund a pro rata portion of their capital commitments. PE funds primarily focus on illiquid investments in private securities, including preferred stock, common stock, investments in other private equity funds, debt securities or bridge loans, options and warrants.

All investment decisions are typically made by the GP, who, along with an investment adviser (adviser) that generally is an affiliate of the GP, also manages the PE fund's portfolio of investments. A PE fund's life is typically stated and can range from eight to ten years, with certain extensions. The LPs usually are subject to "lock-up" provisions that prohibit them from selling, transferring or encumbering their interest without the GP's prior approval, for the entire life of the fund. While there may be a limited market for the LP interests, such interests are generally not tradable without the approval of the GP.

The adviser earns a management fee, typically calculated as a percentage (e.g., 2%) of the PE fund's committed capital or total funded capital. The GP earns a carried interest, defined as a percentage of profits generated by the PE fund (generally, after a specified minimum return for the LPs is achieved). In a typical PE fund, the GP receives a carried interest of 20%. In certain private equity structures, the adviser's and GP's right to receive either the management fee or the carried interest, respectively, is assigned to an affiliate of the GP.

Some PE funds are structured as "funds of funds," which make investments in portfolios of other PE funds. Simplified examples of common PE structures are presented below:





## IA.2.2 Illustrative example

The following simplified example and Questions IA.2-1 and IA.2-2 illustrate the application of ASC 820's provisions.

### Illustration IA.2.2-1: Application of ASC 820 to a PE transaction

On 1 January 20X0, the GP forms a private equity limited partnership (the Partnership), which is an investment company under ASC 946. Capital commitments made by the GP and unaffiliated LPs are \$1 million and \$99 million, respectively. The adviser earns a management fee of 2% of committed capital and the GP earns carried interest of 20% of all profits, payable only after the LPs achieve an 8% internal rate of return. The LPs are restricted from selling, transferring or encumbering their partnership interests without the prior approval of the GP. The GP does not consolidate its interest in the Partnership.

On 31 January 20X0, the GP, on behalf of the Partnership, enters into an agreement to (1) acquire all of the outstanding voting stock of Company A (i.e., a controlling interest), which is an operating company that does not provide services to the Partnership and (2) obtain financing to fund its acquisition of Company A on 31 March 20X0 (acquisition date). A lender provides a loan commitment to the Partnership, which is to be funded on the acquisition date. The GP calls for the funding of the LPs' capital to finance the balance of the purchase. On 31 March 20X0, the loans and capital are funded, and the acquisition is completed.

## IA.2.3 Accounting and valuation issues

When applying ASC 820's provisions to the interests described in the illustrative example, consideration should be given to the following:

- ▶ Unit of account
- ▶ Measurement objective
- ▶ Exit market
- ▶ Market participant assumptions

Unless (1) an entity has elected fair value as the measurement objective in accordance with the Fair Value Option Subsections of ASC 825 or (2) the reporting entity itself is an investment company following the guidance in ASC 946, fair value might not be the measurement attribute of interests held by investors in unconsolidated PE funds. That's because some of those investments might be required to be accounted for in accordance with the equity method of accounting (which is not a fair value measurement) or under the measurement alternative, as further described in Question IA.2-2.

In considering the use of the fair value option, we understand that the SEC and FASB staffs do not believe a non-investment company holding a GP interest in a PE fund may recognize any portion of the GP interest at fair value by applying the Fair Value Option Subsections of ASC 825, thus prohibiting the GP from recognizing performance-based fees at the inception of the PE fund (or as the PE fund, in turn, makes investments). We understand that this is based on the conclusion that, in substance, the carried interest compensates the GP for the services it provides, and that measuring the carried interest at fair value effectively allows the equity-method investor to recognize revenue before actually providing substantive services. That is, revenues should be recognized as the related services are performed in accordance with applicable Topics.

## Questions and interpretive responses (updated September 2022)

### Question IA.2-1 How should the unit of account guidance in US GAAP be applied in the illustrative example?

The unit of account defines what is being measured for financial statement purposes by reference to the level at which the asset or liability is aggregated (or disaggregated) for purposes of applying other Topics. With the exception of financial instruments with quoted prices in active markets and groups of financial instruments with offsetting risk that qualify for the measurement exception described in section 10, ASC 820 does not prescribe the unit of account (for measurement purposes), except to note that it should be determined in accordance with other Topics that require (or permit) measurement at fair value.

In the illustrative example IA.2.2, we believe the units of account vary based primarily on (1) the asset being measured and (2) the reporting entity making the evaluation, as follows:

- ▶ PE fund – The PE fund’s unit of account is its equity investment in Company A. If the PE fund had other investments in other operating companies or a debt investment in Company A, we generally believe that each of those investments (and not the portfolio of investments) would constitute a separate unit of account.
- ▶ Limited Partners – We believe each LP’s unit of account is its interest in the fund that considers both funded and unfunded capital commitments.
- ▶ General Partner – We believe the GP’s equity interest (which considers its funded and unfunded capital commitments) and the GP’s affiliate’s (i.e., the Adviser) management contract are separate units of account. Refer to Question IA.2-2 for further guidance on accounting for the GP’s interest.
- ▶ Lender – We believe the lender’s loan commitment (before the loan is funded) and its loan (after the loan’s funding) represent the lender’s units of account.

### Question IA.2-2 What is the measurement objective for each unit of account described in Question IA.2-1? (updated September 2022)



#### **FASB amendment**

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

Assuming the instrument is not elected to be measured at fair value pursuant to the Fair Value Option Subsections of ASC 825, the measurement objective for each unit of account described above varies, as follows:

- ▶ PE fund – The PE fund measures its investments in operating entities that are not providing services to the PE fund at fair value, if the PE fund is an investment company under ASC 946. Fair value measurements are determined in accordance with ASC 820's provisions. If the PE fund does not meet the definition of an investment company, it accounts for its investments pursuant to other Topics.
- ▶ Limited Partners – If an LP neither uses fair value accounting nor consolidates the private equity fund, the LP would generally apply the guidance in ASC 323-30-S99-1.<sup>87</sup> That guidance requires investments in unconsolidated limited partnerships to be accounted for under the equity method, unless the investor's interest is so minor that the limited partner has virtually no influence over the partnership's operating and financial policies. In practice, investments greater than 3% to 5% are generally viewed to be more than minor. See section 3.3.2 of our FRD, *Equity method investments and joint ventures*, for additional guidance.

When the interest is so minor that a limited partner has virtually no influence, an entity should measure the investment at fair value through net income or, if eligible, under the measurement alternative (i.e., measure at cost less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer).

LP investments accounted for pursuant to the equity method are not intended to be fair value measurements – even if the underlying investee (the PE fund) itself is an investment company or reports its assets at fair value – for several reasons, including:

- ▶ The investee's liabilities may not be measured at fair value.
- ▶ The investor and investee have different units of account (the PE fund has investments in portfolio companies while the LP has an interest in the PE fund) and, as a result, the investor's and investee's exit markets may differ.
- ▶ The fair value measurement of the LP interest would include the effects of changes in market fee structures, sale restrictions,<sup>88</sup> redemption restrictions and unfunded capital commitments.
- ▶ General Partner – The GP accounts for its interest in the unconsolidated partnership pursuant to the equity method of accounting. Equity method accounting is not a fair value measurement, even if the investee follows fair value accounting for its investments.
- ▶ Lender – The loan to the PE fund should be measured at amortized cost, considering the impairment provisions of ASC 310. (This example does not address the accounting for loan commitments or loans held for sale.)

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<sup>87</sup> Formerly EITF Issue No. D-46.

<sup>88</sup> The effect of a restriction on the fair value measurement will differ depending on whether the restriction is deemed to be a characteristic of the asset (i.e., part of the unit of account of the asset) or a characteristic of the entity holding the asset. Refer to section 5.2.1 for further discussion before the adoption of ASU 2022-03 and section 5.2.1A for further discussion after the adoption of ASU 2022-03.

**Question IA.2-3 Does a reporting entity's proportionate share of a PE fund's reported NAV represent the fair value of an equity interest in the fund?**

A reporting entity's proportionate share of a PE fund's reported NAV will not necessarily represent the fair value of an equity interest in the fund, because NAV may not capture all of the equity interest's characteristics that market participants would consider in pricing the interest. For example, the fair value of the underlying assets within a PE fund ignores any sale or redemption restrictions associated with a reporting entity's equity interest in the fund, as well as the effect of any required additional capital contributions. As such, the price that would be received for the interest in an orderly transaction between market participants will often differ from the fund's NAV.

Although the fund's reported NAV may not represent the exit price of an equity interest in the PE fund in all circumstances, ASC 820 permits (but does not require) the use of NAV as a practical expedient in measuring the fair value of certain alternative investments.<sup>89</sup> We believe the practical expedient may also be applied to investments in foreign funds that calculate NAV in a manner consistent with ASC 946. Importantly, even when the practical expedient is used, management is responsible for understanding, assessing and concluding on the appropriateness of the NAV provided by the fund. In some instances, the reported NAV may need to be adjusted if it is not calculated (1) as of the same date as the reporting entity's measurement date or (2) in a manner consistent with the measurement guidance in ASC 946 (e.g., the financial statements of the fund are prepared on a tax basis). Question IA.2-4 discusses these adjustments in more detail.

In addition, the practical expedient cannot be used if it is probable as of the measurement date that the entity will sell the investment (or a portion of the investment) for an amount other than NAV. In these situations, the fair value measurement must be made pursuant to the principles in ASC 820, considering all of the characteristics that market participants would use in pricing the interest. Questions IA.2-5 through IA.2-8 discuss considerations in determining the fair value of an investment in a private equity fund in accordance with ASC 820 when the practical expedient is not used. Refer to section 18 for additional discussion on the NAV practical expedient.

**Question IA.2-4 When applying the NAV practical expedient, what adjustments should be made to the reported NAV that is calculated (1) as of a date that differs from the reporting entity's measurement date or (2) in a manner inconsistent with the measurement principles of ASC 946?**

ASC 820-10-35-60 states that "if the [NAV] per share of the investment obtained from the investee is not as of the reporting entity's measurement date or is not calculated in a manner consistent with the measurement principles of [ASC] 946, the reporting entity shall consider whether an adjustment to the most recent [NAV] per share is necessary. The objective of any adjustment is to estimate a [NAV] per share for the investment that is calculated in a manner consistent with the measurement principles of [ASC] 946 as of the reporting entity's measurement date."

As such, the measurement objective of the practical expedient (i.e., NAV calculated in accordance with ASC 946) can still be considered in situations described in the question. The reported NAV should be adjusted to be contemporaneous with the reporting entity's measurement date, in a manner consistent with ASC 946's measurement principles; however, factors that could cause NAV to differ from a true exit price (e.g., the effect of any sale or redemption restrictions and any required additional capital contributions) need not be considered.

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<sup>89</sup> The NAV practical expedient applies to investments without a readily determinable fair value in either (i) an investment company within the scope of Topic 946 or (ii) a real estate fund for which it is industry practice to measure investment assets at fair value on a recurring basis and to issue financial statements that are consistent with the measurement principles in Topic 946.

To further illustrate this concept, if the reported NAV is determined in a manner inconsistent with the measurement principles of ASC 946 (e.g., the financial statements of the fund are prepared on a tax basis or the fund is not required to prepare GAAP financial statements), the reporting entity would make any necessary adjustments to the reported NAV such as estimating the fund's NAV based on the fair values of the various underlying investments in the fund. However, we do not believe the entity would need to consider adjustments to this estimated NAV based on specific attributes of its equity interest in the fund (e.g., sale or redemption restrictions).

**Question IA.2-5**

**What factors should an entity consider in estimating the fair value of an investment in a PE fund when the practical expedient is not used, such as when a sale of the investment at an amount that differs from NAV is deemed probable?**

When the NAV practical expedient is not used to determine fair value, a reporting entity should consider the specific characteristics that market participants would consider in pricing the investment. While NAV may represent a starting point when estimating fair value,<sup>90</sup> adjustments to a PE fund's reported NAV may also be required to reflect various considerations, including the following:

- ▶ If the PE fund were leveraged, the NAV would not reflect the debt's fair value (unless the fund elected to measure its debt at fair value pursuant to the Fair Value Option Subsections of ASC 825).
- ▶ Even if the PE fund is unleveraged (or the debt was measured at fair value pursuant to ASC 825), the unit of account of the LPs differs from that of the PE fund itself. That is, the NAV is not intended to represent the exit price LPs would receive for selling their interest in the fund. The PE fund itself, unlike a typical hedge fund, does not offer liquidity through sale and redemption provisions, and the NAV does not consider other characteristics associated with the LP interests, including:
  - ▶ Market forces may result in changes to the market fee structures of PE funds (in contrast, the fee paid by the LPs to the GP is fixed).
  - ▶ Sale and redemption restrictions would need to be considered in the fair value.
  - ▶ The LPs may have unfunded capital commitments, which should be reflected in the fair value of their respective investments.
  - ▶ A purchaser of a PE fund interest may pay a premium or receive a discount to reflect the underlying risk in the amount and/or timing of the PE fund's cash flows.
  - ▶ The PE fund (for its investments) and the LPs (for their LP interests) each may have different exit markets that can create differences in fair value measurements.

While not common, sales of interests in PE funds occur from time to time. LPs may seek to sell their investments in a PE fund for a variety of reasons including merger or acquisition, need for liquidity or change in strategy, among others. While premiums have been observed in practice, discounts to NAVs on sales of PE fund interests are common. In addition to the characteristics of interests noted above, premiums or discounts can also arise based on the following factors:

- ▶ Fund type, specific portfolio investments in the fund, market conditions and the reputation of the fund manager
- ▶ An evaluation of the PE fund manager's valuation methodology (e.g., if a fund manager's valuations were at the lower end of the range of acceptable exit prices, a lower discount may result)

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<sup>90</sup> As previously noted, unless a fair value measurement has been elected in accordance with the Fair Value Option Subsections of ASC 825 or the reporting entity is itself an investment company, the LPs generally account for their interests pursuant to the equity method, and the lender measures its interest at amortized cost—neither of which is a fair value measurement.

- ▶ Where the PE fund is in its investment distribution cycle
- ▶ The degree of estimation uncertainty of the PE fund's underlying portfolio investments, given the nature of its private investments
- ▶ The seller's motivation, which may indicate a distressed sale (because there are many reasons why investors sell their interests, market observers cannot merely assume that an observed sale is distressed)

Further consideration of these attributes and factors are discussed in Questions IA.2-6 through IA.2-9.

In some instances, the price in a probable sales transaction may be known with a high level of certainty prior to the transaction being completed. Refer to Question 18.1-4 in section 18 for further discussion.

#### Question IA.2-6

#### **How does a GP's ability to restrict the sale, transfer or encumbrance of the LP interests affect their valuation?**

A GP's ability to restrict the sale, transfer or encumbrance of an LP interest does not affect the reporting entity's ability to use the NAV practical expedient in ASC 820. That is, despite these restrictions, the reporting entity is permitted to estimate the fair value of its investments in private equity funds using the NAV per share (or its equivalent) of the investment as of the reporting entity's measurement date, as a practical expedient.<sup>91</sup>

However, as noted above, in those situations where the practical expedient is not used to determine fair value, the effect of any restrictions would need to be considered. ASC 820 clarifies that the effect on a fair value measurement of a restriction on the sale or use of an asset by a reporting entity differs depending on whether the restriction would be considered by market participants in pricing the asset.

In the illustrative example in IA.2.2, the restriction on an LP's ability to sell, transfer or encumber their interests is a characteristic of the security and, therefore, would transfer to market participants. Accordingly, the fair value of the LP interest should consider the effect of this restriction if the practical expedient is not used.

We generally believe that the transaction price (or entry price) of an LP interest contemplates the effect of the transfer restriction. That is, upon making its commitment, each investor was aware of the transfer restriction imposed by the GP. As such, if an LP were to immediately transfer its interest to a prospective buyer, we generally do not believe a loss would be recognized upon the transfer solely because of the transfer restriction. We believe that had the prospective buyer directly subscribed to the PE fund's offering, it would have been subject to the same transfer restriction and generally would not have incurred a loss at the time of its subscription. However, we generally believe that the effect of the restriction should be considered in subsequent fair value measurements.

A GP's ability to restrict the sale, transfer or encumbrance of the LP interests can affect consolidation conclusions for the GPs and LPs, as discussed in section 10.3.2 of our FRD, ***Consolidation***, because one party may be deemed a *de facto* agent of another.

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<sup>91</sup> In ASU 2009-12's Basis for Conclusions, the FASB noted that the practical expedient permits a reporting entity to estimate fair value without consideration of further adjustment to NAV for attributes of the investments, such as restrictions.

**Question IA.2-7 Should an investor's unfunded capital commitment be considered in determining the fair value of that investor's interest?**

An adjustment for the effect of any unfunded capital commitments is not required when the fair value of an investment is estimated using unadjusted NAV reported to the investor, as provided for by the practical expedient in ASC 820. However, in those situations where use of the practical expedient is prohibited (or not elected), we believe that an investor's unfunded capital commitment is a characteristic of the equity investment, and therefore should be considered in determining fair value. In determining the discount to be applied to an unfunded commitment, market participants for PE interests generally consider the GP's past performance and market reputation. For example, more substantial discounts have been observed for interests with significant unfunded commitments and/or with GPs with less significant investment experience.

**Question IA.2-8 How should ASC 820's exit market concept be applied in the simplified example in IA.2.2?**

The determination of an exit market is relevant only if the measurement objective of the interest is fair value and the NAV practical expedient is not used. ASC 820 assumes that the transaction to exit the asset or liability occurs in the principal market (or in the absence of a principal market, the most advantageous market). The principal market is the market with the greatest volume and level of activity for the asset that the reporting entity can access.

We believe the exit market varies by instrument in the simplified example, as follows:

- ▶ PE fund – The exit market for the fund's controlling interest<sup>92</sup> in Company A is typically through a sale in the mergers and acquisitions (M&A) market.<sup>93</sup> If the fair value of Company A's equity was determined through reference to a similar public company, the market price of the similar public company should be adjusted in order to determine the price a market participant would pay for the investment in Company A, whose securities are not registered for public sale. For example, we believe that any transformation value, including any related IPO costs and a discount for lack of marketability for Company A, must be deducted from the market price of a similar public company because an asset should be measured based on its current form.
- ▶ Limited Partners – We believe each LP's exit market would generally be through a direct sale to a third-party buyer because by design the LP is unable to put its investment to the PE fund through a redemption provision.

**Question IA.2-9 May a PE fund value debt and a controlling equity interest in a portfolio company that is held in the same fund based on enterprise value?**

In some cases, a PE fund may hold debt (with a provision that requires the debt to be repaid at par upon a change in control) and a controlling equity investment in the same portfolio company.

Consider the following example:

Enterprise value	=	\$ 1,600
Par value of debt	=	\$ 400 (with a change in control provision)
Fair value of debt	=	\$ 300 (based on price in the secondary market)

<sup>92</sup> Importantly, if the PE fund held only a noncontrolling interest in Company A, then the exit market for the noncontrolling investment is the secondary market for Company A's shares, because the fund does not have the ability to effect the sale of the company in the M&A market.

<sup>93</sup> If a portion of Company A's shares are traded in an active market (i.e., on a public exchange), the fair value of the PE fund's investment in Company A would be determined based on P\*Q. Because the shares are Level 1 instruments, ASC 820 defines the unit of account as the individual shares, even if the PE fund holds a controlling interest in Company A.

We understand that based on industry practice, the debt and controlling equity interest are often assumed to be sold to the same market participant in the M&A market. This hypothetical sale in the M&A market would generally result in the fair value of the debt and controlling equity investment to be equivalent to enterprise value as illustrated below.

Fair value of debt	= \$ 400 (par value due to change in control)
Fair value of total equity	= enterprise value – par value of debt
	= \$ 1,200 (\$1,600 – \$400)
Controlling equity interest	= 80%
Fair value of controlling equity	= \$ 960

We believe this approach reflects the characteristics of the items being measured and is consistent with how market participants, acting in their economic best interest, would transact for these items. This view is also consistent with TIS Section 6910.34 of the AICPA Technical Practice Aids for Investment Companies. The AICPA's guidance states that "[b]ecause FASB ASC 946 does not specify the unit of account for measuring fair value, it might be appropriate to consider how fair value would be maximized, which may be in a transaction that involves both the debt and controlling equity position if this is how market participants would transact."

The AICPA guidance also notes that the FASB provides guidance in situations when the unit of account is not specified.<sup>94</sup> The FASB has indicated that "a fair value measurement assumes that market participants seek to maximize the fair value of a financial or nonfinancial asset or to minimize the fair value of a financial or nonfinancial liability by acting in their economic best interest in a transaction to sell the asset or to transfer the liability in the principal (or most advantageous) market for the asset or liability. Such a transaction might involve grouping assets and liabilities in a way in which market participants would enter into a transaction, if the unit of account specified in other Topics does not prohibit that grouping."<sup>95</sup>

**Question IA.2-10 May the cost basis of a PE fund's investment in a portfolio company be used as a proxy for its fair value?**

ASC 820 states that fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e., an exit price). ASC 820 recognizes that there are many valuation techniques (and inputs to those techniques) that market participants use in pricing an asset. A fair value measurement takes into consideration all relevant facts and circumstances, maximizing the use of observable inputs.

Circumstances may exist in which the cost basis of an investment may be an appropriate consideration, such as when the investment is purchased very close to the measurement date. However, even in this case, the entity would need to evaluate whether the entry price reflects an exit price in the entity's principal market. Reporting entities should evaluate whether the fair value has changed and make adjustments, as appropriate, to reflect the exit price.

Further, ASC 820 notes that valuation techniques that are appropriate and for which sufficient data is available should be used to measure fair value. In many situations, this will result in the application of multiple approaches, when more than one valuation technique is deemed appropriate. For example, we would generally expect both the market and income approaches (depending on the type of investment)

<sup>94</sup> In TIS Section 6910.35, the AICPA addresses whether it is appropriate for investment companies to assess control by aggregating positions held across multiple reporting entities (e.g., multiple related funds or as part of a "club deal"). The AICPA's guidance indicates that while aggregating positions across multiple reporting entities to assess control for purposes of incorporating a control premium into the valuation of an investment is not consistent with the fair value measurement framework, it may be appropriate to consider other premiums and discounts (relative to the price of a noncontrolling interest) in the valuation. For example, the guidance notes that the inclusion of a premium may be appropriate if observed transaction data for similar investments indicates that market participants pay a premium multiple relative to the multiples observed for the guideline companies because they place additional value on being part of the controlling group that has the right to determine the company's strategy.

<sup>95</sup> Paragraph BC49 of ASU 2011-04.

to be appropriate when measuring the fair value of a portfolio company held by the PE fund. The fair value of a PE fund's underlying investments is generally estimated through the use of valuation models, given the absence of quoted market prices or observable market transactions for identical or similar assets. Regardless of the approach used to estimate fair value, reporting entities should analyze all relevant facts and circumstances that market participants would consider in determining fair value.

**Question IA.2-11 Does ASC 820 affect the accounting for due diligence costs?**

ASC 820 does not provide guidance related to the accounting for costs associated with due diligence. However, ASC 820 makes clear that a fair value measurement does not include transaction costs.



# IA.3 Fair value measurement considerations for investments in hedge funds

This appendix includes considerations in applying ASC 820 to unregistered alternative investment structures, commonly referred to as hedge funds. While this appendix discusses common features or terms in hedge funds, different hedge fund structures exist. Their specific terms should be understood before applying ASC 820's provisions.

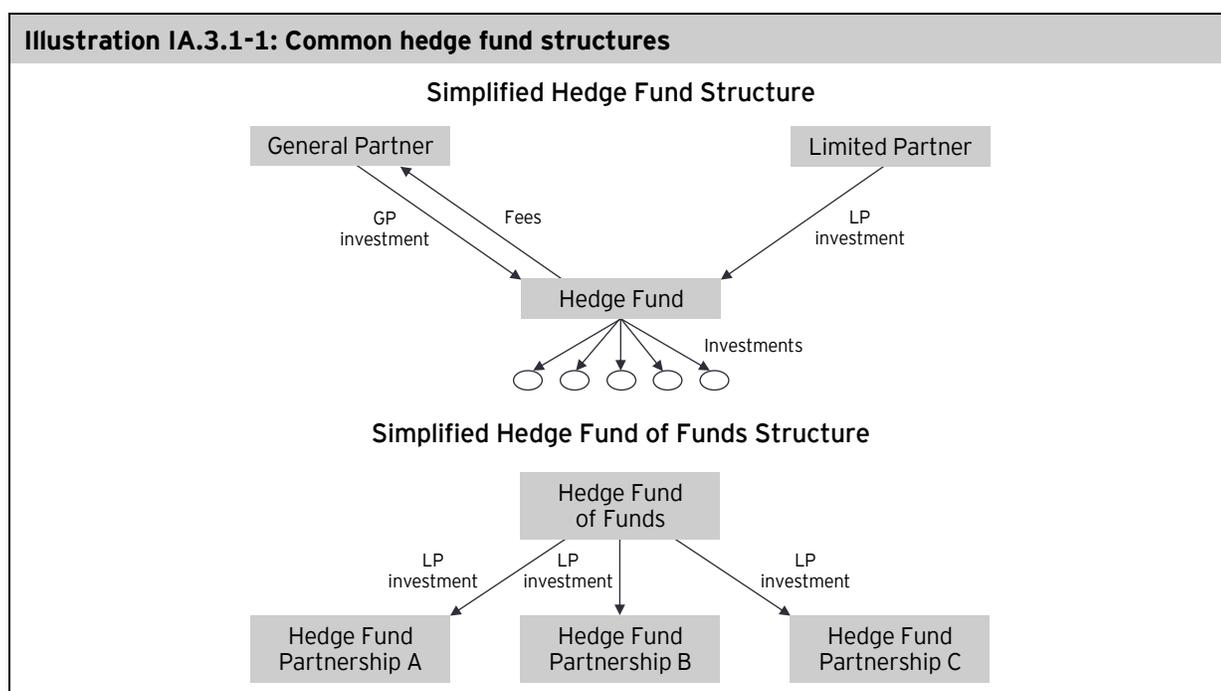
## IA.3.1 Background

Hedge funds are investment pools offered to certain qualified investors, such as high net worth individuals, pension funds, endowments and financial institutions. Hedge funds can be structured as either partnerships or corporations. In a partnership, the GP is in charge of day-to-day operations and is responsible for applying the fund's trading strategy. A corporate structure operates in a similar manner, with an investment adviser fulfilling management roles. Hedge funds may employ a wide array of strategies, with investments that may include exchange-traded equity securities, fixed income securities, commodities, complex OTC derivative products, private securities and other investments. Hedge funds may also invest in other hedge funds and are referred to as hedge funds of funds.

Hedge funds are usually subscribed through private offerings, and interests in the funds are generally not available through an established exchange. Most funds have restrictions on redemption and sale, transfer or encumbrance of the interests in the fund.

The GP and/or investment adviser earns a management fee and a performance fee or allocation. The management fee is generally calculated as a percentage of net assets, and the performance fee or allocation is based on a percentage of a fund's profits, as defined by the hedge fund's governing documents. While specific fee structures vary, a 2% management fee combined with an annual 20% performance fee is common.

Simplified examples of common hedge fund structures are presented below:



## IA.3.2 Illustrative example

The following simplified example and Questions IA.3-1 and IA.3-2 illustrate the application of ASC 820's provisions.

### Illustration IA.3.2-1: Application of ASC 820 to hedge funds

On 1 January 20X0, the GP forms a hedge fund in the form of a limited partnership. The GP and unaffiliated LPs contribute capital of \$1 million and \$99 million, respectively. The GP charges a fee in exchange for services equal to 2% of net assets and receives an incentive allocation equal to 20% of all profits. The LPs are restricted from selling, transferring or encumbering their partnership interests without the prior approval of the GP. Subscriptions to the hedge fund are taken monthly, and the LPs are permitted to withdraw interests monthly on 45 days written notice after an initial lock-up of one year (during which no withdrawals are permitted).

Assume that the GP does not consolidate the hedge fund under ASC 810 and uses equity method accounting. One of the LPs is a hedge fund of funds that qualifies as an investment company and accounts for its investments at fair value in accordance with ASC 946.

## IA.3.3 Accounting and valuation issues (updated September 2022)



### FASB amendment

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

When applying ASC 820's provisions to the interests described in the illustrative example, consideration should be given to the following:

- ▶ Unit of account
- ▶ Measurement objective
- ▶ Exit market
- ▶ Market participant assumptions

We believe that, unless the reporting entity uses a fair value accounting framework (e.g., investment companies, pension plans and endowments), fair value will generally not be the measurement attribute of most interests held by participants in an unconsolidated hedge fund. That is, those investments that typically are in the legal form of equity may be accounted for in accordance with the equity method of accounting, which is not a fair value measurement.<sup>96</sup>

<sup>96</sup> While fair value may not be the required measurement objective for these interests, a reporting entity may have the ability to measure certain interests at fair value under the Fair Value Option Subsections of ASC 825.

Although the underlying portfolio investments of the hedge fund are recorded at their fair values, the NAV reported by a hedge fund may not necessarily represent the fair value of an investor's interest in the fund for several reasons including:

- ▶ The hedge fund's liabilities may not be measured at fair value
- ▶ The investor and hedge fund have different units of account (the hedge fund has investments in a portfolio of investments while the investor has an interest in the hedge fund); as a result, the investor's and hedge fund's exit markets may differ
- ▶ The fair value measurement of the investor's interest would include the effects of changes in market fee structures, sale restrictions,<sup>97</sup> redemption restrictions and any other features not reflected in a hedge fund's NAV

## Questions and interpretive responses (updated September 2022)

### Question IA.3-1 How should the unit of account guidance in US GAAP be applied in illustration IA.3.2-1?

The unit of account defines what is being measured for financial statement purposes by reference to the level at which the asset or liability is aggregated (or disaggregated) for purposes of applying other Topics. With the exception of financial instruments with quoted prices in active markets and groups of financial instruments with offsetting risk that qualify for use of the measurement exception described in section 10, ASC 820 does not prescribe the unit of account (for measurement purposes), except to note that it should be determined in accordance with other Topics that require (or permit) measurement at fair value.

In the illustrative example, we believe the units of account vary based primarily on the reporting entity making the evaluation, as follows:

- ▶ Limited Partners – We believe each LP's unit of account is its LP interest.
- ▶ General Partner – We believe the GP's interest and management contract are separate units of account. Refer to Question IA.3-2 for further guidance on accounting for the GP's interest.
- ▶ Hedge fund of funds – We believe the hedge fund of funds' unit of account is its LP interest, as described for the LPs above.

### Question IA.3-2 What is the measurement objective for each unit of account described in Question IA.3-1?

Assuming the instrument is not elected to be measured at fair value pursuant to the Fair Value Option Subsections of ASC 825, the measurement objective for each unit of account described above varies, as follows:

- ▶ Limited Partners – If an LP neither uses fair value accounting nor consolidates the hedge fund, the LP would generally apply the guidance in ASC 323-30-S99-1.<sup>98</sup> That guidance requires investments in unconsolidated limited partnerships to be accounted for under the equity method, unless the investor's interest is so minor that the limited partner has virtually no influence over operating and financial policies. In practice, investments greater than 3% to 5% are generally viewed to be more than minor. See section 3.3.2 of our FRD, *Equity method investments and joint ventures*, for additional guidance.

<sup>97</sup> The effect of a restriction on the fair value measurement will differ depending on whether the restriction is deemed to be a characteristic of the asset (i.e., part of the unit of account of the asset) or a characteristic of the entity holding the asset. Refer to section 5.2.1 for further discussion before the adoption of ASU 2022-03 and section 5.2.1A for further discussion after the adoption of ASU 2022-03.

<sup>98</sup> Formerly EITF Issue No. D-46.

When the interest is so minor that a limited partner has virtually no influence, an entity should measure the investment at fair value through net income or, if eligible, under the measurement alternative (i.e., measure at cost less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer).

LP investments accounted for pursuant to the equity method are not intended to be fair value measurements – even if the underlying hedge fund itself is an investment company or reports its assets at fair value – for several reasons, including:

- ▶ The hedge fund's liabilities may not be measured at fair value.
- ▶ The investor and hedge fund have different units of account (the hedge fund has investments in a portfolio of investments while the LP has an interest in the hedge fund) and, as a result, the investor's and hedge fund's exit markets may differ.
- ▶ The fair value measurement of the LP interest would include the effects of changes in market fee structures, transfer restrictions and any other features not reflected in a hedge fund's NAV.
- ▶ General Partner – The GP accounts for its GP interest in an unconsolidated partnership pursuant to the equity method of accounting. Equity method accounting is not a fair value measurement, even if the investee follows fair value accounting for its investments.
- ▶ Hedge fund of funds – A hedge fund's investment in another hedge fund would be measured at fair value pursuant to ASC 946. The investment may be eligible for the practical expedient allowing fair value to be estimated using the net asset value per share (or its equivalent) of the investment as of the reporting entity's measurement date. Refer to section 18 for a discussion of the application of the NAV practical expedient.

**Question IA.3-3 Does a hedge fund's NAV reported to an investor represent a fair value measurement?**

A hedge fund's NAV reported to an investor will not necessarily represent the fair value of an equity investment in the fund, because NAV may not capture all of the equity interest's characteristics that market participants would consider in pricing the interest. For example, in situations where the reporting entity cannot redeem its investment with the fund at the measurement date, reported NAV will likely differ from the price that would be received for the interest in an orderly transaction between market participants.

Although the fund's reported NAV may not represent the exit price of an equity interest in the hedge fund in all circumstances, ASC 820 permits the use of NAV as a practical expedient in measuring the fair value of certain alternative investments.<sup>99</sup> We believe the practical expedient may also be applied to investments in foreign funds that calculate NAV in a manner consistent with ASC 946.

Importantly, even when the practical expedient is used, management is responsible for understanding, assessing and concluding on the appropriateness of the NAV provided by the fund. In some instances, the reported NAV may need to be adjusted if it is not calculated (1) as of the same date as the reporting entity's measurement date or (2) in a manner consistent with the measurement guidance in ASC 946 (e.g., the financial statements of the fund are prepared on a tax basis). Question IA.3-4 discusses these adjustments in more detail.

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<sup>99</sup> The NAV practical expedient applies to investments without a readily determinable fair value in either (i) an investment company within the scope of Topic 946 or (ii) a real estate fund for which it is industry practice to measure investment assets at fair value on a recurring basis and to issue financial statements that are consistent with the measurement principles in Topic 946.

In addition, the practical expedient cannot be used if it is probable as of the measurement date that the entity will sell the investment (or a portion of the investment) for an amount other than NAV. In these situations, the fair value measurement must be made pursuant to the principles in ASC 820, considering all of the characteristics that market participants would use in pricing the interest. Questions IA.3-5 and IA.3-6 discuss considerations in determining the fair value of an investment in a hedge fund in accordance with ASC 820 when the practical expedient is not used. Refer to section 18 for additional discussion on the NAV practical expedient.

**Question IA.3-4** When applying the NAV practical expedient, what adjustments should be made to the reported NAV that is calculated (1) as of a date that differs from the reporting entity's measurement date or (2) in a manner inconsistent with the measurement principles of ASC 946?

ASC 820-10-35-60 states that "if the [NAV] per share of the investment obtained from the investee is not as of the reporting entity's measurement date or is not calculated in a manner consistent with the measurement principles of [ASC] 946, the reporting entity shall consider whether an adjustment to the most recent [NAV] per share is necessary. The objective of any adjustment is to estimate a [NAV] per share for the investment that is calculated in a manner consistent with the measurement principles of [ASC] 946 as of the reporting entity's measurement date."

As such, the measurement objective of the practical expedient (i.e., NAV calculated in accordance with ASC 946) can still be considered in situations described in the question. The reported NAV should be adjusted to be contemporaneous with the reporting entity's measurement date, in a manner consistent with the measurement principles of ASC 946; however, factors that could cause NAV to differ from a true exit price (e.g., restrictions on redemptions) need not be considered.

To further illustrate this concept, if the reported NAV is determined in a manner inconsistent with the measurement principles of ASC 946 (e.g., the financial statements of the fund are prepared on a tax basis or the fund is not required to prepare GAAP financial statements), the reporting entity would make any necessary adjustments to the reported NAV such as estimating the fund's NAV based on the fair values of the various underlying investments in the fund. However, we do not believe the entity would need to consider adjustments to this estimated NAV based on the specific attributes of its equity interest in the fund (e.g., the effect of a restriction on the redemption of its interest due to the imposition of a gate, described below).

**Question IA.3-5** What factors should an entity consider in estimating the fair value of an investment in a hedge fund when the practical expedient is not used, such as when a sale of the investment at an amount that differs from NAV is deemed probable? (updated September 2022)



### **FASB amendment**

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

When the NAV practical expedient is not used to determine fair value, a reporting entity should consider the specific characteristics that market participants would consider in pricing the interest. For example, an adjustment to reported NAV may be needed to reflect any lock-up periods, gates or other restrictions<sup>100</sup> associated with the interest in the fund.

In estimating fair value, we believe a hypothetical purchaser's ability to subscribe to the fund or redeem the existing investor's investment at NAV is an important consideration. For example, if a fund is open to new investors, presumably the fair value of a hedge fund investment would not be expected to exceed the amount that a new investor would be required to invest with the fund directly to obtain a similar interest. Similarly, the hypothetical seller of a hedge fund investment would not be expected to accept lower proceeds than what it would receive by redeeming its investment with the hedge fund directly (if possible). In our view, the willingness and ability of the fund to provide a source of liquidity for the hedge fund interest through subscriptions and redemptions are important considerations in assessing whether adjustments to NAV would be required in determining the exit price of an investment.

Stated differently, we believe the put feature generally granted to an investor through the investment's redemption right is an important characteristic of the investment that market participants would consider in determining the price at which they would transact for the investment. In situations where a hedge fund does not stand ready to provide liquidity to investors, significant judgment may be required to assess the effect of the lack of liquidity on the fair value of the investment.

As part of its valuation analysis, a reporting entity should understand the nature of any restrictions associated with the investments. For example, a hedge fund's investor agreement may include an initial lock-up period that prohibits an investor from redeeming its equity interest in the fund for a specified period (e.g., 12 months) after initial investment. In addition, the agreement may provide the GP with the ability to halt redemptions from the fund (e.g., until they can be honored in an orderly fashion). Such halts may be imposed to prevent the fund from being liquidated. Alternatively, halts may be imposed if the hedge fund's investments become too difficult to value, potentially causing serious concern among remaining investors that redeeming members are afforded an unfair advantage at their expense.

Many funds impose restrictions on redemptions through the use of pro-rata reductions to investors' redemption amounts (commonly referred to as "gates") when there is a high level of redemption requests. While the mere ability of a hedge fund to impose a gate does not necessarily affect the fair value of an interest in the fund, the imposition of a gate may affect the fair value of the interest, considering all facts and circumstances (similar to halts of redemptions). When a gate or redemption restriction has been imposed, fair value will typically reflect the increased risks associated with the inability to freely redeem the position with the hedge fund.

A "side pocket" is a type of account that segregates the illiquid investments of the hedge fund's portfolio. In general, only investors in the hedge fund at the time of the side pocket's creation participate in its returns. Investors' investments in side pockets may not be fully redeemed until investments in the underlying securities of the side pocket have been sold or are deemed liquid. Typically, performance fees on side pockets are charged only on realized gains. Because the fund does not provide liquidity to investors in side pockets, the fair value of the investment will likely reflect this illiquidity in a hypothetical sale of the side pocket interest at the measurement date.

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<sup>100</sup> The effect of a restriction on the fair value measurement will differ depending on whether the restriction is deemed to be a characteristic of the asset (i.e., part of the unit of account of the asset) or a characteristic of the entity holding the asset. Refer to section 5.2.1 for further discussion before the adoption of ASU 2022-03 and section 5.2.1A for further discussion after the adoption of ASU 2022-03.

In addition to the various restrictions discussed above, reporting entities may need to adjust a hedge fund's reported NAV because:

- ▶ The fund's liabilities may not be measured at fair value.
- ▶ The reporting entity and the fund have different units of account (the fund has investments in a portfolio of investments while the reporting entity has an interest in the hedge fund); as a result, the reporting entity's and the fund's exit markets may differ.
- ▶ The fair value measurement of the reporting entity's interest would include the effects of changes in market fee structures and any other features not reflected in a hedge fund's NAV.

In some instances, the price in a probable sales transaction may be known with a high level of certainty prior to the transaction being completed. Refer to Question 18.1-4 in section 18 for further discussion.

**Question IA.3-6 How should ASC 820's exit market concept be applied in the simplified example in IA.3.2?**

The determination of an exit market is relevant only if the measurement objective of the interest is fair value and the NAV practical expedient is not used. ASC 820 states that an asset's fair value is based on the price that would be received in a hypothetical sale between market participants at the measurement date. This hypothetical sale is assumed to occur even though the investment's terms prohibit that sale from occurring without the GP's approval.

We believe that while an investor's ability to invest in or redeem its interest in the hedge fund can affect the fair value of that investment (as discussed in Question IA.3-5), the exit market for the investor's interest is not the underlying hedge fund. Instead, the exit market for the investor's interest is assumed to include independent buyers and sellers of the hedge fund interest.



# IA.4 Fair value measurement considerations for the life insurance industry

This appendix provides a series of questions and interpretive responses addressing considerations related to the application of ASC 820 and the Fair Value Option Subsections of ASC 825 for the life insurance industry.

ASU 2018-12<sup>101</sup> will significantly change how insurers account for long-duration contracts. The guidance also significantly expands disclosure requirements for the applicable insurance-related assets and liabilities, which in certain instances may be similar to the disclosure requirements of ASC 820. The ASU is effective for SEC filers, excluding smaller reporting companies, for fiscal years and interim periods therein beginning after 15 December 2022. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within fiscal years beginning after 15 December 2025. However, early adoption is permitted.

## Questions and interpretive responses (updated September 2023)

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### Embedded derivatives in life and annuity contracts and market risk benefits (updated September 2023)

Long-duration products such as universal life-type or investment contracts are often sold with contract features that provide the policyholder with guaranteed benefits in addition to their account balance. When an insurer is obligated to cover any shortfall between the guaranteed benefits and the account balance, they are exposed to capital market risk. These types of contract features often take the form of an annuitization, death or withdrawal benefits in excess of the policy's stated account balance and are generally offered through separate account products (i.e., the policyholder can direct the account funds to one or more separate account investment alternatives). However, they can be offered through general account products (i.e., non-separate account products) as well.

Before adopting ASU 2018-12, an insurer would generally account for these features as bifurcated embedded derivatives recorded at fair value under ASC 815 or as insurance liabilities under the benefit ratio model in ASC 944 (commonly referred to as Statement of Position 03-1 liabilities), depending on the characteristics of the contract feature.

ASU 2018-12 creates a new category of benefit features called "market risk benefits" (MRBs), defined as contracts or contract features in a long-duration insurance contract that both provide protection to the policyholder from capital market risk and expose the insurer to capital market risk. MRBs transfer a loss in, or a shortfall of, the policyholder's account balance to the insurer but do not include the death benefit component of a life insurance contract. ASU 2018-12 requires insurers to measure features that meet the definition of an MRB at fair value.

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<sup>101</sup> ASU 2018-12, *Financial Services – Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts*.

In the Basis for Conclusions of ASU 2018-12, the Board defined capital market risk to include equity, interest rate and foreign exchange risks. Other-than-nominal exposure to capital market risk would exist if the net amount at risk (i.e., the guaranteed benefit in excess of the account balance, cash value or similar amount) varies by more than an insignificant amount in response to capital market volatility, and the exposure to capital market risks has more than a remote probability of occurring.

An MRB exposes the insurer to a loss or a shortfall in the policyholder's account balance that would otherwise have been borne by the policyholder. A loss in the policyholder's account balance generally occurs when negative investment performance is passed through to the policyholder. An MRB requires the insurer to compensate the policyholder for this loss. An MRB can also include features that provide protection against a shortfall in an account balance, even though the feature does not protect the policyholder from a loss in an account balance due to investment performance. Features that may meet the shortfall criteria are often structured as guaranteed benefits or specified account values in reference to a target amount. Under the guidance in ASU 2018-12, MRBs are excluded from the scope of ASC 815. As a result, upon adopting the guidance in ASU 2018-12, entities would first need to consider whether features in long-duration insurance contracts represent MRBs before considering the guidance in ASC 815 (including the guidance on embedded derivatives). Many benefit features in long-duration insurance contracts that are currently accounted for under an insurance model (based on the conclusion the features contain mortality or longevity risk in addition to capital market risk) are expected to meet the criteria of MRBs. Generally, benefit features in long-duration insurance contracts currently recognized as embedded derivatives are expected to either meet the MRB criteria or continue to be recognized as embedded derivatives.

For example, benefit guarantees, such as guaranteed minimum death benefits (GMDBs), guaranteed minimum accumulation benefits (GMABs), guaranteed minimum income benefits (GMIBs), guaranteed minimum withdrawal benefits (GMWBs) and guaranteed minimum withdrawal-for-life benefits (GMWLBS) are likely to be considered MRBs since they generally expose the insurer to a loss or shortfall in the policyholder's account balance. In contrast, while equity-indexed annuities provide a benefit to the policyholder based on the performance of an index, these contracts generally do not expose the insurer to a loss or a shortfall in the policyholder's account balance that would otherwise have been borne by the policyholder (unless the contract also includes a benefit guarantee, as discussed above) and, therefore, likely would not be deemed to contain MRBs. Notwithstanding these general observations, it's important to note that the determination of whether an insurance product contains an MRB will vary, depending on the facts and circumstances of the contract. ASU 2018-12 significantly changes the accounting for features deemed to be MRBs that were previously not bifurcated and accounted for separately as derivatives (e.g., because the feature was deemed to be clearly and closely related to the host contract), as these features will now be required to be measured at fair value.

The accounting for an MRB that was previously determined to be an embedded derivative bifurcated from a long-duration contract may not be significantly different because the feature will continue to be measured at fair value. The primary difference is that the new guidance requires the change in fair value of MRBs related to instrument-specific credit risk to be recognized in OCI rather than in earnings.

Contract features that do not meet the definition of an MRB under ASU 2018-12 should continue to be evaluated under ASC 815 to determine whether they represent embedded derivatives that require bifurcation. If they are not accounted for in accordance with ASC 815, the features would generally be accounted for under the insurance liability benefit ratio model, which has been retained.

See our Technical Line publication, [\*\*\*A closer look at how insurers will have to change their accounting and disclosures for long-duration contracts\*\*\*](#) (SCORE No. 05073-181US), for further discussion regarding the criteria used to evaluate whether benefit features meet the definition of MRBs.

The principles in ASC 820 may affect the determination of the fair value for MRBs and embedded derivatives. Valuation considerations that currently exist when measuring embedded derivatives in life and annuity contracts at fair value will also exist when measuring MRBs at fair value after adoption of ASU 2018-12.

The fair value concepts discussed in the Questions and interpretive responses below, while in the context of embedded derivatives, such as GMABs and GMWBs, will generally also apply when determining the fair value of MRB features upon the adoption of ASU 2018-12. The remainder of this Appendix has not been updated for ASU 2018-12.

**Question IA.4-1 In applying ASC 820, what are the considerations in determining the fair value of embedded derivatives in variable life and annuity contracts?**

Life insurance companies should ensure their practices regarding the valuation of embedded derivatives, such as GMABs and GMWBs, are in compliance with the fair value framework in ASC 820. For example, life insurance companies typically use risk-neutral, market-based assumptions when valuing embedded derivatives at initial recognition and at subsequent measurement dates. Questions IA.4-2 and IA.4-3 further discuss market participant assumptions.

In addition, counterparty credit risk and nonperformance risk, which includes credit risk associated with the company that issued the obligation (i.e., own credit risk), should be assessed in determining the value of embedded derivatives. Nonperformance risk is discussed further in Questions IA.4-4 and IA.4-5.

**Question IA.4-2 The approach used in pricing insurance products (including products with embedded derivatives) is often inelastic and, as such, prices may not be adjusted for perceived short-term changes in market-based assumptions (e.g., risk-free interest rates, equity volatilities). That is, product pricing remains relatively constant despite movements in market-based assumptions. Does the market-based focus of ASC 820 imply that life insurance companies should update market-based assumptions used to determine the value of the embedded derivative at each measurement date?**

Valuation techniques used to measure fair value should maximize the use of observable inputs and minimize the use of unobservable inputs. Therefore, when market observable information is available, it should be considered in determining fair value.

Assumptions historically used in pricing insurance and investment products issued by insurance companies (including embedded derivatives within these products) are based on characteristics that may not be consistent with a market-based approach to measuring the fair value of the product in accordance with ASC 820's objectives. This is because the assumptions used to determine pricing are based on an entity-specific entry price (including an assumed cost structure, cost of capital requirements and market share goals). As these assumptions are entity-specific and entry price focused, they may differ from the assumptions that would be used to determine the fair value of the embedded derivative in a market participant exit price scenario. Assumptions used in an exit price valuation should be consistent with the assumptions market participants would use when pricing the instrument under the market conditions that exist as of the measurement date.

For example, some believe that risk margins (or risk premiums) remain relatively constant over extended periods of time (consistent with market participants' views that volatility and interest rates tend to fluctuate without materially affecting the risk margin). Those who hold this view also assume that the risk margin remains internally consistent across in-force and new business at each measurement date, unless there is a change in product design. We believe that risk margins can change during the period that the contracts remain in-force, as market participants' assumptions and expectations regarding risk change. Therefore, these risk margin assumptions should be reviewed at each measurement date to ensure that the risk margin used in the valuation remains appropriate from the perspective of a market participant.

Such an approach is consistent with the treatment of all other assumptions and inputs used in measuring fair value. As a result, risk margins used in a fair value measurement may differ from risk margins used in pricing insurance products. Question IA.4-3 discusses risk margins in more detail.

As another example, the term structure of interest rates is observable and is deemed to represent market expectations regarding future interest rates. Therefore, changes in interest rates should be considered in the determination of fair value.

**Question IA.4-3**

**How is a risk margin (or risk premium) considered when calculating the fair value of an embedded derivative, and how often should risk margins be re-evaluated in determining fair values under ASC 820?**

ASC 820 states that a risk adjustment should be included in determining fair value if a market participant would include one in valuing the asset or liability, even if the amount is difficult to determine. As most market participants who would purchase a portfolio of insurance or investment contracts with embedded derivatives would expect to be compensated for bearing the risk of uncertainty associated with the future cash flows of the insurance or investment contract and embedded derivative, a risk margin should be included in the determination of the fair value of embedded derivatives in variable life and annuity contracts.

When valuing the cash flows associated with embedded derivatives included within insurance or investment contracts, most market participants would use a discount rate reflective of a risk-free interest rate and a risk margin. A risk margin (or risk premium) represents the compensation that market participants would demand for bearing uncertainty inherent in the cash flows. The risk margin would include an adjustment to account for the uncertainty associated with mortality and policyholder behavior, as well as uncertainty inherent in valuing future cash flows not already included within risk-neutral methodologies. While risk margins may be less volatile than certain other assumptions, they are not fixed and can change over time based on market expectations regarding uncertainty or the compensation required for bearing the risk of this uncertainty.

There has been a great deal of discussion on various approaches to determining risk margins. As such, various publications can be used to gain information about different approaches and considerations in calculating risk margins; however, the inputs used in calculating risk margins should be based on market participant assumptions rather than entity-specific assumptions.

Market participants likely will have similar assumptions about the risk and uncertainties associated with the future cash flows of derivatives embedded in insurance or investment contracts as the issuer of the contract. Therefore, companies may utilize their own pricing methodology as a basis for calculating risk margin, provided the company's assumptions about risk margins are consistent with the assumptions of a market participant and if the company's methodology reflects information that is reasonably available regarding the assumptions of a market participant. However, to the extent a company's assumptions differ from those of market participants, the company's assumptions should be adjusted to reflect market participant assumptions. As with all other valuation inputs, risk margins must be assessed to ensure they are representative of market participant assumptions at each measurement date.

**Question IA.4-4**

**What considerations should an insurance company use in evaluating nonperformance risk, including its own credit risk, in measuring the fair value of embedded derivatives?**

Nonperformance risk refers to the risk that an obligation will not be fulfilled and conceptually represents more than the company's own credit risk. While nonperformance risk includes the company's own credit risk, it also includes other risks such as settlement risk. Nonperformance risk should be assessed from the perspective of the liability being measured, not solely the company obligated under the liability.

The effect of own credit risk on fair value should not be assumed to be zero. For many embedded derivatives in insurance and investment products issued by insurance companies, the current credit spread associated with the company's debt rating may be an indication of the company's nonperformance risk. Alternatively, single name credit default swaps (CDS) on the company may also provide market-based credit spread information. However, market implied credit spreads on instruments of the insurance company, its parent or an affiliate likely will need to be adjusted to reflect differences between the credit risk implied by the debt (or CDS) spreads and the nonperformance risk applicable to the embedded derivatives in the insurance or investment contract. This adjustment may be necessary because insurance and investment contract policyholders generally have higher priority than debt holders in the event of insolvency, thereby reducing nonperformance risk from the perspective of market participants.

The company should document the factors considered in determining nonperformance risk at the measurement date. This documentation should include information about market participant assumptions, the inherent risk in the valuation model and the observability of the inputs used in the valuation model. (Refer to Appendix D for additional discussion on determining a credit valuation adjustment when measuring the fair value of a derivative.)

**Question IA.4-5 How do guaranty funds affect the evaluation of a company's nonperformance risk under ASC 820?**

Insurance companies are subject to a variety of assessments related to insurance activities, including those by state guaranty funds. These funds assess entities licensed to sell insurance in their state to provide for the payment of covered claims when an insurance company becomes insolvent. In the event of insolvency, the guaranty fund provides some protection to policyholders, although the exact level of coverage provided and timing of payments may vary by product and state.

The regulatory environment in which the company operates may affect the company's evaluation of nonperformance risk if this environment provides a mechanism for defaults to be resolved, such as in the case of guaranty funds. Reimbursement from a guaranty fund is available to all covered policyholders and is not based on the insurance company obligated under the contract. Therefore, the guarantee provided by a guaranty fund is the same for all similarly covered insurance contracts and would remain the same if the insurance contract were transferred to another insurance company. As such, we consider the guarantee to be an attribute of the insurance contract that should be considered in determining the fair value of the embedded derivative of the insurance or investment contract (under ASC 820, only attributes of the asset or liability being valued are considered in a fair value measurement). The existence of guaranty funds does not, however, eliminate nonperformance risk and, in fact, guaranty funds' mitigating effect may be limited due to limitations on coverage and the potential for delayed payments by the guaranty funds.

**Question IA.4-6 Can the "budget method" be used to determine the assumptions about future adjustable contract features of equity-indexed annuities and life insurance contracts?**

The budget method is a valuation approach that has been used by some companies to estimate the fair value of embedded derivatives in equity-indexed products. Using this valuation approach, the fair value of the embedded derivative is estimated based on a target expenditure to purchase options that would be equivalent to the benefit under the embedded derivative.

In accordance with ASC 820, application of the budget method should include the effect of nonperformance risk when valuing liabilities. Also, companies using the budget method need to evaluate the exit price assumptions, including risk margin, to ensure that these assumptions are representative of the current assumptions market participants would use in pricing the derivative instruments. See Question IA.4-3 for more information about evaluating risk margin.

**Question IA.4-7 Can a Day 1 gain or loss be reported for an embedded derivative in variable life and annuity contracts under ASC 820?**

ASC 820 does not modify ASC 815-15-30-2, which requires that an embedded derivative be bifurcated from the host contract and recognized at fair value with the remaining amount (i.e., the transaction price of the hybrid instrument, less the fair value of the embedded derivative) allocated to the host instrument. Therefore, no gain or loss would be recognized at initial recognition for embedded derivatives accounted for under ASC 815-15-30-2, as any conceptual Day 1 gain or loss on the bifurcated derivative is required to be accounted for in the basis of the host instrument.

However, if a company elects to measure an insurance contract at fair value in accordance with the Fair Value Option Subsections of ASC 825, a Day 1 gain or loss could result if it is determined that fair value for the entire contract does not equal its transaction price. Refer to section 11 for further discussion with respect to the recognition of Day 1 gains and losses.

**Question IA.4-8 What are the considerations in determining the classification of derivatives embedded in insurance or investment contracts within the fair value hierarchy?**

In assessing classification within the fair value hierarchy, ASC 820 requires an entity to consider the lowest level input that is deemed to be significant to the fair value measurement. Section 14 discusses some of the considerations for determining the significance of inputs to the fair value measurement. The valuations of embedded derivatives bifurcated from insurance or investment contracts often utilize unobservable inputs (i.e., Level 3 inputs), which may include policyholder behavior, mortality or morbidity assumptions, nonperformance risk and financial inputs for unobservable periods. Due to the number of unobservable inputs in the fair value measurement that may be significant (individually or in the aggregate), we generally would expect derivatives embedded in an insurance or investment contract to be classified in Level 3 of the fair value hierarchy. However, if the unobservable inputs used to value the embedded derivative are deemed not significant, individually or in the aggregate, to the fair value measurement, the embedded derivative may be classified in Level 2 of the fair value hierarchy.

Although historical industry statistical data exists for certain inputs (e.g., policy lapse, mortality and morbidity rates), this data is typically not based on market transactions and, therefore, would not be considered observable market data consistent with a Level 2 input. However, this data should not be ignored in a fair value measurement and can be used in the valuation if appropriately adjusted to consider attributes of the embedded derivative that differ between the historical industry statistical data and the items being measured and for differences between historical data and current market expectations regarding these assumptions.

**Question IA.4-9 How should changes in the fair value of an embedded derivative as a result of terminations and lapses be presented in the Level 3 reconciliation required by ASC 820? (updated September 2022)**

As discussed in section 20, ASC 820 requires public companies to disclose a reconciliation of the beginning and ending balances for any recurring fair value measurements that utilize significant unobservable inputs (i.e., recurring Level 3 measurements). In addition to the reconciliation, ASC 820 requires public companies to separately disclose gains or losses in the period attributable to changes in unrealized gains and losses for Level 3 assets or liabilities still held at the reporting date. Although there may be diversity in practice as to the presentation of changes in the fair value of an embedded derivative included in the Level 3 reconciliation, we believe the following interpretation on how these items should be presented is consistent with the intent of the disclosure requirements.

Payments made during the period as a result of the guarantee without the complete extinguishment of the guarantee are considered partial settlements of the embedded derivative and, therefore, should be included as a component of "Purchases, issuances, sales and settlements" in the Level 3 reconciliation (see Illustration IA.4-9.1). Changes in the fair value of the remaining portion of the embedded derivative during the period are considered unrealized gains and losses if the guarantee has not been extinguished.

If the policyholder were to lapse or terminate the annuity contract (and therefore the guarantee) and receive no payment on the guarantee, the value previously reported for the embedded derivative would be released through the income statement as a realized gain included as a component of "Total gains and losses" in the Level 3 reconciliation, which includes both realized and unrealized gains (see Example 3 in Illustration IA.4-9.3). If the policyholder lapses or terminates the annuity contract and a payment on the guarantee is required (e.g., a minimum account balance guarantee is paid), the payment of the guaranteed amount would be included as a component of "Purchases, issuances, sales and settlements," as the payment of the guarantee is considered to be an extinguishment (or final settlement) of the guarantee related to the annuity contract. Whether the guarantee benefit is paid or not during the period in which the contract is terminated, any gains or losses recognized are considered to be realized.

In presenting derivatives embedded in annuity contracts in the Level 3 reconciliation, we believe fees attributed to the embedded derivative (i.e., amounts paid by the policyholder to purchase coverage afforded by the guarantee) should be included as a component of "Purchases, issuances, sales and settlements." The following are three simplified examples of Level 3 reconciliations that illustrate the concepts discussed in this appendix.

<b>Illustration IA.4-9.1: No lapse or termination</b>	
<b>Example 1</b>	
Assume an embedded derivative in a single premium annuity contract has a fair value on 1 January 20X1 of \$100. From 1 January 20X1 to 31 March 20X1, fees attributed to the guarantee were \$3, and there was an increase in fair value of the embedded derivative of \$17. If there is no lapse or termination, the change in fair value of the embedded derivative (\$17) is included in earnings and is attributable to unrealized losses related to liabilities still owed at the reporting date. In this example, the Level 3 reconciliation would be as follows for the quarter ending 31 March 20X1:	
Beginning balance	\$ (100)
Transfers into Level 3	-
Transfers out of Level 3	-
Gains (losses) realized/unrealized	
Included in earnings	(17)
Included in other comprehensive income	-
Purchases, issuances, sales and settlements	
Purchases	-
Issuances	-
Sales	-
Settlements	(3)
Ending balance	<u>\$ (120)</u>
The amount of total losses for the period included in earnings attributable to the change in unrealized losses relating to liabilities owed at the reporting date	 <u>\$ 17</u>

**Illustration IA.4-9.2: Partial termination with a partial payment on the guarantee****Example 2**

Assume the policyholder terminated half of the annuity contract (i.e., \$60) on 1 April 20X1, and a payment was made on the portion of the guarantee that was terminated. From 31 March 20X1 to 30 June 20X1, assume that the remaining embedded derivative increased in fair value by \$5, and fees attributed to the guarantee were \$3. In this example, the Level 3 reconciliation would be as follows for the quarter ending 30 June 20X1:

Beginning balance	\$ (120)
Transfers into Level 3	-
Transfers out of Level 3	-
Gains (losses) realized/unrealized	
Included in earnings	(5)
Included in other comprehensive income	-
Purchases, issuances, sales and settlements	
Purchases	-
Issuances	-
Sales	-
Settlements	57 <sup>102</sup>
Ending balance	<u>\$ (68)</u>
The amount of total losses for the period included in earnings attributable to the change in unrealized losses relating to liabilities owed at the reporting date	<u>\$ 5</u>

**Illustration IA.4-9.3: Full termination of the contract without a payment on the guarantee****Example 3**

Assume that on 1 July 20X1, the remaining portion of the contract was terminated by the policyholder and there was no payment on the guarantee. In this example, the Level 3 reconciliation would be as follows for the quarter ending 30 September 20X1:

Beginning balance	\$ (68)
Transfers into Level 3	-
Transfers out of Level 3	-
Gains (losses) realized/unrealized	
Included in earnings	68
Included in other comprehensive income	-
Purchases, issuances, sales and settlements	
Purchases	-
Issuances	-
Sales	-
Settlements	-
Ending balance	<u>\$ 0</u>

The amount of total gains or losses for the period included in earnings attributable to the change in unrealized gains or losses would not be applicable as the liability is no longer outstanding at quarter end.

<sup>102</sup> In this example, the amount included in "Settlements" represents the partial settlement amount of \$60, less the \$3 in fees attributed to the remaining guarantee.

## Separate accounts

Separate accounts are used to support variable annuity contracts and variable life insurance policies (hereinafter referred to together as “variable contracts”) as well as certain group annuity contracts, investment contracts and funding agreements. The separate account is not a legal entity, but rather, it is an accounting entity with separate accounting records for assets, liabilities, income and expenses segregated as a discrete operation within the insurance company. For regulatory purposes, a separate account is regulated as an investment company and must register under the Investment Company Act of 1940 (1940 Act), unless it qualifies for an applicable exemption. It is defined by Section 2(a)(37) of the 1940 Act as an account established and maintained by an insurance company pursuant to the laws of any state or territory of the United States, or of Canada or any province thereof, under which income, gains and losses, whether or not realized, from assets allocated to such account, are, in accordance with the applicable contract, credited to or charged against such account without regard to other income, gains or losses of the insurance company.

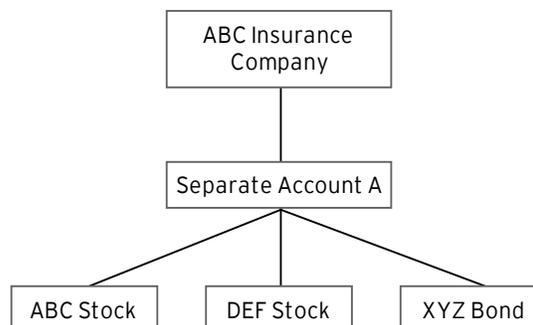
### *Variable contracts*

A variable contract is generally considered to be both a security registered under the Securities Act of 1933 and an insurance policy filed with, approved and regulated by state insurance departments. Therefore, a variable contract separate account files standalone financial statements with the SEC on an annual basis (a Form N3 for separate accounts organized as management investment companies or Form N4 or N6 for separate accounts organized as unitized investment trusts). Some separate accounts are not registered with the SEC (generally those sold through group insurance contracts to employers); however, the same organizational structures and principles noted below generally apply.

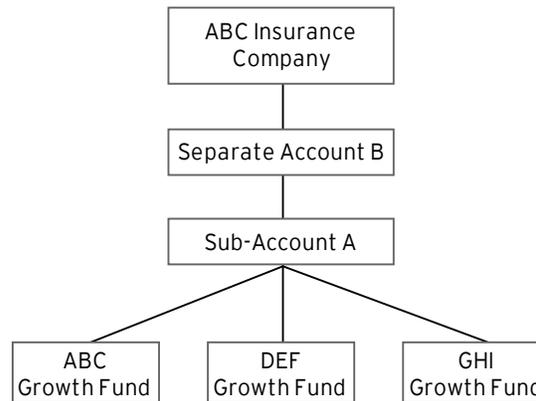
A variable contract is a contractual arrangement that combines some features of an investment contract (i.e., the policyholder assumes the risk of investment gain or loss for the securities held in the separate account) with certain traditional insurance features (i.e., the insurance company assumes the risk of mortality and administrative expenses).

### *Organizational structures of separate accounts*

A registered separate account is legally organized as either a non-unitized investment company or a unitized investment trust (UIT). A non-unitized investment company invests directly in individual securities, whereas a UIT invests directly in registered investment companies (e.g., mutual funds). The following is an illustration of the structure of a separate account that is organized as a non-unitized investment company.



UIT separate account structures typically include multiple sub-accounts. Each sub-account has a unique investment strategy and typically invests in various mutual funds, which may include publicly traded mutual funds or shadow mutual funds. A shadow mutual fund is specifically set up by an investment management company for one or more insurance companies' policyholders to invest in funds that are identical to a public fund. The UIT structure allows policyholders to allocate amounts invested among various investment alternatives. The following is an illustration of the structure of a separate account that invests in either public or shadow funds.



Proprietary funds are organized and managed by an affiliate of the insurance company (typically an investment company) and are 100% owned by the insurance company or its affiliates. Institutional funds are organized and managed by the insurance company specifically for institutional policyholders (typically pension plans). Although often unregistered, these funds are similar in structure to non-unitized funds. While specific contracts and structures may vary, the concepts discussed herein are broadly applicable among the various types of individual and institutional contracts and separate account structures.

The sponsoring insurance company is the owner of the investments within the separate account, whether those are investments in bonds and stocks (in a non-unitized fund) or mutual funds (in a UIT). The pricing of the investments in a non-unitized fund typically is determined by public market prices (when available) for the underlying investments. For a UIT separate account, the value of the underlying mutual funds typically is based on the NAV of the mutual fund. Policyholders' interests are expressed in terms of units in the separate account, which are valued by the sponsoring insurance company through a daily unit value calculation based on the NAV of the underlying mutual funds (or the fair value of the assets that a non-unitized separate account owns), as well as mortality and expense fees.

ASC 944-80 indicates that, when specified criteria<sup>103</sup> are satisfied, separate account assets representing policyholder funds are measured at fair value and reported in the insurance enterprise's financial statements as a summary total, with an equivalent summary total reported for the related liability. The investment performance (including interest, dividends, realized gains and losses and changes in unrealized gains and losses) of the separate account assets representing the policyholder's funds (asset account) and the corresponding amounts credited to the policyholder (liability account) are reported on the same line in the income statement, resulting in no direct net effect on earnings for the insurance company.

ASC 820 does not change the accounting guidance in ASC 944-80 applicable to separate account assets or liabilities. However, because ASC 944-80 requires separate account assets to be carried at fair value, the separate account assets are within the scope of ASC 820 for both measurement and disclosure purposes.

<sup>103</sup> ASC 944-80-25-2 requires that the separate account arrangement meet all of the following requirements to be reported as a summary total: (1) the separate account is legally recognized, (2) the separate account assets supporting the contract liabilities are legally insulated from the general account liabilities, (3) the insurer must invest the policyholder's funds as directed by the policyholder in designated investment alternatives or in accordance with specific investment objectives or policies and (4) all investment performance must be passed through to the individual policyholder.

Under ASC 944-80, the measurement objective for separate account liabilities is not fair value and, therefore, separate account liabilities are not within the scope of ASC 820. Separate account liabilities are reported at a value equal to the fair value of the separate account assets. If the fair value option were to be elected for the variable contract pursuant to the Fair Value Option Subsections of ASC 825, the fair value measurement for the contract would include consideration of all the rights and obligations of the contract, as well as nonperformance risk, and conceivably would not equal the fair value of the separate account assets.

**Question IA.4-10 What is the unit of account for separate account assets?**

The unit of account defines what is being measured for financial reporting purposes and drives the level of aggregation (or disaggregation) for presentation and disclosure. For separate account assets reported on the insurance company's financial statements, we believe it is appropriate that the unit of account be based on the level at which the insurance company transacts, or the level at which the insurance company buys and sells investments, at the direction of the policyholder. For UIT separate accounts, transactions typically occur at the mutual fund level, as this is the level at which the insurance company purchases and sells assets. While the insurance company may aggregate trades from many policyholders on a daily basis before executing one net transaction, the actual trading occurs between the insurance company and the underlying mutual fund. Therefore, in most cases, the unit of account for the UIT separate account assets will be the investment in the underlying mutual fund. For separate accounts structured as a non-unitized fund, the unit of account would be the investment in the stock or bond, as the insurance company directly purchases the individual securities.

**Question IA.4-11 What is the exit market for separate account assets? How is the exit price for separate account assets determined? (updated September 2022)**



**FASB amendment**

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered when measuring fair value. Recognizing such a restriction as a separate unit of account is also not permitted. The guidance will be applied prospectively, with special transition provisions for entities that qualify as investment companies under ASC 946. The guidance is effective for all public business entities for fiscal years beginning after 15 December 2023, and interim periods within those fiscal years. For all other entities, it is effective for fiscal years beginning after 15 December 2024, and interim periods within those fiscal years. Early adoption is permitted for all entities.

Under ASC 820, a fair value measurement assumes that the transaction to sell the asset occurs in the principal market or, in the absence of a principal market, in the most advantageous market. We believe it is reasonable to assume that a market participant would be indifferent between purchasing the assets from the insurance company directly or purchasing the assets in the open market, or in the case of mutual funds, directly from the fund. This indifference is because in these markets, the market participant would transact at the quoted price for the investment, provided there are no other attributes of the insurance company's investment that would affect the transaction price (e.g., restrictions, lock-up agreements<sup>104</sup>).

<sup>104</sup> The effect of a restriction on the fair value measurement will differ depending on whether the restriction is deemed to be a characteristic of the asset (i.e., part of the unit of account of the asset) or a characteristic of the entity holding the asset. Refer to section 5.2.1 for further discussion before the adoption of ASU 2022-03 and section 5.2.1A for further discussion after the adoption of ASU 2022-03.

In public funds, shadow funds or proprietary funds, the value at which policyholder-directed purchases and sales are transacted on a daily basis is NAV, which is derived from the underlying fair value of the investments in the mutual fund each day. As discussed in section 18, ASC 820 permits (but does not require) the use of NAV as a practical expedient in measuring the fair value of certain alternative investments, even in those situations where a redemption of the interest with the fund is restricted. However, because the use of this practical expedient applies only to investments without readily determinable fair values, investments in most open-ended mutual funds will not qualify for use of the practical expedient when the per share (unit) is determined and published and is the basis for current transactions. Nonetheless, we believe NAV will likely represent the fair value of these investments given that the mutual fund stands ready to purchase and sell units of the fund at a published NAV on a daily basis. That is, for an open-ended mutual fund, the fair value of an investment in the fund would not be expected to be higher than the amount that a new investor would be required to spend to directly invest in the mutual fund. Similarly, the hypothetical seller of the investment would not be expected to accept less in proceeds than it could receive by directly redeeming its investment with the fund.

For non-unitized funds and institutional funds, the exit price would be determined for each underlying individual investment.

**Question IA.4-12 What considerations should be made in determining the classification in the fair value hierarchy for the separate account assets?**

As discussed in section 14, the fair value hierarchy is divided into three levels (Level 1, Level 2 and Level 3) based on the observability and relative subjectivity of the fair value measurement. Classification within the fair value hierarchy is affected by the lowest level input that is deemed significant to the overall fair value measurement, with observable inputs prioritized over unobservable inputs.

In determining the classification of separate account assets in the fair value hierarchy, the separate account structure, type of securities in the separate account and the source of the fair value measurement for these securities should all be considered. The criteria applied in determining the classification of the separate account assets should be the same as the classification considerations for other similar types of investments (e.g., mutual funds, bonds, stocks, real estate) held in the general account.

In addition, while insurance companies often aggregate the trades of all policyholders upon execution, in certain instances it may be appropriate to assess the level of trading activity based on the individual purchases and sales of policyholders.

**Question IA.4-13 ASC 820 requires a reconciliation of the beginning and ending balance for measurements classified in Level 3 of the fair value hierarchy. If separate account assets are classified in Level 3, how is the reconciliation of these assets presented in the insurance company's financial statement disclosures?**

As addressed previously, the income statement recognition model for separate accounts requires the gains and losses from separate account assets to be offset by corresponding changes in the separate account liabilities, resulting in no net income or loss from the separate account activities. Despite the fact that the changes in the fair value of separate account assets do not directly affect the income statement (other than fees earned by the insurance company for managing separate accounts), ASC 820 requires a reconciliation of the beginning and ending balances of fair value measurements classified in Level 3. Therefore, we believe separate account assets that are classified in Level 3 of the fair value hierarchy should be included in the sponsoring company's Level 3 reconciliation.

However, because of the net income statement presentation for separate account activities required by ASC 944-80, some constituents have questioned whether the information provided by the Level 3 reconciliation for separate account assets meets the disclosure objectives of ASC 820. That is, some believe the reconciliation for separate account assets classified in Level 3 may not be meaningful in

assessing the relative quality of earnings related to the separate account assets. Accordingly, the company may consider providing explanatory language regarding the accounting requirements of ASC 944-80 in a footnote to the Level 3 reconciliation provided for separate account assets (e.g., due to the requirements of ASC 944-80, the amounts included in the Level 3 reconciliation are offset by changes in the separate account liabilities in the income statement).

**Question IA.4-14** As described above, separate account liabilities are not within the scope of ASC 820 as the measurement attribute for these liabilities is not fair value. However, are the fair values of separate account liabilities required to be disclosed in accordance with the requirements of ASC 825?

ASC 825 requires disclosure of the fair value of financial instruments (both assets and liabilities). The disclosure requirements of ASC 825 were not modified by ASC 820. Accordingly, the requirement to provide fair value disclosures for investment contracts has not changed. Contracts without significant mortality and morbidity risk remain in the scope of ASC 825, and disclosure of the fair value of the liabilities related to the contract, by level of the fair value hierarchy, is required. However, contracts with significant mortality or morbidity risk are considered to be insurance contracts, which are excluded from the scope of ASC 825 and, while the fair value of the liability related to these types of contracts is permitted to be disclosed, it is not required.

While ASC 820 did not change the disclosure requirements of ASC 825, the fair value amounts disclosed in accordance with ASC 825 should be determined using the principles of ASC 820. The fair value of the investment contract would include consideration of all the rights and obligations of the contract, as well as nonperformance risk. Amounts related to variable investment contracts may be reported in other captions of the balance sheet, as well as within separate account liabilities. Additionally, we believe it would be beneficial for financial statement preparers to explain the relationship of the fair value of investment contracts and related balances reported for separate account liabilities and general account liabilities and assets.

**Question IA.4-15** In the standalone financial statements for a separate account, at what level should ASC 820 disclosures be presented – at the fund level or the individual investment level?

The fair value disclosures required by ASC 820 should be made separately for each class of assets and liabilities measured at fair value. However, as discussed in section 20.3.3, although the hierarchy disclosure is presented by class, the determination of the hierarchy level in which the fair value measurement is categorized is determined at the unit of account level. For a non-unitized fund, the unit of account is the individual investment within the fund (e.g., stocks, bonds, etc.). Therefore, the fair value hierarchy disclosures should be based on the individual security. For all other types of separate account structures, the unit of account is the shares in the underlying mutual fund.

Separate account financial statements are prepared in accordance with specialized industry practices applicable to investment companies.

## Deferred acquisition costs (DAC)

When accounting for insurance contracts under ASC 944, certain acquisition costs incurred in underwriting the policy are capitalized and amortized. DAC is reported on the balance sheet at amortized cost in accordance with ASC 944. Under today's guidance, there are different amortization models based on product type (e.g., when the premium is recognized, or based on the pattern in which estimated gross profit (EGP) or estimated gross margin (EGM) is expected to be recognized over the life of a portfolio of contracts). Amortization models based on EGPs or EGMs include elements of fair value measurement.

ASU 2018-12 changes the amortization method of DAC for long-duration insurance contracts and many investment contracts. Under the new guidance, DAC is amortized on a constant level basis over the expected life of the contracts, independent of profitability or revenue components.

**Question IA.4-16 What effect does ASC 820 have on the accounting for DAC?**

For universal life-type and investment contracts, before the adoption of ASU 2018-12, the application of ASC 820 may affect one or more elements included in the ASC 944 estimated gross profit or estimated gross margin calculation (e.g., changes in the value of bifurcated embedded derivatives included in hybrid insurance or investment contracts) and thereby affect DAC. After adoption of ASU 2018-12, entities will be required to amortize DAC on a constant level basis over the expected life of the contracts, independent of profitability or revenue components. Because the bases for amortization will be independent of profitability, amortization patterns generally will not be impacted by ASC 820.

Also, if the fair value option is elected under the Fair Value Option Subsections of ASC 825 for an insurance or investment contract, any associated acquisition costs should be expensed immediately, not deferred. Nevertheless, the exit price of an insurance or investment contract in an acquisition often includes implicit compensation for the sale and underwriting effort associated with the contract and, therefore, this compensation would be incorporated into the fair value of the insurance contracts to the extent that a market participant would consider such amounts in a transaction to assume the insurance or investment contracts.



# IA.5 Fair value measurement considerations for the real estate industry

This appendix provides a series of questions and interpretive responses addressing considerations related to the application of ASC 820 and the Fair Value Option Subsections of ASC 825 for the real estate industry, including real estate entities that apply the investment company accounting guidance in ASC 946.

## Questions and interpretive responses (updated September 2023)

### Fair value framework

#### Question IA.5-1 What are the unit of account considerations for investments in real estate?

The unit of account defines what is being measured for financial statement purposes by reference to the level at which the asset or liability is aggregated (or disaggregated) for purposes of applying other Topics. With the exception of financial instruments with quoted prices in active markets and groups of financial instruments with offsetting risk that qualify for the measurement exception described in section 10, ASC 820 does not prescribe the unit of account (for measurement purposes), instead noting that it should be determined in accordance with the provisions of the Topic that requires (or permits) the fair value measurement. Refer to section 5.3 for additional discussion on the unit of account.

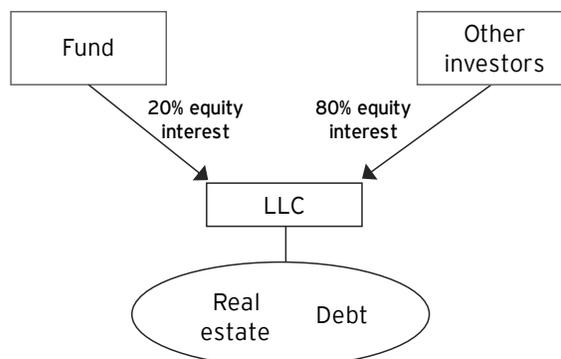
The unit of account can vary for investments in real estate. In some cases, real estate is held directly or in a separate legal entity that is consolidated by the reporting entity. In these situations, the reporting entity's unit of account is the real estate. In other cases, the reporting entity (1) has a noncontrolling equity investment in a separate legal entity that holds real estate or (2) is itself an investment company pursuant to ASC 946 or follows similar accounting and hence does not consolidate controlled non-investment company investees. In both of these cases, the unit of account is the equity investment.

To illustrate these concepts, consider the following two examples:

#### Illustration IA.5-1.1: Example A – noncontrolling equity interest

A real estate company (Fund), which meets the ASC 946 assessment of investment company status, owns a 20% noncontrolling equity interest in a limited liability company (LLC) that, in turn, holds real estate financed by mortgage debt. The remaining 80% owners of the LLC are third-party investors.

The Fund's unit of account in this example is the 20% equity interest in the LLC.

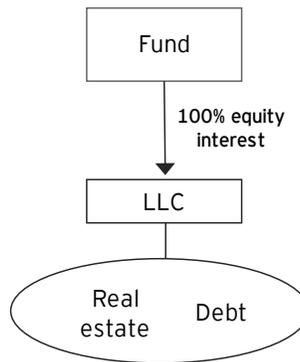


If the Fund were not an investment company under ASC 946, the unit of account would also be its 20% noncontrolling ownership interest in the LLC. However, unless the fair value option is available and elected, the ownership interest would generally be accounted for under the equity method, not at fair value.

#### Illustration IA.5-1.2: Example B – 100% owned equity interest

The Fund, which meets the ASC 946 assessment of investment company status, owns 100% of the equity interests in the LLC that, in turn, holds real estate. Consistent with Example A, the real estate is collateral for the LLC's debt.

The Fund's unit of account in this example is the 100% equity interest in the LLC (not the separate real estate and debt) because the Fund does not consolidate controlled investees.



In contrast, if the Fund were not an investment company, it would generally consolidate the LLC. In that case, the real estate and debt represent distinct units of account, which are presented separately in the consolidated financial statements.

#### Question IA.5-2

**What are the valuation considerations for measuring the fair value of an equity interest in an entity holding real estate financed with debt? (updated September 2023)**

When determining the fair value of an equity interest in an entity holding real estate financed by debt, the terms of the debt and the rights of the ownership interest should be considered. Market participants generally place value on below-market (or above-market) debt, due to the benefit (or cost) of the off-market debt's terms. When appropriate, the fair value of an equity interest in an entity holding real estate financed by debt should consider the debt's fair value.

In some cases, the debt repayment terms may require its immediate repayment if the collateral (the real estate) is sold or if there is a change in control of the entity (i.e., provisions that limit transferability or assumption). Regardless of whether such a provision requiring immediate repayment exists, the benefit (or cost) attributable to the below-market (or above-market) coupon on the debt received through the expected change in control may be considered when valuing the equity interest. That is, an immediate change in control is not assumed if that is not consistent with market participant assumptions about the expected probability and timing of the repayment of the debt. A market participant would consider the time horizon and change of control provisions to determine whether they expect to realize the benefit (or cost) from a below-market (or above-market) rate coupon. Estimating market participant assumptions requires judgment based on the specific facts and circumstances. For additional guidance and considerations, refer to the AICPA Audit and Accounting Guide, *Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies*.<sup>105</sup>

<sup>105</sup> Chapter 4, *Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments*, and Paragraphs 6.20 through 6.32 of Chapter 6, *Valuation of Debt Instruments*.

Another factor that should be considered in valuing the equity interest is whether the holder of the interest is restricted from selling or transferring the interest. If that restriction is an attribute of the interest, it should be considered in the fair value determination, as market participants may place less value on an investment that is restricted (see section 5.2.1 for further discussion on restrictions before the adoption of ASU 2022-03 and section 5.2.1A for discussion on restrictions after the adoption of ASU 2022-03).

**Question IA.5-3 What are the valuation considerations in measuring or disclosing the fair value of debt collateralized by real estate?**

For the purposes of this response, the real estate and the debt are considered separate units of account, such as when the reporting entity owns real estate that is leveraged.

We believe a debt issuer would generally consider the same factors as a creditor would if it were to measure its loan at fair value. The debt's repayment terms (including any call features), nonperformance risk, including the fair value of the real estate if the debt is nonrecourse, and the current interest environment, among other items, should be considered in determining its fair value.

While the terms of the debt may restrict its transfer to or assumption by a market participant, ASC 820 requires the fair value measurement to contemplate the price that would be received in a hypothetical transfer of the debt at the measurement date. As discussed in section 9.3, the fair value measurement of a liability does not include a separate adjustment for a restriction on the transfer of the liability.

As such, the debt's fair value may not be assumed to be its par value simply because (1) it cannot be transferred to or assumed by a market participant or (2) if the real estate were to be sold, the debt would be required to be repaid at par. Instead, each of the factors discussed previously, among others, should be considered in determining the debt's fair value.

Refer to section 9 for additional considerations when determining the fair value of liabilities.

**Question IA.5-4 How is the concept of highest and best use applied when valuing real estate?**

As discussed in section 8.1, highest and best use is a valuation concept that considers how market participants would use a nonfinancial asset to maximize its benefit or value, even if that use is different from the reporting entity's intended or actual use of the asset. The maximum value of a nonfinancial asset to market participants may come from its use (1) in combination with other assets or with other assets and liabilities or (2) on a standalone basis.

Although ASC 820 includes the concept of considering complementary liabilities when measuring the fair value of a nonfinancial asset, we believe this concept<sup>106</sup> was generally intended to align the guidance in ASC 820 with common practice for measuring the fair value of certain nonfinancial assets (e.g., intangible assets) where a contributory charge is taken for working capital.<sup>107</sup> We do not believe this guidance would affect the measurement of real estate that is financed with debt. That is, real estate should generally be valued independently from any debt used to finance the property and, therefore, the fair value of real estate may be lower than the par value of any nonrecourse debt used to fund the real estate.

In certain circumstances, it may be appropriate to value real estate considering its "use" with other properties if synergistic value is created when individual buildings or projects are valued as a group. However, an entity should ensure this approach is consistent with how the real estate assets would be sold and the assumptions market participants would use in pricing the assets. We generally believe this

<sup>106</sup> This concept was introduced in ASC 820 through the amendments in ASU 2011-04.

<sup>107</sup> This is consistent with the guidance in ASC 820-10-35-10E(a)(2), which states that liabilities associated with a nonfinancial asset include liabilities that fund working capital.

valuation premise is limited to situations where properties are in close proximity and were developed and managed contemplating the interaction of the assets. If value is maximized by considering the assets in combination with other assets, the valuation premise is applied even if the asset is disaggregated in applying other Topics (including the required disclosures pursuant to ASC 820).

In contrast, when the valuation premise is on a standalone basis, which is more commonly used for valuing real estate, fair value is based on the price that would be received in a current transaction to sell the asset to market participants who would use the asset on a standalone basis.

To illustrate the difference between the two concepts, consider a mixed-use project that has several properties including residential housing, a hotel and retail space. The valuation premise is “in combination” if the fair value of the aggregate real estate is higher to market participants than the sum of the fair value of the individual properties because of synergies and complementary cash flows. In contrast, the “standalone” valuation premise would be used if fair value would be maximized by market participants by considering the properties individually.

The determination of the highest and best use for real estate assets involves careful consideration of the specific facts and circumstances. In applying these concepts, we believe that reporting entities generally should not assume a sale of the entire portfolio or a significant segment of the portfolio to a buyer unless it has sufficient evidence to support that a market exists for such a sale, the entity has access to that market and the market participants in that market would include synergistic value in determining the price they would pay for the asset group.

Refer to section 8 for additional discussion of the concepts of highest and best use and valuation premise.

#### Question IA.5-5

**Highest and best use establishes the premise of value considering the use of the asset that is physically possible, legally permissible and financially feasible at the measurement date. How should the term “legally permissible” be applied in the context of real estate?**

We believe a market participant considers all relevant factors in determining whether the legally permissible use of an asset can be something other than its current use at the measurement date. Provided there is evidence to support such an assertion, alternative uses that enable the asset holder to maximize its value should be considered, but a search for potential alternative uses need not be exhaustive. Costs to transform the asset (e.g., obtaining a new zoning permit or converting the asset to the alternative use) and associated profit requirements of a market participant should be considered in the fair value measurement.

When assessing whether a change in the legal use of an asset could be obtained, an entity should consider a market participant’s perspective on the probability, extent and timing of different types of approvals that may be required. There is a difference between discretionary and ministerial approvals. Discretionary approvals are generally those that a government entity can withhold at its discretion, whereas ministerial approvals are those that, while discretionary, are generally granted if requests are made.

For example, if land used for commercial development had not been rezoned, but the land is located in an area where surrounding properties have been rezoned as residential property, and there is clear evidence that the land could be rezoned, we believe the entity should consider the value of the land as residential property as one potential use in its assessment of the highest and best use for the asset. If it is unclear that the land could be rezoned, the fair value would consider the probability, extent and timing of the approval as well as any associated costs as discussed above. Entities in this situation should have evidence to support their assumptions about the potential for the land to be rezoned.

Appraisals that reflect the effect of a reasonably anticipated change in what is legally permissible should be carefully evaluated. If the appraised value assumes a change in use can be obtained, the valuation might not reflect the price that a market participant would pay as of the measurement date if it does not back out the cost and profit margin associated with transforming the asset or does not capture the risk

that the approval might not be granted (refer to Question IA.5-6 for additional discussion on transformation activities). An entity should also evaluate inputs used from the valuation of similar assets that do not have similar permitting uncertainties.

**Question IA.5-6 Does the concept of highest and best use conflict with valuing the asset in its current form?**

While the highest and best use of an asset may consider an alternative use for the nonfinancial asset, the objective of the fair value measurement remains the same, that is, to determine the price market participants would pay for the asset in its current condition. If no market exists for an asset in its current form, but there is a market for the transformed asset, an entity could use this information but would need to adjust the price to account for differences between the asset being measured and the transformed asset. For example, the expected costs to transform the asset and any associated profit margin should be deducted in determining the fair value of the asset. Other potential differences, such as whether different market participants would transact for the transformed asset as compared to the asset in its current condition, should also be considered.

**Question IA.5-7 How should transaction costs be considered in a fair value measurement under ASC 820?**

ASC 820 indicates that transaction costs are those costs that result directly from the transaction and would not have been incurred by the reporting entity absent a decision to sell the asset or transfer the liability. As discussed in section 6.3, transaction costs are not considered to be an attribute of the asset or liability, but rather represent incremental direct costs that are a consequence of management's decision to transact.<sup>108</sup> For example, due diligence costs paid by the reporting entity in connection with the purchase of an asset would be excluded from a fair value measurement as these costs are direct incremental costs to acquire the asset (and are a component of the entry price).

The accounting for transaction costs depends, in part, on whether the entity is in the scope of ASC 946. An entity in the scope of ASC 946 should initially measure its investments in debt and equity securities at their transaction price, which should include commissions and other charges that are part of the purchase transaction. As investment companies are required to subsequently measure all investments at fair value with changes in fair value recognized in earnings, transaction costs are often immediately recognized as an unrealized loss.

For entities that are not subject to ASC 946, the accounting for transaction costs depends on the measurement objective for the asset. For example, if an entity elects to apply fair value accounting to mortgage loans, the Fair Value Option Subsections of ASC 825 indicate that "upfront costs and fees related to items for which the fair value option is elected shall be recognized in earnings when incurred and not deferred." As a result, if the fair value option is elected, transaction costs would be expensed as incurred.

In measuring fair value, we believe estimated costs may be considered in a fair value measurement if market participants would consider these costs in their estimate of the price they would be willing to pay for the asset. For example, buyers and sellers regularly incorporate estimates of future costs to be incurred for transferring certain real estate in calculating the investment's expected cash flows for purposes of determining fair value. Therefore, it may be appropriate to consider these future costs in the

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<sup>108</sup> Costs associated with maintaining and operating an asset, such as future leasing commissions and tenant improvements, are not considered transaction costs; however, they may represent transformation costs. As these costs generally would be incurred regardless of the reporting entity's decision to sell the asset and are necessary to maintain a usable asset, we believe they would be considered in the estimate of fair value. Depending on the valuation technique utilized, this consideration may be explicit or implicit. For example, in an income approach, projected cash flows would be adjusted for expected ongoing maintenance costs. However, adjustments may not be necessary under a market approach, if ongoing costs have effectively been considered in the comparable market data.

assumptions. However, the transaction costs that the reporting entity will incur when it decides to sell the asset, that are not included in the price at which a willing buyer and willing seller of the real estate would transact, would not be considered in the asset's fair value measurement.

To illustrate this concept, consider the following example.

**Illustration IA.5-7.1: Example – transaction costs**

A real estate company (Fund A) meets the ASC 946 assessment of investment company status and records its investments at fair value. Considering market participant assumptions, Fund A uses an income approach based on discounted cash flows, including a terminal value, to estimate a fair value of \$2 million for its investment in a real estate property.

Since Fund A believes a willing buyer would consider the estimated sales costs it will incur in the future when determining the price it is willing to pay to acquire the real estate property today, Fund A includes \$50,000 in estimated future sales costs within the estimate of expected cash flows when determining the fair value of the real estate property.

In contrast, transaction costs that would be incurred by Fund A if it were to sell the investment today are not part of a fair value measurement and would be expensed when incurred.

Real estate accounted for on a historical cost basis that is classified as held for sale under ASC 360 is measured at the lower of its carrying value or fair value less cost to sell. As discussed in Question 6.3-1, the measurement concepts and disclosure requirements in ASC 820 also apply to measurements based on fair value, such as fair value less cost to sell. The "fair value less cost to sell" measurement objective includes (1) fair value and (2) cost to sell, and the fair value component should be determined in accordance with the principles of ASC 820.

To illustrate this concept, assume Company X purchases real estate from Company Y for \$500. Included in that transacted fair value amount were certain costs that market participants consider in pricing the asset. Also assume that costs to sell, as contemplated in ASC 360, are \$15. Assuming there was no bargain purchase, if Company X were to sell the real estate to Company Z immediately after Company X had acquired the real estate, the real estate's fair value presumably would be \$500. For ASC 360's purposes, however, the real estate held for sale would be measured at \$485 (fair value less costs to sell).

Refer to section 4.2 of our FRD, *Impairment or disposal of long-lived assets*, for additional guidance on measuring real estate classified as held for sale under ASC 360.

## Valuation techniques

### Question IA.5-8 Which valuation techniques are appropriate in valuing real estate?

ASC 820 does not prescribe the valuation techniques that should be used in any particular circumstance. Instead, the guidance indicates that valuation techniques that are appropriate in the circumstances and for which sufficient data is available shall be used to measure fair value. In some cases, a single valuation technique may be appropriate (e.g., when valuing an asset or liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques may be appropriate.

In measuring fair value, ASC 820 indicates that valuation techniques should be consistent with the market, income and cost approaches. Within these approaches, there are various techniques for measuring fair value (e.g., discounted cash flow or direct capitalization under the income approach). However, in all cases, the objective is to use the valuation technique (or combination of valuation techniques) that is appropriate in the circumstances and for which there is sufficient data. The decision

to use one valuation technique over another, or to use more than one valuation technique, depends on the specific facts and circumstances. But in all cases, a fair value measurement considers available market observable transactions, maximizing the use of market observable inputs.

When it is determined that use of multiple valuation techniques is appropriate, ASC 820 indicates that the results should be evaluated and weighted considering the reasonableness of the range indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

A valuation technique that depends on unobservable inputs in determining fair value may not yield the most representative measure of fair value if another appropriate valuation technique is based on observable inputs. If multiple approaches are used, results under the approach that maximizes the use of observable inputs should generally be given greater weight.

ASC 820 requires that valuation techniques used to measure fair value be consistently applied. Changes in valuation techniques (or their application) are appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, new markets develop, new information becomes available, information previously used is no longer available, valuation techniques improve or market conditions change. Companies are required to disclose when there has been a change in the valuation technique(s) used during the period (refer to section 20.3.5 for further discussion).

Section 12 provides further discussion on evaluating valuation techniques.

#### Question IA.5-9

**What are some of the factors an entity should consider in assessing whether an appraisal is compliant with the principles of ASC 820?**

The Uniform Standards of Professional Appraisal Practice (USPAP) are the generally accepted standards for professional appraisal practice in North America in valuing real estate, personal property and businesses. Although certain of the concepts of ASC 820 may be similar to concepts in the USPAP, an assessment of the appraisal should be performed to determine that the appraised value is an appropriate measure of fair value for financial reporting purposes (i.e., the appraisal has been performed in accordance with the principles of ASC 820).

The use of a third-party valuation specialist does not reduce management's ultimate responsibility for the fair value measurements (and related disclosures) in the entity's financial statements. Management must understand the assumptions used in the valuations, including those performed in accordance with the USPAP, and determine whether the assumptions are consistent with the principles of ASC 820. This due diligence also enables management to assess the observability of the inputs for purposes of meeting the required fair value disclosures, including determining the level of the measurement within the fair value hierarchy. Further, management may determine that an adjustment to the valuation may be necessary to comply with the provisions of ASC 820.

For example, traditional real estate appraisal procedures and reports may not anticipate or explicitly address the requirements of ASC 820. It is possible that an appraisal (whether prepared internally or externally) includes assumptions that are not consistent with the principles of ASC 820. An appraisal utilized for financial reporting purposes should be evaluated to determine whether the appraisal process and report meet the requirements of ASC 820. Such an evaluation would include, but is not limited to, whether:

- ▶ The principal or most advantageous market has been appropriately considered
- ▶ Appropriate market participants (or characteristics of market participants) have been identified and the assumptions market participants would utilize in pricing the asset have been used
- ▶ Inputs to the valuation approaches maximize the use of observable data to the extent possible

- ▶ Adjustments to the data are (1) based on observable or unobservable inputs or (2) significant to the overall fair value measurement
- ▶ All appropriate valuation approaches and techniques have been used

If multiple valuation techniques are used, the merits of each valuation technique and the underlying assumptions embedded in each of the techniques should be considered in evaluating and assessing the results.

For example, if an appraisal of an office building was performed in accordance with the USPAP, the appraiser should analyze the relevant legal, physical and economic factors to the extent necessary to support a conclusion as to the highest and best use of the building. The appraisal of the office building may incorporate assumptions about the future state of the building, rather than the building's current condition at the measurement date. Expectations about future improvements or modifications to be made to the building may be considered in the appraisal, such as the renovation of the building or the conversion of the office building into condominiums. This method of calculating fair value then might use the expected future cash flows of the "renovated asset" or the "transformed asset" (e.g., a condominium) to value the asset in its current form (e.g., an office building).

The expected future cash flows of a renovated (transformed) asset would need to be adjusted for renovation or transformation costs (e.g., legal, rezoning and remodeling costs) and profits expected by a market participant in determining whether an alternative use of the asset would maximize the value of the asset. Accordingly, management should evaluate whether transformation costs and any associated profits resulting from the transformation process have been included in the appraised value and if the inclusion of such amounts is appropriate.

## Inputs and the fair value hierarchy

### Question IA.5-10 How should inputs used to value real estate be considered in the context of the fair value hierarchy?

ASC 820 prioritizes the use of observable inputs over unobservable inputs in valuation techniques and establishes a fair value hierarchy that is divided into three levels (Level 1, Level 2 and Level 3) based on the observability, reliability, and relevance of the inputs. As discussed in section 14, classification in the fair value hierarchy for disclosure purposes is based on the lowest level input that is significant to the fair value measurement in its entirety. In performing the assessment of significance, we believe inputs should be considered individually and in aggregate.

ASC 820 requires that the significance of adjustments to observable data be considered in the context of the overall fair value measurement. That is, when an observable input is adjusted to reflect differences between the asset being valued and the observed transaction, the adjustment may result in the fair value measurement being categorized in a lower level of the fair value hierarchy. For example, adjustments to a price per square foot for a building derived from observable market data may be required to compensate for differences between the transacted asset and the asset being valued. Due to the lack of an active market for identical assets, we believe it would be rare for real estate to be classified in Level 1 of the fair value hierarchy. In market conditions where real estate is actively purchased and sold, the level of observable inputs may result in real estate being classified in Level 2. However, that determination will depend on the facts and circumstances, including the significance of adjustments to observable data. In inactive real estate markets, we generally believe that it is unlikely that real estate will be classified in Level 2.

Level 3 inputs are unobservable inputs for an asset or liability. In developing Level 3 inputs, an entity may begin with its own data, however this data should be adjusted if reasonably available information dictates that market participants would use different assumptions or if the entity's data pertains to factors specific only to the entity.

**Question IA.5-11 If one of the significant inputs to a real estate valuation is unobservable, can the fair value measurement rely solely on the use of Level 3 inputs?**

To increase consistency and comparability in fair value measurements and related disclosures, the fair value hierarchy prioritizes the use of observable inputs over unobservable inputs. That is, the use of observable inputs should be maximized and the use of unobservable inputs minimized. Because of ASC 820's prioritization of observable inputs over unobservable inputs, even if the asset is classified in Level 3, it would not be appropriate to use unobservable (Level 3) inputs when observable (Level 2) inputs are reasonably available.

For example, the difficulty in obtaining observable inputs for "entrepreneurial profit" or "functional obsolescence" in a cost approach does not mean that all other inputs for the measurement can be based on the entity's own data (i.e., unobservable inputs) if observable inputs are available without undue cost and effort.

**Question IA.5-12 Some pricing surveys for real estate are obtained from a pricing service and are used in valuing real estate. What is management's responsibility to corroborate the pricing information from a third party?**

Management is responsible for fair value measurements reported in the financial statements and for determining whether those measures are derived from observable or unobservable data. Management should understand how the third-party service provider obtained the information and assess the reliability of the information in developing the fair value measurement. Management should have controls in place (for issuers) and perform sufficient procedures to corroborate that the information received from the third-party service provider is appropriate to meet the objectives of ASC 820, including the required fair value disclosures.

The verification process is a critical component in evaluating the relevance of the data and whether it is derived from a market-corroborated input. Market-corroborated inputs include inputs that are not directly observable, but that are derived principally from, or corroborated by, observable market data through correlation or other means.

While these types of inputs obtained by a third-party service provider may be considered observable, management should verify that the pricing information was obtained for similar assets from market participants. For example, the use of capitalization and discount rates obtained from institutional real estate investors may be appropriate to value institutional grade investment properties but not for other lower grade property types because the market participants differ, and the assets are not similar.

Further, pricing data from an entity that was involved in a particular transaction would provide a better indication of fair value than information obtained from an entity that was not a party to the transaction. However, companies should not ignore data obtained from other market participants.

The USPAP Scope of Work Rule states that an appraiser must "determine and perform the scope of work necessary to develop credible assignment results." In determining the appropriate scope of work, the appraiser considers, among other items, the approaches that their peers would take, expectations of management and how the valuation will be used.

As such, even if a valuation is performed by an appraiser, it may not use the same valuation technique, inputs and assumptions market participants would use. As noted above, the appraiser is reporting under standards that require consideration of what approach their peers would use. Therefore, consideration should be given as to whether the valuation was performed in a manner consistent with the fair value principles established by ASC 820.

**Question IA.5-13 Does the use of an external valuation result in the measurement being classified in a particular level of the fair value hierarchy?**

The fact that information is obtained from an external source is not determinative of its classification in the fair value hierarchy. Instead, classification should be based on the relevance and observability of the information used in the valuation. Regardless of whether the valuation was performed (or the inputs compiled) internally or externally, management should review and understand the inputs used in the valuation to determine the appropriate classification of those inputs in the fair value hierarchy.

## Fair value option for equity method investments

**Question IA.5-14 The Fair Value Option Subsections of ASC 825 allow entities to elect fair value as the measurement objective for investments that otherwise would be accounted for under the equity method in accordance with the requirements of ASC 323. What effect does the existence of a promote feature or carried interest have on the ability to elect the fair value option for an equity method investment?**

Using the fair value option, entities may make an irrevocable election to measure certain eligible items (which generally include equity method investments) at fair value and recognize changes in fair value in earnings. However, in a 10 December 2007 speech,<sup>109</sup> the SEC staff encouraged entities to carefully analyze whether a substantive nonfinancial performance obligation is embedded in an instrument that would otherwise be accounted for under the equity method, before applying the fair value option. Applying the fair value option to a financial instrument with such an embedded feature could effectively recognize or accelerate revenue that otherwise would be inappropriate based on the relevant accounting literature.

In its speech, the SEC staff used an example to illustrate these concerns. The SEC staff identified arrangements in which an investor has an equity interest in another entity with an embedded feature that provides the investor with a disproportionate profit allocation or return (e.g., certain partnership agreements with an embedded feature are commonly referred to as a “carried interest” or in real estate, a “promote”). If the investment includes a substantive performance obligation to the investee (e.g., the general partner must provide management services to the investee), the embedded feature may represent compensation for services, and applying the fair value option would result in revenue recognized for profits associated with future performance.

The SEC staff expressed concern that such a fair value measurement may result in the premature recognition of revenue by the general partner with the promote provisions. Therefore, in evaluating whether the fair value option is available for an equity method investment, an entity should consider any promote or carried interest provisions. We believe that this feature would preclude the entire interest from being measured at fair value pursuant to the Fair Value Option Subsections of ASC 825. Because promote or carried interest provisions would likely preclude the use of the fair value option in ASC 825 for certain equity method investments, entities should look to other US GAAP in recognizing revenue.

Refer to section 3 of our FRD, ***Equity method investments and joint ventures***, for further guidance on determining which investments would otherwise qualify to be accounted for under the equity method and, therefore, are eligible for the fair value option. Refer to section 6.11 of our FRD, ***Equity method investments and joint ventures***, for application of the fair value option to equity method investments.

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<sup>109</sup> Statement made by Sandie E. Kim, Professional Accounting Fellow at the SEC, 10 December 2007, at the 2007 AICPA National Conference on Current SEC and PCAOB Developments.

# IA.6 Fair value measurement considerations for the oil and gas industry

This appendix provides a series of questions and interpretive responses addressing considerations related to the application of ASC 820 for the oil and gas industry.

## Questions and interpretive responses

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### Fair value framework

**Question IA.6-1** When measuring fair value for impairment purposes, should the unit of account for oil and gas properties accounted for under the successful efforts method consider derivatives in economic or designated hedging relationships associated with the property?

Oil and gas companies often use forward contracts to hedge sales of production from specific oil and gas properties. In many cases, these contracts are a separate unit of account subject to separate accounting (e.g., as derivative instruments in accordance with ASC 815). However, they may also affect the future cash flows related to the properties, leading entities to consider whether they should be included as part of the impairment assessment.

The unit of account defines what is being measured for financial statement purposes by reference to the level at which the asset or liability is aggregated (or disaggregated) for purposes of applying other Topics. With the exception of financial instruments with quoted prices in active markets and groups of financial instruments with offsetting risk that qualify for the measurement exception described in section 10, ASC 820 does not prescribe the unit of account (for measurement purposes), noting that it should be determined in accordance with the provisions of other Topics.

For purposes of recognition and measurement of an impairment loss under the successful efforts method, ASC 360 indicates that long-lived assets to be held and used should be grouped at the lowest level of cash flows that are largely independent of other assets and liabilities. While this determination requires judgment, reporting entities should be able to support their assertion that the cash flows from oil and gas properties either are or are not largely independent from the cash flows of the associated forward contracts.

If a company determines that the asset group for impairment purposes would include contracts that meet the definition of a derivative, the entity should make sure these derivatives are included in both the fair value assessment and the carrying value of the asset group. Because derivatives subject to ASC 815's measurement requirements are already recorded at fair value, they should have no net effect on the measurement of an impairment.

Forward contracts that are excluded from the scope of ASC 815 (e.g., the company elects the normal purchases and normal sales scope exception) but deemed to be part of the asset group for impairment purposes could affect whether a property is impaired as the fair value of these contracts would not be captured in the carrying value of the property.

**Question IA.6-2 How do the fair value measurement principles in ASC 820 affect the way oil and gas companies that account for their properties under the successful efforts method measure impairment?**

Oil and gas companies that account for their operations under the successful efforts method of accounting evaluate property for potential impairment under ASC 360. If the carrying amount of held for use property is not recoverable, the property's carrying amount is reduced to fair value and an impairment loss is recognized.

Oil and gas companies typically use a reserve report as a starting point to determine the fair value of the property. This report is usually prepared using company-specific information (i.e., considering the company's specific cost structure and plans for development), but may also include certain market-based assumptions such as forward strip prices and cost escalations.

Companies should evaluate the inputs and valuation techniques used in their reserve reports to determine whether they meet the fair value measurement requirements in ASC 820. Company-specific assumptions should be challenged to make sure that they are consistent with the assumptions market participants would use in developing a fair value measurement. Such an evaluation would include, but is not limited to, whether:

- ▶ The principal or most advantageous market has been appropriately considered
- ▶ Appropriate market participant characteristics have been identified and the assumptions market participants would use in pricing the properties have been used, which may include consideration of risk-adjusted probable and possible reserves that may be excluded from other calculations (such as depreciation, depletion and amortization)
- ▶ Adjustments to the data are (1) based on observable or unobservable inputs or (2) significant to the overall fair value measurement
- ▶ All valuation techniques that are appropriate in the circumstances and for which sufficient data is available have been used

These considerations may result in a fair value measurement for the property that is different from a company's own reserve report. Additionally, entities should consider other evidence of fair value if available, including recent transactions when computing the fair value of properties for impairment purposes.

**Question IA.6-3 How is the principal market determined when a company transacts in both the wholesale and retail markets? That is, can there be two principal markets for the same asset or liability?**

ASC 820 defines the principal market as the market with the greatest volume and level of activity for the asset or liability. The determination of the principal market (and, subsequently, the market participants in the principal market) is made from the perspective of the reporting entity considering the markets to which it has access. ASC 820-10-35-6A notes that "[b]ecause different entities (and businesses within those entities) with different activities may have access to different markets, the principal (or most advantageous) market for the same asset or liability might be different for different entities (and businesses within those entities)."

As such, it is possible for a company to determine that there are different principal markets for the same asset or liability. For example, different exit markets may be identified for the same asset between or among operating units of a single entity because each unit engages in different activities and, therefore, transacts in different markets. We would not expect different principal markets to be identified for the same asset or liability simply because management has different exit strategies for the assets. That is, we do not believe principal markets are determined based on management's intent.

Given that the hypothetical transaction contemplated in the fair value measurement guidance assumes the sale of existing contracts (as compared with the reissuance of a new contract), a wholesaler's physical contract with an end-user would generally be marketable only to other wholesalers who could deliver to the end-user. For example, an oil and gas producer that is also in the natural gas marketing business with commercial and industrial end-users would typically be able to transfer its sales contracts only to other oil and gas producers or wholesale suppliers. As the end-users are not in the market to buy or sell wholesale contracts, the principal market for the oil and gas producer in this example is the wholesale market.

In many circumstances, observable pricing in the wholesale market is available for many commodities at many pricing points. However, in less liquid areas, observable pricing may not be available. In these instances, oil and gas entities may look to the nearest liquid market for which observable wholesale prices are available and adjust those prices to reflect transportation costs.

When observable wholesale pricing is not available, entities may need to consider the price a retail customer would currently pay for similar contracts as this could affect the price that wholesalers are willing to pay for the contract. For example, if the terms specified in an existing contract with a retail customer are above or below the current market price, the contract would presumably have more or less value in the wholesale market given the off-market nature of its terms.

#### Question IA.6-4

**What are considerations for determining the fair value of instruments in markets that are not active? Examples may include a long-term derivative contract based on a commodity that actively trades only for short durations or derivative contracts that require physical settlement in unique locations.**

Unobservable inputs (including a company's own assumptions) can be used to measure fair value to the extent that relevant observable inputs are not available. For example, unobservable inputs would be used in situations in which there is little, if any, market activity for the asset or liability around the measurement date. However, the use of a company's own assumptions in the absence of relevant observable market data does not equate to entity-specific assumptions. ASC 820-10-35-54A states that "[i]n developing unobservable inputs, a reporting entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the reporting entity that is not available to other market participants (for example, an entity-specific synergy)."

ASC 820 is clear that unobservable inputs should reflect assumptions that market participants would use in pricing the asset or liability at the measurement date (including assumptions about risk). In addition, instruments that are measured using significant unobservable inputs are classified in Level 3 of the fair value hierarchy and require additional disclosures to provide increased transparency of the effect of these fair value measurements on earnings.

Although little, if any, market activity may exist for the specific instrument being valued, other information may be available for consideration in estimating fair value. This information may include quoted prices and transactions for similar instruments (or instruments that are similar to the commodity underlying the instrument), broker quotes or market research reports. In order to assess the weight that should be placed on these various data points, a company should understand the source of the data underlying this information. In addition, in the case of transactions for similar instruments (or instruments for similar commodities), a company should determine whether adjustments to quoted or transaction prices are necessary to address factors such as the comparability of the transaction to the asset or liability being measured and the proximity of the transaction to the measurement date.

With respect to broker quotes, a company should consider the nature of the quote (e.g., an indicative bid versus a binding offer), in addition to evaluating whether the quote incorporates current information (e.g., the quotes are based on orderly transactions or valuation techniques that appropriately reflect market participant assumptions regarding risk in the current market).

As discussed in section 6, ASC 820 includes application guidance on factors that may indicate a market is not active and circumstances that may indicate a transaction is not orderly.

The objective of a fair value measurement remains the same regardless of (1) whether the market for an asset or liability is active or inactive and (2) the valuation technique used to estimate fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced liquidation or distressed sale) between market participants at the measurement date under current market conditions. As such, even when estimating fair value using valuation models that incorporate a company's own assumptions, the measurement should attempt to take into account all of the factors that market participants would consider in determining a current price for the asset or liability. For example, an appropriate risk premium that market participants would require as compensation for bearing the uncertainty inherent in the cash flows of the instrument would be considered.

**Question IA.6-5 Are physically settled energy contracts that have been designated as normal purchase/normal sale under ASC 815 affected by the guidance in ASC 820?**

All energy contracts (including physically settled contracts) meeting the definition of a derivative in ASC 815 are required to be measured at fair value in accordance with the principles of ASC 820, unless a scope exception from ASC 815 applies. Energy contracts designated as normal purchase/normal sale are one example of such a scope exception and, therefore, are not accounted for pursuant to ASC 815. These contracts are either executory contracts or revenue contracts and are accounted for under the applicable accounting standard (e.g., ASC 606), not at fair value.

**Question IA.6-6 Are physically settled commodity derivatives eligible for measurement under the portfolio approach described in section 10?**

As discussed in section 10, ASC 820 provides a measurement exception that allows an entity to determine the fair value of a group of financial assets, financial liabilities and nonfinancial items accounted for as derivatives in accordance with ASC 815 that have offsetting risks based on the sale or transfer of its net exposure to a particular risk, if certain criteria are met. ASC 820-10-35-18H clarifies the scope of this exception and states this approach "applies only to financial assets and financial liabilities within the scope of Topic 815 or Topic 825 and nonfinancial items accounted for as derivatives in accordance with Topic 815."

Accordingly, companies may elect to measure physical settled commodity derivative contracts under the portfolio approach, assuming all other criteria have been met.

The FASB clarified in ASU 2018-09, *Codification Improvements*, that nonfinancial items accounted for as derivatives in accordance with ASC 815 are eligible for the portfolio exception. Before the issuance of ASU 2018-09, the FASB staff had indicated that it was not the Board's intention to exclude nonfinancial derivatives measured at fair value (e.g., physically settled commodity derivative contracts) from the scope of the measurement exception. Therefore, we believe entities may elect to measure physically settled commodity derivative contracts under the portfolio approach regardless of whether they have adopted ASU 2018-09, assuming all other criteria have been met.

**Question IA.6-7 Do the fair value measurement principles in ASC 820 affect how oil and gas companies apply the full cost ceiling test under SEC Regulation S-X, Rule 4-10 (Rule 4-10)?**

Oil and gas companies that account for their operations under the full cost method of accounting are subject to the full cost ceiling test in determining whether their properties are impaired. The full cost ceiling test is based on a formula prescribed by Rule 4-10. That SEC guidance requires that a company (1) use a 12-month average price, (2) assume the continuation of current economic conditions and (3) use a discount rate of 10% in calculating the present value of estimated future net revenues to be used in determining the cost center ceiling. Due to the prescriptive nature of the formula, the amount calculated under the ceiling test is not a fair value measurement in accordance with ASC 820.

In situations where costs associated with unproven properties are included in the total costs being amortized, Rule 4-10 requires that the lower of cost or estimated fair value of those unproven properties be used in the calculation of the full cost ceiling. For the purposes of Rule 4-10, we believe estimated fair value means fair value in accordance with ASC 820. Therefore, the fair value measurement principles may affect the full cost ceiling test only for those companies that include unproven properties in the costs being amortized. However, the measurement of impairment under the full cost ceiling test is not a fair value measure in the aggregate and would not require disclosure as a nonrecurring measurement in periods when a full-cost ceiling write-down occurs, unlike other impairment tests. For those companies that exclude unproven properties from the costs being amortized, the guidance in ASC 820 would not have an effect on the full cost ceiling test.

**Question IA.6-8 Does the guidance in ASC 820 and ASC 825 on liabilities issued with an inseparable third-party credit enhancement apply to the fair value measurement of derivative contracts, even if the third-party credit enhancement is determined to be separable from the derivative?**

We believe the concepts underlying the guidance in ASC 820 and ASC 825 regarding inseparable third-party credit enhancements would also apply to derivative instruments required to be measured at fair value under ASC 815 that include credit enhancements determined to be separable.

**Background**

Many OTC derivative contracts are subject to credit support requirements in accordance with the provisions of an ISDA Master Agreement between the derivative counterparties. Under the ISDA Master Agreement, companies are often required to provide their counterparty with some form of credit support when the contract is in a loss position. The form of credit support is typically provided in a Credit Support Annex (CSA) to the ISDA Master Agreement. It is common practice in the energy industry that the CSAs allow for multiple forms of credit support including: (1) cash collateral or (2) posting a letter of credit (LOC) for the benefit of the derivative counterparty. In situations where the CSA allows for multiple forms of credit support, the determination of the form used is typically at the discretion of the party providing the support (i.e., the company in a liability position).

If the company were to transfer its liability to another party (e.g., transfer a commodity forward that is subject to an ISDA transaction confirmation under the overall Master Agreement), the credit support requirements under the company's specific ISDA Master Agreement would not transfer with the commodity forward. Instead, the commodity forward would become part of any existing ISDA Master Agreement and related CSA between the transferee and the counterparty to the derivative. As such, the LOC is deemed separable from the derivative contract.

The unit of account guidance in ASC 825 on liabilities issued with an inseparable third-party credit enhancement provides that the issuer of such a liability shall not include the effect of the credit enhancement in the fair value measurement of its liability.<sup>110</sup> Although ASC 825 uses the example of a third-party guarantee of a debt issuance to illustrate its concepts, the guidance applies to all liabilities measured at fair value on a recurring basis (including all derivatives required to be measured at fair value under ASC 815) with inseparable credit enhancements. However, some have questioned whether this guidance should also be applied to derivative contracts in which the third-party credit enhancement is determined to be separable from the derivative (e.g., the LOC described above).

### Additional discussion

ASC 825-10-25-13 states that “[f]or the issuer of a liability issued with an inseparable third-party credit enhancement (for example, debt that is issued with a contractual third-party guarantee), the unit of accounting for the liability measured or disclosed at fair value does not include the third-party credit enhancement.” A key principle underlying the guidance in ASC 825 is that a third-party credit enhancement does not relieve the issuer of its ultimate obligation under the liability. Generally, if the issuer of the liability fails to meet its payment obligations to the investor, the guarantor has an obligation to make the payments on the issuer’s behalf and the issuer has an obligation to the guarantor.<sup>111</sup> Any payments made by the guarantor in accordance with the guarantee result in a transfer of the issuer’s debt obligation from the investor to the guarantor. The issuer’s resulting debt obligation to the guarantor has not been guaranteed. Consequently, the Boards decided that if the third-party credit enhancement is accounted for separately from the liability, the fair value of that obligation takes into account the credit standing of the issuer and not the credit standing of the guarantor.

Similarly, if the company defaults on the payments required under the derivative contracts, the bank issuing the LOC will pay the counterparty, and the company’s obligation merely transfers from the original counterparty to the issuing bank. Therefore, despite the issuance of the LOC, the company will have a continuing obligation in the event of default. As such, the company’s nonperformance risk (not that of the bank providing the LOC) would be considered in determining the fair value of the derivative liability.

US GAAP does not address the extent to which a secured LOC affects the determination of a company’s nonperformance risk. Under one view, a secured LOC could be deemed to affect any continuing obligation the company would have to the LOC issuer in the event of default (as per the key underlying principle discussed above). In these situations, the nonperformance risk of the company may be deemed to be akin to any of its other secured obligations. Under this view, the effect of a secured LOC on the determination of the company’s nonperformance risk would likely vary based on the type of collateral (or liens on specified assets) securing the LOC and depend on the specific facts and circumstances. An alternative view is that any third-party LOC, whether secured or unsecured, has no effect on the determination of the company’s nonperformance risk associated with its derivative contract. Under this view, any consideration of the LOC would not occur until the company’s obligation actually transferred from the derivative counterparty to the LOC issuer. We believe that a company could apply either view with disclosure of the approach applied.

While the guidance in ASC 820 and ASC 825 is specific to third-party credit enhancements that are inseparable from the liability, we believe the concepts underlying this guidance also apply to separable credit enhancements, such as an LOC posted to derivative counterparties, where the company is in a derivative liability position. In our view, excluding the effect of inseparable credit enhancements in determining the fair value of an issuer’s liability while including the effect of separable credit enhancements seems contradictory to the objective of the guidance.

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<sup>110</sup> The guidance in ASC 825 does not apply to the holder of the issuer’s credit-enhanced liability.

<sup>111</sup> Paragraph BC38 of ASU 2011-04.

Finally, it should be noted that the guidance in ASC 820 and ASC 825 does not affect the measurement of derivative liabilities when cash is posted as collateral by the company with the derivative counterparty. When cash is posted as collateral, the cash is physically remitted to the counterparty and generally is not subject to any restrictions on its use. While the cash remittance does not technically extinguish the derivative liability,<sup>112</sup> it mitigates credit risk on the derivative to the extent the ISDA Master Agreement allows for the legal right of offset with the counterparty (consistent with the factors discussed in ASC 210-20).

Stated differently, if the company defaults on its derivative obligation, the counterparty retains the cash collateral it already holds from the counterparty. While posting cash collateral serves to reduce credit exposure, cash collateral arrangements typically do not completely eliminate the exposure. For example, most collateral agreements do not require collateral to be posted until a certain threshold has been reached and then only for the exposure in excess of the threshold. In addition, even when transactions with a counterparty are subject to collateral requirements, companies remain exposed to what is commonly referred to as “gap” risk – the exposure from fluctuations in the value of the derivative between the time when collateral is called and actually posted.

#### Question IA.6-9

**Is it appropriate to recognize Day 1 gains (or losses) on physically settled derivatives that contain a future service element, such as a forward contract meeting the definition of a derivative with a physical delivery requirement?**

ASC 820 allows for the recognition of Day 1 gains and losses when the transaction price is not deemed to represent the fair value of the asset acquired or liability assumed at initial recognition. While not intended to be all-inclusive, ASC 820-10-30-3A provides examples of factors that might indicate that the transaction price would not equal fair value and, therefore, supports recognition of an inception gain or loss (e.g., when the exit market for a transaction differs from the entry market).

While transacting in the retail market (when the exit market is the wholesale market) may result in the recognition of Day 1 gains or losses, we expect a fair value measurement to consider the fact that another producer would also expect to earn a profit on the transaction. Accordingly, the fair value measurement would include an estimate of such profit in the determination of fair value. As it pertains to physically settled derivatives with a future service element, we generally expect that the exit price would include assumptions that a third party would use to determine the fair value of the related performance element.

To illustrate, assume a producer of natural gas has entered into a five-year contract with a utility company to deliver natural gas each month to a designated point at a published spot market price for that point on the date of delivery plus a \$0.05/mcf premium. Also assume that the natural gas contract meets the definition of a derivative and has not qualified for or applied the normal purchase and sales exemption. Therefore, the producer is accounting for the contract at its fair value.

In this situation, market participants in the producer’s principal market (other natural gas producers) likely would similarly price the arrangement. As such, it would not be appropriate to automatically conclude that the \$0.05/mcf premium represents a Day 1 gain, because all or some portion of the \$0.05/mcf premium likely represents compensation for the performance element of the contract that other market participants would require.

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<sup>112</sup> For certain centrally cleared OTC derivatives, variation margin payments are considered to represent legal settlement payments, as opposed to collateral payments, and, therefore, would serve to partially extinguish the derivative. See section 8.13.3 of our FRD, *Derivatives and hedging*, for additional discussion regarding variation margin payments for centrally cleared derivatives.

In other words, while an end-user may be willing to pay a premium above the posted spot market price at each delivery date for the certainty in knowing that the natural gas has been committed and will be delivered to the end-user for the next five years by a counterparty with sufficient resources to honor its obligation, other producers would likewise demand compensation for taking on the obligation to ultimately fulfill the contract.

Although expected to be uncommon, if a company determines that there is a Day 1 gain, it should have evidence to support the basis for why the gain has been earned and why another market participant on a sale or transfer of the derivative contract would not require similar compensation.

While the SEC staff<sup>113</sup> has cautioned against using the fair value option election for instruments that have a performance obligation, the effects of the performance obligation should be considered for those instruments where fair value measurement is required, as discussed above.

## Inputs and the fair value hierarchy

### Question IA.6-10 What are the fair value hierarchy considerations for exchange-traded commodity contracts?

Quoted prices in active markets generally provide the most reliable evidence of fair value and should be used when available. As such, contracts traded on an exchange (e.g., NYMEX) will typically be measured at their quoted prices and classified as Level 1 in the fair value hierarchy.

However, ASC 820 does include certain circumstances when adjustments to a Level 1 input are permitted, including situations when a quoted price in an active market does not represent fair value at the measurement date. ASC 820-10-35-41C(b) indicates “[t]hat might be the case if, for example, significant events (such as transactions in a principal-to-principal market, trades in a brokered market, or announcements) take place after the close of a market but before the measurement date. A reporting entity shall establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment results in a fair value measurement categorized within a lower level of the fair value hierarchy.”

While we would generally not expect a company to adjust quoted prices for exchanged-traded commodity contracts, in certain instances it may be appropriate. For example, it may be appropriate to adjust the quoted exchange price if certain significant unexpected weather events or other catastrophes that could significantly affect pricing were to occur between the close of the exchange and the end of business (the fair value measurement date).<sup>114</sup> Any such adjustment should be considered and made on a consistent basis. In situations where adjustments to quoted prices in active markets are made, the measurement would be classified as Level 2 or Level 3 in the fair value hierarchy, depending on the source and significance of the adjustments.

Some common examples of when an adjustment may be appropriate relate to instruments (or underlying securities) that trade on a global basis, or when the last day of the reporting period falls on a non-trading day (e.g., a weekend or a holiday). Consider a US-based company whose accounting policy is to adjust all of its worldwide derivative contracts to fair value at the close of business US Eastern Standard Time.

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<sup>113</sup> At the 2007 AICPA National Conference on Current SEC and PCAOB Developments, the SEC staff discussed arrangements in which an investor has an equity interest in another entity with an embedded feature that provides the investor with a disproportionate profit allocation or return (for example, “carried interest” or “promote” in certain partnership agreements). The SEC staff stated that applying the fair value option to such a financial instrument could inappropriately recognize or accelerate revenue associated with future performance. The full text of the speech of SEC Professional Accounting Fellow Sandie E. Kim is available at <http://www.sec.gov/news/speech/2007/spch121007sek.htm>.

<sup>114</sup> Refer to section 15.3 for additional discussion on the need to consider significant events that occur on the measurement date but after the close of trading.

Assume the company had a contract to buy Brent crude that trades on the London exchange. In accordance with its accounting policy, the company adjusts the observable London price subsequent to the close of the London exchange to reflect estimated movements in the fair value of the contract after the London exchange's closing to the close of business US time, based on movements in West Texas Intermediate crude (NYMEX traded crude contract) and/or other market observable information. In this example, the London exchange contract would not be classified in Level 1 of the fair value hierarchy. Depending on the observability of the inputs used to make the adjustment to the London close price, these measurements would be classified in either Level 2 or Level 3 of the hierarchy.

If the end of trading occurs on a weekend or a holiday, entities may consider significant events that occur in the intervening period to determine whether an adjustment is necessary. Factors may include after-market futures trading activities, significant news events and other items that may suggest the closing price is no longer the best indicator of fair value without further adjustment. Depending on the significance and observability of the inputs used to make such an adjustment to the prior day's close price, these measurements would be classified in either Level 2 or Level 3 of the fair value hierarchy.

**Question IA.6-11 What are the fair value hierarchy considerations for NYMEX "look-alike" contracts, which are commonly traded in the over-the-counter (OTC) market?**

NYMEX "look-alikes" are OTC cash-settled swaps or options that are based on a settlement price of a similar futures contract traded on the NYMEX. Although these instruments may be initially executed in active markets, quoted prices for the identical asset or liability will often not be available for subsequent measurement. While these OTC contracts may be similar to those traded on the NYMEX or other exchanges, they are not identical, and as such we would generally not expect "look-alikes" to be classified as Level 1 in the fair value hierarchy. Depending on the observability and significance of the other inputs used to value these NYMEX "look-alike" contracts, these measurements would represent either Level 2 or Level 3 instruments.

**Question IA.6-12 What are the fair value hierarchy considerations for measurements based on third-party broker quotes or pricing services (e.g., natural gas forward price curves provided by an energy broker service)?**

As discussed in Question 16.1-2, the level within the hierarchy that a quoted price obtained from a broker will be classified depends on the nature of the quote and could be Level 1, Level 2 or Level 3. In certain brokered markets, firm quotes are disclosed and a company has the ability to "hit" or execute a transaction at the quoted price. Depending on the nature of the instrument and the level of activity in these markets, these firm quotes may be deemed Level 1 or Level 2. However, in instances where a company solicits a quote from a broker, the quotes are often not binding and may include a disclaimer that the broker would not be held to that price in an actual transaction. On their own, we believe non-binding quotes would generally be categorized as a Level 3 input. In addition, when a quote includes explanatory language or a disclaimer, the company should assess whether the quote represents fair value (exit price) or whether an adjustment is needed.

Likewise, information provided by third-party pricing services could potentially represent Level 1, Level 2 or Level 3 information, depending on the source of the information and the type of instrument being measured. For example, pricing services may provide quoted market prices (e.g., closing price) for financial instruments traded in active markets; these prices would be deemed Level 1 measurements.

Alternatively, a third-party pricing service may provide a company with consensus pricing information (e.g., information obtained by polling dealers for indications of mid-market prices for a particular asset class). We believe that the non-binding nature of consensus pricing would generally result in its classification as Level 3 information, assuming no additional corroborating evidence. Pricing services may also use models to determine values for certain asset classes. The level in which these instruments

would be classified would depend on the observability of the inputs used in the model. Therefore, companies that use pricing services will need to gain an understanding of the sources of information and methods used in the price quotes provided by these services in order to determine how the assets or liabilities would be classified in the fair value hierarchy.

ASC 820-10-35-54K through 35-54M address the use of quoted prices from third parties noting that the guidance does not preclude the use of quoted prices by third parties when the company has determined that the quoted prices provided by those parties are determined in accordance with the fair value measurement principles in ASC 820. Companies need to understand the source of information received from brokers and pricing services in order to assess its relevance. When there has been a significant decrease in the volume or level of activity for the asset or liability, the company should evaluate whether quotes from brokers and pricing services are based on current information that reflects orderly transactions or valuation techniques that appropriately reflect market participant assumptions regarding risk.

Less weight should be placed on third-party quotes that are not based on transactions as compared to other indications of fair value that are based on market transactions. In addition, the nature of the quote (e.g., whether the quote is an indicative bid or a binding offer) should also be considered in assessing the relevance of the quote, with more weight given to quotes based on binding offers.

**Question IA.6-13** For certain energy contracts, depending on the liquidity of the market, it is not atypical for companies to be able to obtain only calendar, summer/winter or quarterly broker quotes. Would using the quarterly broker quote to “shape” monthly prices automatically result in an input that is considered Level 3?

To illustrate the “shaping” concept, assume that a broker quotes only a quarterly forward price for natural gas delivery in the San Juan basin for fourth quarter 20X0 and not a forward price for each month in that quarter. It is typical for a company to take the quarterly forward broker-quoted pricing and “shape” it for each month in that quarter based on a combination of factors such as historical relationships at the specific pricing location for those months as well as the relationship between the NYMEX forward strip for those months. As such, these broker quotes are “shaped” by the company to obtain estimates of monthly forward market prices.

If the seasonal broker quote can be corroborated, the pricing input may qualify as a Level 2 input. That is, if the months within the quarter or season that are “shaped” using management’s estimates can be corroborated with observable monthly forward market data, such as NYMEX, for similar products at similar locations, the “shaped” information may qualify as a Level 2 input.

# A

# Glossary

## Excerpt from Accounting Standards Codification

### Fair Value Measurement – Overall

#### *Glossary*

#### *820-10-20*

#### *Acquiree*

The **business** or **businesses** that the **acquirer** obtains control of in a **business combination**. This term also includes a nonprofit activity or business that a not-for-profit acquirer obtains control of in an **acquisition by a not-for-profit entity**.

#### *Acquirer*

The entity that obtains control of the **acquiree**. However, in a **business combination** in which a **variable interest entity** (VIE) is acquired, the primary beneficiary of that entity always is the acquirer.

#### *Acquisition by a Not-for-Profit Entity*

A transaction or other event in which a not-for-profit acquirer obtains control of one or more nonprofit activities or businesses and initially recognizes their assets and liabilities in the acquirer's financial statements. When applicable guidance in Topic 805 is applied by a **not-for-profit entity**, the term **business combination** has the same meaning as this term has for a for-profit entity. Likewise, a reference to business combinations in guidance that links to Topic 805 has the same meaning as a reference to acquisitions by not-for-profit entities.

#### *Active Market*

A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

#### *Benchmark Interest Rate*

A widely recognized and quoted rate in an active financial market that is broadly indicative of the overall level of interest rates attributable to high-credit-quality obligors in that market. It is a rate that is widely used in a given financial market as an underlying basis for determining the interest rates of individual financial instruments and commonly referenced in interest-rate-related transactions.

In theory, the benchmark interest rate should be a risk-free rate (that is, has no risk of default). In some markets, government borrowing rates may serve as a benchmark. In other markets, the benchmark interest rate may be an interbank offered rate.

#### *Beneficial Interests*

Rights to receive all or portions of specified cash inflows received by a trust or other entity, including, but not limited to, all of the following:

- a. Senior and subordinated shares of interest, principal or other cash inflows to be passed-through or paid-through
- b. Premiums due to guarantors
- c. Commercial paper obligations
- d. Residual interests, whether in the form of debt or equity

**Brokered Market**

A market in which brokers attempt to match buyers with sellers but do not stand ready to trade for their own account. In other words, brokers do not use their own capital to hold an inventory of the items for which they make a market. The broker knows the prices bid and asked by the respective parties, but each party is typically unaware of another party's price requirements. Prices of completed transactions are sometimes available. Brokered markets include electronic communication networks, in which buy and sell orders are matched, and commercial and residential real estate markets.

**Business**

Paragraphs 805-10-55-3A through 55-6 and 805-10-55-8 through 55-9 define what is considered a business.

**Business Combination**

A transaction or other event in which an **acquirer** obtains control of one or more **businesses**. Transactions sometimes referred to as true mergers or mergers of equals also are business combinations. See also **Acquisition by a Not-for-Profit Entity**.

**Collateralized Financing Entity**

A **variable interest entity** that holds financial assets, issues **beneficial interests** in those financial assets and has no more than nominal equity. The beneficial interests have contractual recourse only to the related assets of the collateralized financing entity and are classified as financial liabilities. A collateralized financing entity may hold **nonfinancial assets** temporarily as a result of default by the debtor on the underlying debt instruments held as assets by the collateralized financing entity or in an effort to restructure the debt instruments held as assets by the collateralized financing entity. A collateralized financing entity also may hold other financial assets and financial liabilities that are incidental to the operations of the collateralized financing entity and have carrying values that approximate fair value (for example, cash, broker receivables or broker payables).

**Conduit Debt Securities**

Certain limited-obligation revenue bonds, certificates of participation or similar debt instruments issued by a state or local governmental entity for the express purpose of providing financing for a specific third party (the conduit bond obligor) that is not a part of the state or local government's financial reporting entity. Although conduit debt securities bear the name of the governmental entity that issues them, the governmental entity often has no obligation for such debt beyond the resources provided by a lease or loan agreement with the third party on whose behalf the securities are issued. Further, the conduit bond obligor is responsible for any future financial reporting requirements.

**Contract**

An agreement between two or more parties that creates enforceable rights and obligations.

**Cost Approach**

A valuation approach that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).

**Credit Risk**

For purposes of a hedged item in a fair value hedge, credit risk is the risk of changes in the hedged item's fair value attributable to both of the following:

- a. Changes in the obligor's creditworthiness
- b. Changes in the spread over the **benchmark interest rate** with respect to the hedged item's credit sector at inception of the hedge

For purposes of a hedged transaction in a cash flow hedge, credit risk is the risk of changes in the hedged transaction's cash flows attributable to all of the following:

- a. Default
- b. Changes in the obligor's creditworthiness
- c. Changes in the spread over the contractually specified interest rate or the benchmark interest rate with respect to the related financial asset's or liability's credit sector at inception of the hedge

#### ***Currency Risk***

The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

#### ***Customer***

A party that has contracted with an entity to obtain goods or services that are an output of the entity's ordinary activities in exchange for consideration.

#### ***Dealer Market***

A market in which dealers stand ready to trade (either buy or sell for their own account), thereby providing liquidity by using their capital to hold an inventory of the items for which they make a market. Typically, bid and ask prices (representing the price at which the dealer is willing to buy and the price at which the dealer is willing to sell, respectively) are more readily available than closing prices. Over-the-counter markets (for which prices are publicly reported by the National Association of Securities Dealers Automated Quotations systems or by OTC Markets Group Inc.) are dealer markets. For example, the market for U.S. Treasury securities is a dealer market. Dealer markets also exist for some other assets and liabilities, including other financial instruments, commodities, and physical assets (for example, used equipment).

#### ***Discount Rate Adjustment Technique***

A present value technique that uses a risk-adjusted discount rate and contractual, promised or most likely cash flows.

#### ***Entry Price***

The price paid to acquire an asset or received to assume a liability in an exchange transaction.

#### ***Equity Security***

Any security representing an ownership interest in an entity (for example, common, preferred, or other capital stock) or the right to acquire (for example, warrants, rights, forward purchase contracts, and call options) or dispose of (for example, put options and forward sale contracts) an ownership interest in an entity at fixed or determinable prices. The term equity security does not include any of the following:

- a. Written equity options (because they represent obligations of the writer, not investments)
- b. Cash-settled options on equity securities or options on equity-based indexes (because those instruments do not represent ownership interests in an entity)
- c. Convertible debt or preferred stock that by its terms either must be redeemed by the issuing entity or is redeemable at the option of the investor.

#### ***Exchange Market***

A market in which closing prices are both readily available and generally representative of fair value. An example of such a market is the New York Stock Exchange.

**Exit Price**

The price that would be received to sell an asset or paid to transfer a liability.

**Expected Cash Flow**

The probability-weighted average (that is, mean of the distribution) of possible future cash flows.

**Fair Value**

The price that would be received to sell an asset or paid to transfer a liability in an **orderly transaction** between **market participants** at the measurement date.

**Financial Asset**

Cash, evidence of an ownership interest in an entity, or a contract that conveys to one entity a right to do either of the following:

- a. Receive cash or another financial instrument from a second entity
- b. Exchange other financial instruments on potentially favorable terms with the second entity

**Financial Instrument**

Cash, evidence of an ownership interest in an entity or a contract that both:

- a. Imposes on one entity a contractual obligation either:
  1. To deliver cash or another financial instrument to a second entity
  2. To exchange other financial instruments on potentially unfavorable terms with the second entity
- b. Conveys to that second entity a contractual right either:
  1. To receive cash or another financial instrument from the first entity
  2. To exchange other financial instruments on potentially favorable terms with the first entity

The use of the term financial instrument in this definition is recursive (because the term financial instrument is included in it), though it is not circular. The definition requires a chain of contractual obligations that ends with the delivery of cash or an ownership interest in an entity. Any number of obligations to deliver financial instruments can be links in a chain that qualifies a particular contract as a financial instrument.

Contractual rights and contractual obligations encompass both those that are conditioned on the occurrence of a specified event and those that are not. All contractual rights (contractual obligations) that are financial instruments meet the definition of asset (liability) set forth in FASB Concepts Statement No. 6, *Elements of Financial Statements*, although some may not be recognized as assets (liabilities) in financial statements – that is, they may be off-balance-sheet – because they fail to meet some other criterion for recognition.

For some financial instruments, the right is held by or the obligation is due from (or the obligation is owed to or by) a group of entities rather than a single entity.

**Financial Liability**

A contract that imposes on one entity an obligation to do either of the following:

- a. Deliver cash or another financial instrument to a second entity
- b. Exchange other financial instruments on potentially unfavorable terms with the second entity

***Highest and Best Use***

The use of a nonfinancial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (for example, a business) within which the asset would be used.

***Income Approach***

Valuation approaches that convert future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.

***Inputs***

The assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such as the following:

- a. The risk inherent in a particular valuation technique used to measure fair value (such as a pricing model)
- b. The risk inherent in the inputs to the valuation technique

Inputs may be observable or unobservable.

***Interest Rate Risk***

For recognized variable-rate financial instruments and forecasted issuances or purchases of variable-rate financial instruments, interest rate risk is the risk of changes in the hedged item's cash flows attributable to changes in the contractually specified interest rate in the agreement.

For recognized fixed-rate financial instruments, interest rate risk is the risk of changes in the hedged item's fair value attributable to changes in the designated benchmark interest rate. For forecasted issuances or purchases of fixed-rate financial instruments, interest rate risk is the risk of changes in the hedged item's cash flows attributable to changes in the designated benchmark interest rate.

***Legal Entity***

Any legal structure used to conduct activities or to hold assets. Some examples of such structures are corporations, partnerships, limited liability companies, grantor trusts, and other trusts.

***Level 1 Inputs***

Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

***Level 2 Inputs***

Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

***Level 3 Inputs***

Unobservable inputs for the asset or liability.

***Liability Issued with an Inseparable Third-Party Credit Enhancement***

A liability that is issued with a credit enhancement obtained from a third party, such as debt that is issued with a financial guarantee from a third party that guarantees the issuer's payment obligation.

**Management**

Persons who are responsible for achieving the objectives of the entity and who have the authority to establish policies and make decisions by which those objectives are to be pursued. Management normally includes members of the board of directors, the chief executive officer, chief operating officer, vice presidents in charge of principal business functions (such as sales, administration or finance) and other persons who perform similar policy making functions. Persons without formal titles also may be members of management.

**Market Approach**

A valuation approach that uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business.

**Market Participants**

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- a. They are independent of each other, that is, they are not **related parties**, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms
- b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary
- c. They are able to enter into a transaction for the asset or liability
- d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

**Market Risk**

The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises the following:

- a. **Interest rate risk**
- b. **Currency risk**
- c. **Other price risk.**

**Market-Corroborated Inputs**

Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

**Most Advantageous Market**

The market that maximizes the amount that would be received to sell the asset or minimizes the amount that would be paid to transfer the liability, after taking into account transaction costs and transportation costs.

**Net Asset Value per Share**

Net asset value per share is the amount of net assets attributable to each share of capital stock (other than senior equity securities, that is, preferred stock) outstanding at the close of the period. It excludes the effects of assuming conversion of outstanding convertible securities, whether or not their conversion would have a diluting effect.

***Nonfinancial Asset***

An asset that is not a **financial asset**. Nonfinancial assets include land, buildings, use of facilities or utilities, materials and supplies, intangible assets, or services.

***Nonperformance Risk***

The risk that an entity will not fulfill an obligation. Nonperformance risk includes, but may not be limited to, the reporting entity's own credit risk.

***Nonpublic Entity***

Any entity that does not meet any of the following conditions:

- a. Its debt or equity securities trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally.
- b. It is a conduit bond obligor for **conduit debt securities** that are traded in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local or regional markets).
- c. It files with a regulatory agency in preparation for the sale of any class of debt or equity securities in a public market.
- d. It is required to file or furnish financial statements with the Securities and Exchange Commission.
- e. It is controlled by an entity covered by criteria (a) through (d).

***Not-for-Profit Entity***

An entity that possesses the following characteristics, in varying degrees, that distinguish it from a business entity:

- a. Contributions of significant amounts of resources from resource providers who do not expect commensurate or proportionate pecuniary return
- b. Operating purposes other than to provide goods or services at a profit
- c. Absence of ownership interests like those of business entities.

Entities that clearly fall outside this definition include the following:

- a. All investor-owned entities
- b. Entities that provide dividends, lower costs, or other economic benefits directly and proportionately to their owners, members, or participants, such as mutual insurance entities, credit unions, farm and rural electric cooperatives, and employee benefit plans.

***Observable Inputs***

Inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability.

***Orderly Transaction***

A transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale).

***Other Price Risk***

The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer or by factors affecting all similar financial instruments traded in the market.

***Present Value***

A tool used to link future amounts (cash flows or values) to a present amount using a discount rate (an application of the income approach). Present value techniques differ in how they adjust for risk and in the type of cash flows they use. See **Discount Rate Adjustment Technique**.

***Principal Market***

The market with the greatest volume and level of activity for the asset or liability.

***Principal-to-Principal Market***

A market in which transactions, both originations and resales, are negotiated independently with no intermediary. Little information about those transactions may be made available publicly.

***Readily Determinable Fair Value***

An equity security has a readily determinable fair value if it meets any of the following conditions:

- a. The fair value of an equity security is readily determinable if sales prices or bid-and-asked quotations are currently available on a securities exchange registered with the U.S. Securities and Exchange Commission (SEC) or in the over-the-counter market, provided that those prices or quotations for the over-the-counter market are publicly reported by the National Association of Securities Dealers Automated Quotations systems or by OTC Markets Group Inc. Restricted stock meets that definition if the restriction terminates within one year.
- b. The fair value of an equity security traded only in a foreign market is readily determinable if that foreign market is of a breadth and scope comparable to one of the U.S. markets referred to above.
- c. The fair value of an equity security that is an investment in a mutual fund or in a structure similar to a mutual fund (that is, a limited partnership or a venture capital entity) is readily determinable if the fair value per share (unit) is determined and published and is the basis for current transactions.

***Related Parties***

Related parties include:

- a. Affiliates of the entity
- b. Entities for which investments in their equity securities would be required, absent the election of the fair value option under the **Fair Value Option Subsection** of Section 825-10-15, to be accounted for by the equity method by the investing entity
- c. Trusts for the benefit of employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of management
- d. Principal owners of the entity and members of their immediate families
- e. Management of the entity and members of their immediate families
- f. Other parties with which the entity may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests

- g. Other parties that can significantly influence the management or operating policies of the transacting parties or that have an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests.

**Revenue**

Inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.

**Risk Premium**

Compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or a liability. Also referred to as a risk adjustment.

**Standalone Selling Price**

The price at which an entity would sell a promised good or service separately to a **customer**.

**Systematic Risk**

The common risk shared by an asset or a liability with the other items in a diversified portfolio. Portfolio theory holds that in a market in equilibrium, market participants will be compensated only for bearing the systematic risk inherent in the cash flows. (In markets that are inefficient or out of equilibrium, other forms of return or compensation might be available.) Also referred to as nondiversifiable risk.

**Transaction Costs**

The costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the transfer of the liability and meet both of the following criteria:

- a. They result directly from and are essential to that transaction.
- b. They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in paragraph 360-10-35-38).

**Transportation Costs**

The costs that would be incurred to transport an asset from its current location to its principal (or most advantageous) market.

**Unit of Account**

The level at which an asset or a liability is aggregated or disaggregated in a Topic for recognition purposes.

**Unobservable Inputs**

Inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability.

**Unsystematic Risk**

The risk specific to a particular asset or liability. Also referred to as diversifiable risk.

**Variable Interest Entity**

A **legal entity** subject to consolidation according to the provisions of the Variable Interest Entities Subsections of Subtopic 810-10.

**Master Glossary*****Public Business Entity***

A public business entity is a business entity meeting any one of the criteria below. Neither a not-for-profit entity nor an employee benefit plan is a business entity.

- a. It is required by the U.S. Securities and Exchange Commission (SEC) to file or furnish financial statements, or does file or furnish financial statements (including voluntary filers), with the SEC (including other entities whose financial statements or financial information are required to be or are included in a filing).
- b. It is required by the Securities Exchange Act of 1934 (the Act), as amended, or rules or regulations promulgated under the Act, to file or furnish financial statements with a regulatory agency other than the SEC.
- c. It is required to file or furnish financial statements with a foreign or domestic regulatory agency in preparation for the sale of or for purposes of issuing securities that are not subject to contractual restrictions on transfer.
- d. It has issued, or is a conduit bond obligor for, securities that are traded, listed or quoted on an exchange or an over-the-counter market.
- e. It has one or more securities that are not subject to contractual restrictions on transfer, and it is required by law, contract or regulation to prepare U.S. GAAP financial statements (including notes) and make them publicly available on a periodic basis (for example, interim or annual periods). An entity must meet both of these conditions to meet this criterion.

An entity may meet the definition of a public business entity solely because its financial statements or financial information is included in another entity's filing with the SEC. In that case, the entity is only a public business entity for purposes of financial statements that are filed or furnished with the SEC.

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<sup>115</sup> Indicates the section in this publication where the specific paragraph from the Codification is discussed. Given the interrelationships among the various components of the fair value framework, the principles and concepts espoused in the various ASC paragraphs may be discussed in multiple sections of this publication. In these instances, a reference to the related section(s), where additional discussion may be found, is provided in the document itself.

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820-10-55-103	20.3.5	Disclosure of valuation techniques and inputs
820-10-55-104	20.1	Disclosure objectives
820-10-55-106	20.3.7	Uncertainty of recurring Level 3 fair value measurements from the use of significant unobservable inputs
820-10-55-107	20.6	Fair value measurements of investments in certain entities that calculate NAV
820-10-65-13	5.2.1A	Restrictions on assets (after the adoption of ASU 2022-03)
710-10-25-18	3.4	Measurement exception to the fair value principles for financial instruments
710-10-35-4	3.4	Measurement exception to the fair value principles for financial instruments

# C Abbreviations used in this publication

<b>Abbreviation</b>	<b>FASB Accounting Standards Codification</b>
ASC 210	FASB ASC Topic 210, <i>Balance Sheet</i>
ASC 250	FASB ASC Topic 250, <i>Accounting Changes and Error Corrections</i>
ASC 310	FASB ASC Topic 310, <i>Receivables</i>
ASC 320	FASB ASC Topic 320, <i>Investments – Debt Securities</i>
ASC 321	FASB ASC Topic 321, <i>Investments – Equity Securities</i>
ASC 323	FASB ASC Topic 323, <i>Investments – Equity Method and Joint Ventures</i>
ASC 325	FASB ASC Topic 325, <i>Investments – Other</i>
ASC 326	FASB ASC Topic 326, <i>Financial Instruments – Credit Losses</i>
ASC 330	FASB ASC Topic 330, <i>Inventory</i>
ASC 350	FASB ASC Topic 350, <i>Intangibles – Goodwill and Other</i>
ASC 360	FASB ASC Topic 360, <i>Property, Plant, and Equipment</i>
ASC 410	FASB ASC Topic 410, <i>Asset Retirement and Environmental Obligations</i>
ASC 420	FASB ASC Topic 420, <i>Exit or Disposal Cost Obligations</i>
ASC 450	FASB ASC Topic 450, <i>Contingencies</i>
ASC 460	FASB ASC Topic 460, <i>Guarantees</i>
ASC 605	FASB ASC Topic 605, <i>Revenue Recognition</i>
ASC 606	FASB ASC Topic 606, <i>Revenue from Contracts with Customers</i>
ASC 610	FASB ASC Topic 610, <i>Other Income</i>
ASC 710	FASB ASC Topic 710, <i>Compensation – General</i>
ASC 715	FASB ASC Topic 715, <i>Compensation – Retirement Benefits</i>
ASC 718	FASB ASC Topic 718, <i>Compensation – Stock Compensation</i>
ASC 805	FASB ASC Topic 805, <i>Business Combinations</i>
ASC 810	FASB ASC Topic 810, <i>Consolidation</i>
ASC 815	FASB ASC Topic 815, <i>Derivatives and Hedging</i>
ASC 820	FASB ASC Topic 820, <i>Fair Value Measurement</i>
ASC 825	FASB ASC Topic 825, <i>Financial Instruments</i>
ASC 842	FASB ASC Topic 842, <i>Leases</i>
ASC 850	FASB ASC Topic 850, <i>Related Party Disclosures</i>
ASC 855	FASB ASC Topic 855, <i>Subsequent Events</i>
ASC 860	FASB ASC Topic 860, <i>Transfers and Servicing</i>
ASC 942	FASB ASC Topic 942, <i>Financial Services – Depository and Lending</i>
ASC 944	FASB ASC Topic 944, <i>Financial Services – Insurance</i>
ASC 946	FASB ASC Topic 946, <i>Financial Services – Investment Companies</i>
ASC 948	FASB ASC Topic 948, <i>Financial Services – Mortgage Banking</i>
ASC 958	FASB ASC Topic 958, <i>Not-for-Profit Entities</i>

<b>Abbreviation</b>	<b>FASB Accounting Standards Updates</b>
ASU 2009-12	Accounting Standards Update No. 2009-12, <i>Fair Value Measurements and Disclosures (Topic 820): Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)</i>
ASU 2011-04	Accounting Standards Update No. 2011-04, <i>Fair Value Measurements and Disclosures (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs</i>
ASU 2011-08	Accounting Standards Update No. 2011-08, <i>Intangibles – Goodwill and Other (Topic 350): Testing Goodwill for Impairment</i>
ASU 2012-02	Accounting Standards Update No. 2012-02, <i>Intangibles – Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment</i>
ASU 2012-04	Accounting Standards Update No. 2012-04, <i>Technical Corrections and Improvements</i>
ASU 2015-10	Accounting Standards Update No. 2015-10, <i>Technical Corrections and Improvements</i>
ASU 2016-01	Accounting Standards Update No. 2016-01, <i>Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities</i>
ASU 2016-13	Accounting Standards Update No. 2016-13, <i>Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments</i>
ASU 2018-09	Accounting Standards Update No. 2018-09, <i>Codification Improvements</i>
ASU 2018-12	Accounting Standards Update No. 2018-12, <i>Financial Services – Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts</i>
ASU 2020-06	Accounting Standards Update No. 2020-06, <i>Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity</i>
ASU 2021-08	Accounting Standards Update No. 2021-08, <i>Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers</i>
ASU 2022-02	Accounting Standards Update No. 2022-02, <i>Financial Instruments – Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures</i>
ASU 2022-03	Accounting Standards Update No. 2022-03, <i>Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions</i>

<b>Abbreviation</b>	<b>Non-Authoritative Standards</b>
CON 7	FASB Statement of Financial Accounting Concept 7, <i>Using Cash Flow Information and Present Value in Accounting Measurements</i>
EITF 97-14	Emerging Issues Task Force Issue No. 97-14, <i>Accounting for Deferred Compensation Arrangements Where Amounts Earned Are Held in a Rabbi Trust and Invested</i>
EITF 02-3	Emerging Issues Task Force Issue No. 02-3, <i>Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities</i>
EITF 08-5	Emerging Issues Task Force Issue No. 08-5, <i>Issuer's Accounting for Liabilities Measured at Fair Value with a Third-Party Credit Enhancement</i>
EITF D-46	Emerging Issues Task Force Issue No. D-46, <i>Accounting for Limited Partnership Investments</i>
IAS 26	International Accounting Standard No. 26, <i>Accounting and Reporting by Retirement Benefit Plans</i>
IAS 36	International Accounting Standard No. 36, <i>Impairment of Assets</i>
IFRS 13	International Financial Reporting Standard No. 13, <i>Fair Value Measurement</i>
SAB Topic 5DD	Staff Accounting Bulletin, Topic 5: <i>Miscellaneous Accounting - DD. Written Loan Commitments Recorded at Fair Value Through Earnings</i>
SAB Topic 14	SEC Staff Accounting Bulletin, Topic 14, <i>Share-Based Payment</i>
SOP 93-6	Statement of Position 93-6, <i>Employers' Accounting for Employee Stock Ownership Plans</i>
Statement 115	FASB Statement No. 155, <i>Accounting for Certain Investments in Debt and Equity Securities</i>
Statement 123(R)	FASB Statement No. 123 (revised 2004), <i>Share-Based Payment</i>
Statement 157	FASB Statement No. 157, <i>Fair Value Measurements</i>
Statement 159	FASB Statement No. 159, <i>The Fair Value Option for Financial Assets and Financial Liabilities – Including an Amendment of FASB Statement No. 115</i>

<b>Abbreviation</b>	<b>SEC Accounting Series Releases</b>
Rule 4-10	SEC Regulation S-X Rule 4-10, <i>Financial accounting and reporting for oil and gas producing activities pursuant to the federal securities laws and the Energy Policy and Conservation Act of 1975</i>

# D Credit valuation adjustment for derivative contracts

## D.1 Introduction

As discussed in Questions 9.2-1 through 9.2-3, ASC 820 requires the consideration of both counterparty and own credit risk when determining the fair value of OTC derivative instruments. This appendix is intended to provide additional insight into certain of the approaches that we have observed to be used in practice to determine a nonperformance or credit valuation adjustment (CVA) when measuring the fair value of derivative contracts.

While the guidance in ASC 820 and market conditions during the 2007-2008 economic crisis resulted in a heightened level of awareness of counterparty risk, the concept of recognizing a CVA when measuring the fair value of derivative instruments is not new. The need to recognize an adjustment for counterparty credit risk has been a longstanding practice of derivative dealers (and other financial institutions) when valuing their derivative portfolios for both risk management and financial reporting purposes.

The determination of a CVA can be complex. Part of the complexity stems from the unique nature of nonperformance risk in many OTC derivative transactions.<sup>116</sup> Nonperformance risk associated with a derivative contract is similar to other forms of credit risk in that the cause of economic loss is an obligor's default before the maturity of the contract. However, for many derivative products, two features set nonperformance risk apart from traditional forms of credit risk in instruments such as debt:

- ▶ The uncertainty of the future exposure associated with the instrument. This is due to the uncertainty of future fair value changes in the derivative, as the cash flows required under the instrument stem from (1) movements in underlying variables that drive the value of the contract and (2) the progression of time toward the contract's expiration.
- ▶ The bilateral nature of credit exposure in many derivatives, whereby both parties to the contract face potential exposure in the future. This can occur in instruments such as swaps and forwards given the potential for these derivatives to "flip" from an asset to a liability (or vice versa), based on changes in the underlying variables to the contract (e.g., interest rates or foreign exchange rates).

In this appendix, we briefly discuss the theory behind the determination of a CVA. We then describe certain of the methodologies that we have observed to be used in practice. As no specific methodology is prescribed in the accounting literature, various approaches are used in practice by derivative dealers and end-users to estimate the effect of nonperformance risk on the fair value of derivative contracts. This appendix highlights the characteristics of some of these approaches. However, there may be other acceptable approaches used in practice that are not discussed in this appendix.

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<sup>116</sup> Similar to exchange-traded derivatives, CVAs for OTC derivatives that are centrally cleared are generally not deemed to be material given the margin requirements designed to minimize the nonperformance risk associated with these contracts. Refer to section D.4.1.

Estimating the CVA of a derivative contract or a derivative portfolio requires the use of significant judgment and the determination of a reasonable basis or methodology for estimating a nonperformance adjustment is not limited to a single approach. In determining the appropriateness of a particular approach, we believe reporting entities should consider various qualitative factors including:

- ▶ The materiality of the entity's derivative's carrying value to its financial statements
- ▶ The number and type of derivative instruments in the entity's portfolio
- ▶ The extent to which derivative instruments are either deeply in or out of the money
- ▶ The financial strength/creditworthiness of the parties to the transactions
- ▶ The existence and terms of credit mitigation arrangements (e.g., netting agreements, threshold levels of collateral arrangements)

The expected degree of sophistication in the methodology used by a reporting entity is influenced by the qualitative factors noted above.

In addition to the challenges associated with the determination of a CVA, questions have arisen regarding how these adjustments may affect hedge accounting requirements under ASC 815. This issue is addressed in our FRD, *Derivatives and hedging*.

## D.2 Overview

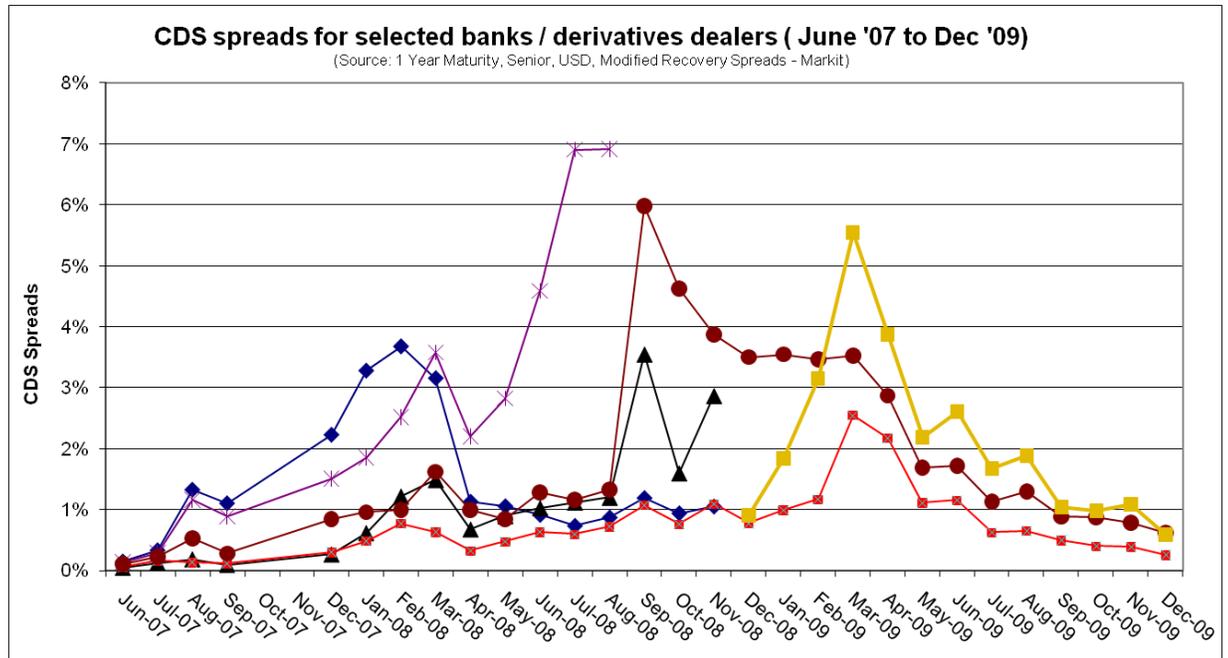
In July 1993, the Group of Thirty (then chaired by Paul Volcker) published a well-known study entitled *Derivatives: Practices and Principles* (the G30 Study), which made a series of recommendations related to the measurement and risk management of derivative instruments. One of the recommendations made in the G30 Study was that dealers and end-users should measure the credit exposure of their derivatives portfolios. To assess counterparty credit risk, the G30 Study noted that a dealer or end-user should ask the following two questions:

- ▶ If a counterparty were to default today, what would it cost to replace the derivative transaction?
- ▶ If a counterparty defaults in the future, what is a reasonable estimate of the future replacement cost?

These two questions remain fundamental to discussions surrounding the determination of a CVA and together address the issues of "current exposure" and "expected future exposure" for derivative transactions that will be discussed in more detail in this appendix.

Notwithstanding the recommendations in the G30 Study, many end-users historically did not explicitly incorporate counterparty nonperformance risk when valuing their derivatives. Instead of quantifying credit exposure, these companies managed their derivative nonperformance risk through a policy of transacting only with investment-grade counterparties, thereby attempting to minimize nonperformance risk. However, the clarification in ASC 820 that fair value represents an exit price from the perspective of market participants suggests that a quantitative approach to nonperformance risk is needed when measuring the value of a derivative contract or portfolio of contracts.

In addition, the 2007–2008 economic crisis served as an important reminder that even highly rated counterparties are subject to default risk, and that the perceived nonperformance risk associated with many derivative counterparties (both dealers and end-users) is not static. It also served to highlight that even investment-grade counterparties are not immune to changes in market participant expectations about their ability to perform. Likewise, the assumption that market participants view the nonperformance risk of investment grade counterparties to be relatively uniform did not hold true during periods of great uncertainty (e.g., 2007 through 2009), as illustrated in the graph below.



### D.3 Effect of ASC 820

While the concept of a CVA is not new, estimating the effect of bilateral nonperformance risk, as contemplated under ASC 820, on the fair value of derivative contracts, can be challenging. As previously noted, the lack of specific guidance in the accounting literature has resulted in a variety of methodologies being used to estimate a CVA. While these approaches can produce different estimates of fair value, as is the case with other estimates required in financial reporting, the use of different methodologies by different entities in a given situation does not necessarily imply that any of these entities is acting unreasonably.<sup>117</sup>

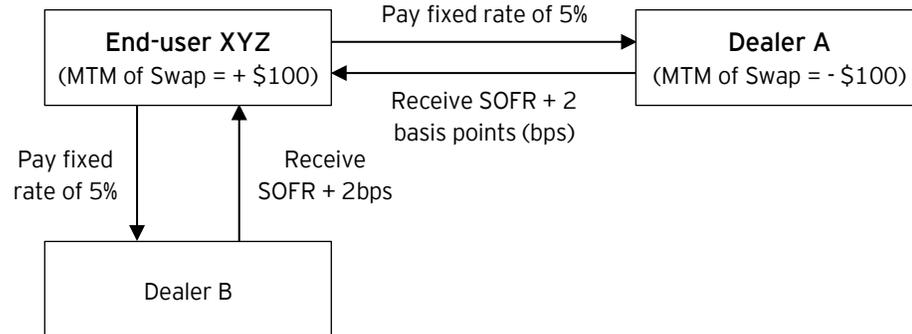
### D.4 Key nonperformance risk concepts

#### D.4.1 Replacement cost and expected exposure

Nonperformance risk in a derivative transaction is the risk that either party to the contract may fail to perform on its contractual obligations, thereby causing potential losses to the other party. The loss due to default is the cost to the non-defaulting party of replacing the existing contract, less any recovery of this cost received from the defaulting counterparty. Unlike many newly initiated derivative contracts that are typically executed at a net present value of zero and, therefore, require no exchange of cash upon issuance, a replacement derivative likely represents an "off-market" transaction. That is, at the time of default, the contract is likely to be either "in the money" or "out of the money" to the non-defaulting counterparty. Accordingly, the replacement cost could be either positive or negative depending on whether the derivative is in a receivable position or payable position from the perspective of the non-defaulting counterparty.

<sup>117</sup> This concept is specifically addressed in SAB Topic 14, which discusses the use of various methodologies to estimate the value of employee stock options under ASC 718.

The following example illustrates the concept of a positive replacement cost associated with a plain vanilla interest rate swap:



Assume the mark-to-market value<sup>118</sup> of the above swap between Dealer A and End-user XYZ is +\$100 to the end-user and -\$100 to the dealer. That is, the end-user has a derivative asset of \$100 while the dealer has a derivative liability of \$100. If Dealer A were to default on this contract today, End-user XYZ would look to replace this contract, presumably with another dealer (Dealer B). In order to enter into a swap contract with a positive value of \$100, End-user XYZ would be required to make a payment of \$100 to Dealer B upon execution of the contract. In addition, End-user XYZ would seek reimbursement on its receivable position of \$100 from Dealer A (which has filed for bankruptcy protection). Assume End-user XYZ recovers \$40 from its receivable with Dealer A through the bankruptcy estate. In this example, the loss incurred by End-user XYZ due to the default of Dealer A is \$60 (replacement cost of \$100 less reimbursement of \$40).

If this swap transaction were recorded simply at its mark-to-market value of \$100, the \$60 loss incurred by End-user XYZ would not be recognized until incurred (i.e., at the time of default). However, a fair value measurement for the derivative is intended to consider the exit price for the instrument at the measurement date, which would include assumptions market participants would make regarding any expected loss due to counterparty default, both today and in the future. As such, assuming no forms of credit risk mitigation, such as collateral, are in place, market participants would likely not pay \$100 to step into End-user XYZ's shoes in this swap if they determined there was, for example, a 20% chance that Dealer A would default at some point during the contract and the market participant would suffer a 60% loss in the event of default. Instead, the amount a market participant would be willing to pay to assume this swap from End-user XYZ would likely be impacted by its assumptions regarding the creditworthiness of the counterparty to the swap. Stated simply, the lower the probability of default by the counterparty, the smaller the required CVA and the closer to \$100 a market participant would likely be willing to pay for the derivative asset.

The above example is purposely simplistic and is intended solely to illustrate the need for a CVA in considering counterparty nonperformance risk. (The concept of negative replacement cost and own nonperformance risk is discussed later in the appendix.) In practice, determining the expected loss on derivatives contracts can be complex in that it considers the probability of default (PD) by the counterparty (both today and in the future), the loss given default<sup>119</sup> (LGD), and exposure at default (EAD). Mathematically, the expected loss can be expressed as follows:

$$\text{Expected loss} = \text{PD} * \text{EAD} * \text{LGD}$$

<sup>118</sup> The value determined based on a mid-market SOFR curve, thereby excluding any consideration of either nonperformance risk or bid-ask spread.

<sup>119</sup> Loss given default is the portion of the credit exposure that will not be recovered following default and is commonly thought of as the inverse of the recovery rate (LGD = 1 – recovery rate).

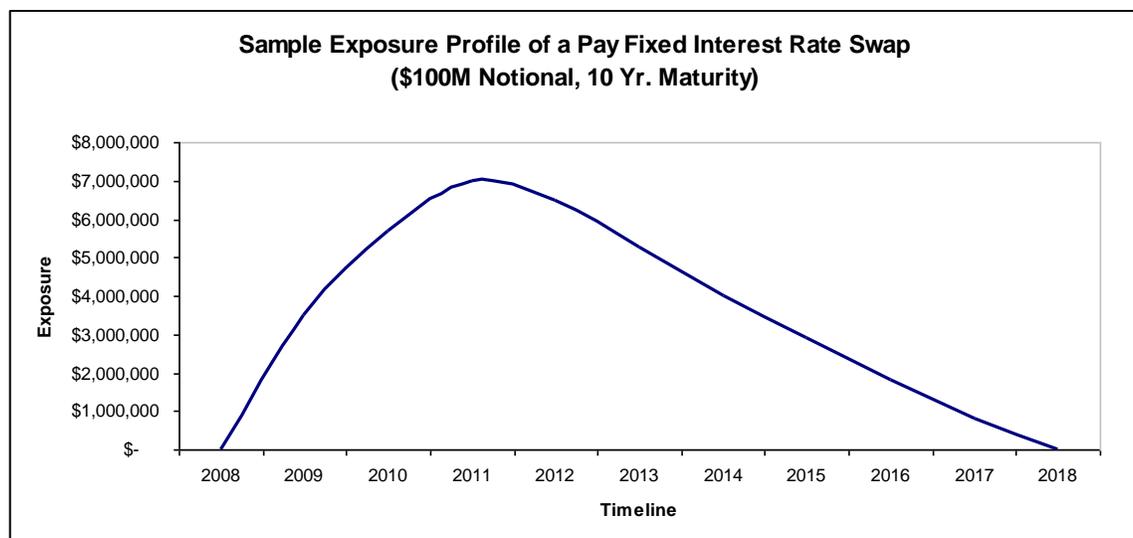
## How we see it

### Centrally cleared derivatives and CVA

The increase in central clearing for many derivative transactions significantly affects the concept of exposure at default (EAD) when estimating CVAs. Because centrally cleared derivatives are subject to initial margin and variation margin requirements, the EAD for these transactions may be significantly reduced or eliminated. Variation margin payments serve as either ongoing partial settlements of the derivative exposure or as collateral for expected EAD and initial margin providing a buffer for potential increases in exposure between the time of default and the period needed to close out the positions. Additionally, margin requirements on the central clearing house's other external derivative transactions serve to reduce the central clearing house's own probability of default (PD). As a result, the insulated operational structure inherent in central clearing contributes to a further reduction in the CVA associated with centrally cleared derivatives.

While many inter-bank derivative transactions are generally required to be centrally cleared (e.g., vanilla interest rate swaps), we continue to observe that a significant volume of derivative transactions with end-users and/or transactions with unique features or structures (e.g., embedded options) are not centrally cleared<sup>120</sup> and, therefore, not subject to daily variation margin requirements. The examples that follow in this appendix are focused on end-user transactions and, therefore, illustrate consideration of CVA in non-centrally cleared transactions.

As previously noted, one reason why the determination of a CVA can be complex is the unique nature of nonperformance risk in certain types of derivatives due to uncertain future exposure that is bilateral in nature. Whereas the credit exposure for a plain vanilla debt instrument stays constant over its life (e.g., fixed principal or face amount), the credit exposure of a derivative contract varies and for many instruments has the possibility of being either positive (a receivable) or negative (a payable) at different points in time. As such, estimating the credit exposure at the time of a potential default can be challenging, as it requires consideration of both current exposure and expected future exposure. The expected exposure profile of a typical interest rate swap is shown in the figure below.



<sup>120</sup> The mandatory clearing requirements resulting from the Dodd-Frank Act include a so-called "end-user exception" that allows certain derivative transactions to not be centrally cleared when, among other requirements, the derivative transaction involves a nonfinancial end-user who is using the derivative to hedge a commercial risk.

The expected positive exposure (at issuance) for the interest rate swap illustrated above over its term maturity is represented by the curve. The expected exposure profile may be determined by computing the expected positive value of the swap at a series of discrete dates in the future. Simply put, the objective is to project the expected replacement cost of the swap at different points in the future. For example, positive expected future exposure for a plain-vanilla pay-fixed interest rate swap could stem from scenarios of rising interest rates in the future. Although the current exposure at issuance is zero, the expected positive exposure for the swap illustrated above is expected to exceed \$6 million around 2011. As such, if the counterparty to this swap were to default in 2011 the replacement cost to the non-defaulting counterparty in a receivable position at the time of default is expected to be approximately \$6 million.

For an interest rate swap, the following two main factors determine the expected exposure over time for a single transaction (or a portfolio of transactions with the same counterparty):

- ▶ Diffusion – The effect of change in the underlying market variables as the instrument progresses farther away from the initiation date
- ▶ Amortization – The effect of the passage of time as the instrument approaches maturity (see the gray box below for further discussion of diffusion and amortization effects)

It is important to note that the determination of expected exposure is a point-in-time estimate of how exposures are expected to behave in the future. Exposures are estimated (often using simulation techniques) based on the current mark-to-market value of the swap, as well as other current market inputs (e.g., implied volatility). Since these inputs are dynamic in nature, the expected exposure needs to be updated as of each measurement date.

## How we see it

### The effects of diffusion and amortization\*

The “hump-back” profile exhibited in the graph above is due to the offsetting effects of the passage of time on (1) the magnitude of the potential movement in the underlying variables and (2) the number of cash flows that need to be replaced if a default should occur. The first effect of the passage of time on expected exposure is that it increases the probability that the underlying variable(s) will drift substantially away from its initial value. This “diffusion effect” is primarily determined by the volatility of the underlying variable(s). The second effect of the passage of time, called the “amortization effect,” is the reduction in the number of cash flows that need to be replaced. For interest rate swaps, the offsetting nature of the diffusion effect and the amortization effect creates the hump-back shape, as the passage of time increases the potential for large per annum replacement costs, but reduces the number of years of cash flows that need to be replaced.

If a default occurs immediately after the swap is executed, ten years of cash flows will need to be replaced, but it is unlikely that the swap rate will have moved very far from its initial level in such a brief period. Consequently, the expected exposure is low because the diffusion effect is low. At the other extreme, if a default occurs just prior to the swap’s last payment date, the market swap rate could be substantially different from its initial level, but because only one cash flow will need to be replaced, the expected exposure is likely also going to be low. The peak exposure (top of the hump) occurs at the point during the swap’s life when sufficient time has passed for the per-annum replacement cost to be high, and sufficient time still remains for the impact of a high per-annum replacement cost to be meaningful.

In addition, the expected exposure profile will depend on the cash flow pattern of the instrument being measured. This pattern will reflect the terms of the specific instrument but will also differ generally based on the type of derivative. For example, in single cash flow products, such as foreign currency forwards, the expected exposure typically peaks at the maturity of the transaction because there is purely diffusion effect, but no amortization effect, until the maturity date. For products with multiple cash flows, such as interest rate swaps, the expected exposure usually peaks at about one-third to one-half of the way into the life of the transaction. Standard interest rate swaps, and other derivatives with periodic payments and no final exchange of principal, tend to have hump-backed exposure profiles, as depicted in the exhibit. However, if the derivative transaction includes a final exchange of principal, as many cross-currency swaps do, the expected exposure profile tends to be upward sloping, since the final exchange of principal increases the importance of the diffusion effect and reduces the amount by which the cross-currency swap amortizes.

Options do not generally have periodic payments but are characterized by an up-front payment of the option premium and a final option payoff at maturity. Accordingly, the amortization effect is limited to the time decay of the option price, and expected exposure is dominated by the diffusion effect. That is, the longer the time period, the greater the potential for movements in the underlying variable, potentially generating a large exposure on the option payoff. In contrast to swaps, purchased options with up-front premiums create an immediate mark-to-market exposure equal to the option premium at inception. If the option seller defaults immediately, the option buyer must pay another option premium (to another seller) to replace the option, even if there has been no movement in the underlying variables.

\* The discussion of diffusion and amortization effects is based on an 18 September 2006 paper by Michael Pykhtin and Steven Zhu entitled "Measuring Counterparty Credit Risk for Trading Products under Basel II."

## D.4.2

### Portfolio valuation and the consideration of credit mitigation arrangements

To this point, only the nonperformance risk associated with a single derivative transaction has been addressed. However, in practice, nonperformance risk is often assessed, and a CVA determined, at the counterparty or netting group level (i.e., the portfolio of all contracts with a given counterparty covered under a netting agreement). As discussed in section 10, the measurement exception in ASC 820 allows a reporting entity to measure the net nonperformance risk of a portfolio of derivatives to a single counterparty, assuming that there is an arrangement in place that mitigates credit risk upon default (e.g., master agreement with a credit support annex).

A master agreement is a legally binding contract between two counterparties to net exposures under other contracts (e.g., derivative contracts) between the same two parties. Such netting may be affected with respect to periodic payments ("payment netting"), settlement payments following the occurrence of an event of default ("close-out netting") or both. In cases of default, these agreements serve to protect the parties from paying out on the gross amount of its payable positions, while receiving less than the full amount on its gross receivable positions with the same counterparty.

Master agreements are only one of the tools used to mitigate nonperformance risk. In many instances, counterparty credit exposure in derivative transactions can be further reduced through collateral requirements. Collateral arrangements serve to limit the expected exposure of one counterparty to the other by requiring the out-of-the-money counterparty to post collateral (e.g., cash or liquid securities) to the in-the-money counterparty. Collateral arrangements are usually documented and specified in the form of a credit support annex (CSA) to the master agreement. The CSA regulates credit support (collateral) for derivative transactions, containing provisions concerning the posting and return of collateral, the types of collateral that may be used, and the treatment of collateral by the secured party.

While these and other credit mitigation arrangements often serve to reduce credit exposure, they typically do not eliminate the exposure completely. For example, many collateral agreements do not require collateral to be posted until a certain threshold has been reached, and, once reached, collateral is required only for the exposure in excess of the threshold. Further, “minimum transfer amounts” specify the increments in which collateral amounts are required to be posted. Changes in fair value below these amounts will not require an immediate posting of additional collateral. In addition, even when transactions with a counterparty are subject to collateral requirements, entities remain exposed to what is commonly referred to as “gap risk” (i.e., the exposure from fluctuations in the value of the derivatives between the time in which collateral is called and the time it is actually posted). Finally, collateral arrangements may be either unilateral or bilateral. Unilateral arrangements require only one party to the contract to post collateral, whereas under bilateral agreements, both counterparties are subject to collateral requirements, although potentially at different threshold levels.<sup>121</sup>

While not completely eliminating nonperformance risk, these agreements help to limit credit exposure and, as such, are typically considered in determining the expected exposure and consequently the CVA for a portfolio of derivatives. This can add to the complexity of the calculation as expected credit exposure must be determined not just for a single derivative contract (whose value changes over time), but instead for a portfolio of derivative contracts (which can include both derivative assets and derivative liabilities). Simply taking the sum of individual exposures could dramatically overstate the portfolio’s expected exposure as it would not take into account positions in the portfolio with offsetting exposures. As such, when netting agreements and collateral arrangements are in place, and a company has elected to measure its derivative positions with offsetting nonperformance risk using the measurement exception discussed in section 10, expected exposure is generally analyzed at the portfolio level (i.e., on a net basis).

## D.5

### Consideration of own nonperformance risk under ASC 820

Derivative contracts accounted for under ASC 815 are measured at fair value in accordance with ASC 820. As discussed in section 9, the issue of nonperformance risk is addressed both implicitly and explicitly in the fair value measurement guidance. With respect to the consideration of a counterparty’s nonperformance risk, the guidance is implicit, in that it requires that fair value be determined based on the assumptions that market participants would use in pricing the instrument. Therefore, if market participants would consider counterparty’s nonperformance risk in pricing the derivative contract, a reporting entity’s valuation methodology should incorporate the effect of this risk on the fair value measurement.

With respect to the consideration of an entity’s own nonperformance risk, the guidance in ASC 820 is explicit. ASC 820-10-35-17 states that “the fair value of a liability reflects the effect of nonperformance risk.” As discussed in section 9, nonperformance risk refers to the risk that an obligation will not be fulfilled. ASC 820 also clarifies that a fair value measurement of a liability assumes that the liability is transferred to a market participant at the measurement date, and that the nonperformance risk relating to that liability is the same before and after its transfer. This implies that the liability is transferred to a market participant of equal credit standing and that the liability to the counterparty continues and is not settled.

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<sup>121</sup> The threshold levels in a collateral arrangement are negotiated by the counterparties, but are typically a function of the credit quality of each entity.

Prior to the issuance of ASC 820, the methodologies used by many dealers focused solely on positive expected exposure, and the recorded CVA served to decrease the mark-to-market values of derivative assets (or sometimes increase the mark-to-market value of derivative liabilities, as these contracts may have had positive expected future exposure based on the likelihood of the contract “flipping” to an asset position). Said another way, the CVA represented a “credit” balance from an accounting perspective. The consideration of both a counterparty’s and the entity’s own nonperformance risk in the determination of CVAs increases the complexity of the calculation, and can frequently result in a decrease to the mark-to-market value of a derivative liability (i.e., the adjustment for nonperformance risk can be a “debit” balance from an accounting perspective, also referred to as a debit value adjustment (DVA)).<sup>122</sup>

## How we see it

Many derivative dealers include a funding valuation adjustment (FVA) in the valuation of their uncollateralized derivative positions to capture the funding cost (or benefit) that results from posting (or receiving) collateral on inter-bank transactions used to economically hedge the market risk associated with these uncollateralized trades.<sup>123</sup> Because the methods for determining FVA can vary, determining whether these methods comply with ASC 820 requires consideration of the facts and circumstances.

The consideration of own nonperformance risk is conceptually consistent with the hypothetical transfer of a liability contemplated in the fair value guidance. For example, assuming the terms of the swap considered the credit standing of the end-user at the date of initiation, those terms would be deemed “off-market” if the credit standing of the company subsequently deteriorated. That is, assuming all other factors remain constant, the terms of the existing swap (the instrument being measured) are more favorable than what the company could otherwise obtain if it were to enter into the identical transaction on the measurement date. Likewise, the terms are more favorable than that which an entity of equal credit standing (the hypothetical transferee) could obtain if it were to enter into the identical swap as of the measurement date.

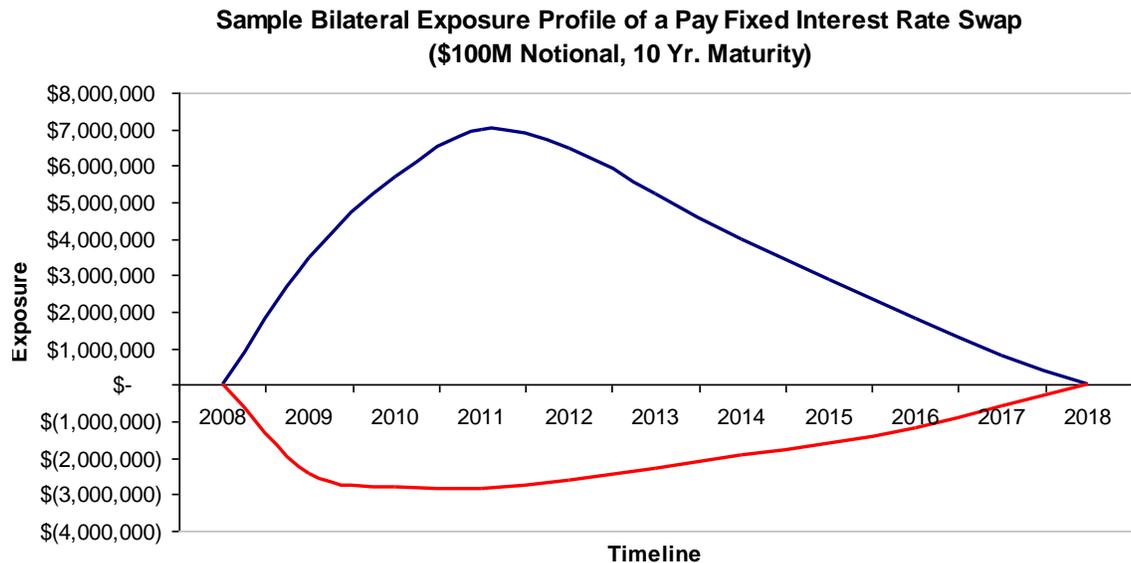
Notwithstanding these points, many constituents continue to believe that the recognition of an accounting gain when an entity’s own credit standing has deteriorated is counterintuitive. In response to these concerns, the FASB issued guidance in ASU 2016-01 on the presentation of nonperformance risk for financial liabilities measured using the fair value option in ASC 825. This guidance requires entities to present separately in OCI the change in the fair value of such liabilities caused by a change in the entity’s own credit risk. However, it is important to note that this guidance does not apply to derivative instruments that are required to be measured at fair value in accordance with ASC 815. As a result, the change in fair value of a derivative instrument related to an entity’s own nonperformance risk continues to be recognized directly in earnings.

<sup>122</sup> The bilateral exposure associated with instruments like swaps, coupled with the consideration of changes in the credit standing of both parties to the contract, can result in increases or decreases to the mark-to-market value of both derivative assets and derivative liabilities.

<sup>123</sup> For example, a derivative dealer would incur a funding cost on an uncollateralized derivative that is in an asset position, because the dealer would need to fund the collateral required on its inter-bank hedge of this position (as the hedge would be in a liability position). Alternatively, a derivative dealer would enjoy a funding benefit on an uncollateralized derivative that is in a liability position, if the dealer receives collateral that it can re-hypothecate on its inter-bank hedge of this position (since the hedge would be in an asset position).

## D.6 Negative expected exposure

The consideration of both counterparty and own nonperformance risk in the determination of a CVA for derivative contracts requires an assessment of both positive and negative total expected exposure. This concept is shown graphically below using the same exposure profile from the illustrative swap example above.



As shown above, the expected exposure for an interest rate swap can be either positive (swap in an asset position) or negative (swap in a liability position). As previously noted, prior to the adoption of the fair value measurement guidance, expected negative exposure (represented by the area between the bottom curve and the X-axis) was generally not considered by those entities that determined a CVA, because it did not result in any counterparty credit exposure to the reporting entity.<sup>124</sup> The clarification regarding the consideration of own nonperformance risk in measuring the fair value of liabilities introduced a CVA for the risk that the reporting entity will default and, therefore, be unable to fulfill its contractual obligation (also known as a DVA).

It is important to note that while the CVA for a derivative with bilateral exposure is estimated by taking into account both positive and negative expected exposures, the CVA is not calculated based on a net expected exposure amount (e.g., positive less negative exposure). Instead, the CVA is calculated based on the sum of the (1) credit adjustment related to the positive expected exposure and (2) credit adjustment related to the negative expected exposure. The credit adjustment based on the positive expected exposure considers the probability of default and loss given default of the counterparty (essentially assessing the risk of the counterparty defaulting when the swap is in an asset position). Alternatively, the credit adjustment based on the negative expected exposure considers the probability of default and loss given default of the reporting entity (essentially assessing the likelihood of the reporting entity defaulting when the swap is in a liability position).

<sup>124</sup> Historically, the results of all simulation scenarios were included in the determination of a CVA; however, those scenarios that resulted in a negative exposure were assigned an exposure amount of zero when determining the positive expected exposure.

Continuing the example used above of a plain-vanilla pay-fixed interest rate swap, negative expected exposure could stem from scenarios of decreasing interest rates in the future.<sup>125</sup> Because interest rates may either rise or fall in the future, the swap could be in an asset or a liability position at the time of default (by either counterparty). For negative expected exposures, the reporting entity would consider its own probability of default (both today and in the future), instead of that of its counterparty. Likewise, the loss given default would consider the expected payout or reimbursement by the reporting entity upon its own default.

## D.7 Discussion of various methodologies used to determine CVA

As previously noted, no specific methodology to measure nonperformance risk is prescribed in the accounting literature. ASC 820 is a principles-based standard intended to provide a general framework for measuring fair value. It was not intended to provide detailed “how-to” guidance on calculating the fair value of various classes of assets and liabilities. Likewise, ASC 815 does not provide specific valuation guidance related to derivative instruments. As a result, extensive judgment needs to be applied, potentially resulting in diversity in the methods and approaches used to quantify nonperformance risk, particularly as it pertains to derivative instruments. As discussed above, a variety of factors may influence the methodology an entity chooses to employ for estimating CVA, including (1) the materiality of the derivative’s carrying value to its financial statements, (2) the number and type of derivatives in the entity’s portfolio, (3) the extent to which the derivatives are in or out of the money, (4) the financial strength/creditworthiness of the parties to the transactions and (5) the existence and terms of credit mitigation arrangements.

## D.8 Expected future exposure approach

Many derivative dealers (and other financial institutions with large derivative portfolios) have implemented methodologies in a manner consistent with the theory discussed above. That is, they determine a counterparty-level CVA, considering both current and expected exposures generated using simulation techniques (e.g., Monte Carlo simulation) and assumptions about the volatility of the applicable underlying variables, which may result in both positive and negative exposures. Expected exposures can also be estimated using replicating portfolios wherein, for example, expected exposures for interest rate swaps are estimated using swaption values.

The expected exposures and LGD assumptions should reflect the risk mitigation benefits of any existing credit enhancements (e.g., netting agreements, collateral arrangements).<sup>126</sup> While the exact methodologies used will likely differ by financial institution, we broadly refer to these methodologies as the Expected Future Exposure (EFE) approach.<sup>127</sup>

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<sup>125</sup> Expected exposure is affected by factors in addition to potential future movements in interest rates. For example, the diffusion and amortization effects, based on the particular characteristics of the instrument, could also have a significant effect.

<sup>126</sup> Certain sophisticated methodologies will also attempt to quantify gap risk.

<sup>127</sup> Additional discussion regarding methodologies that consider expected future exposure can be found in various academic papers, including Eduardo Canabarro’s and Darrell Duffie’s “*Measuring and Marking Counterparty Risk*” from *Asset/Liability Management of Financial Institutions*, Euromoney Books 2003.

## D.9 Current exposure methodologies

While the EFE approach may be considered the most theoretically pure approach, it can be very complex and require significant resources to implement. As such, many reporting entities have adopted alternative approaches for estimating the effect of nonperformance risk on their derivative contracts. While a variety of less complex approaches exist, they typically have the common thread of focusing on current exposure. That is, they do not incorporate simulation (or other valuation techniques) to predict the expected future exposures associated with the derivative instrument(s) being measured. We refer to these approaches as current exposure methodologies.

The following examples are used to illustrate some of the current exposure methodologies we have observed in practice for determining a CVA for derivative transactions. These simplified examples are intended solely to illustrate the particular methodology being discussed and should not be relied upon for any other purpose and may not be appropriate in all instances given the considerations noted above. Plain-vanilla interest rate swaps are used in all the examples illustrated. In addition to being one of the most common types of derivatives (used by many entities to hedge), interest rate swaps exhibit the two unique characteristics of nonperformance risk described earlier: (1) uncertain future exposure that is (2) bilateral in nature.

The three current exposure methodologies discussed are:

- ▶ Discounted cash flow approaches (single credit spread and multiple credit spreads)
- ▶ Variable exposure approach
- ▶ Constant exposure approach

### D.9.1 Discounted cash flow approaches

Under a discounted cash flow approach, nonperformance risk is incorporated into the valuation of a derivative by adjusting the discount rate used to present value projected future cash flows to incorporate the credit spreads of the entity in a payable position. The discount rate will be a risk-adjusted rate or curve, typically comprised of a base rate (e.g., SOFR or Fed Funds) and a credit spread.

After determining the base rate, a credit spread relative to that base rate, or a term structure of credit spreads, is added to the base rate curve to account for the increased nonperformance risk associated with the reporting entity, the counterparty or both. This risk-adjusted curve is then used to calculate the present value of expected cash flows.

It should be noted that all future cash flows are projected based on the contractual rate specified in the derivative contract (e.g., a floating rate such as SOFR plus 250 basis points, or a fixed rate). That is, changes in credit standing are only incorporated into the discount rate because nonperformance risk reflects the likelihood that a contractual cash flow will not be received (or paid); it does not affect the determination of the contractual amount.

In the examples that follow, three-month Term SOFR<sup>128</sup> rates are used to project expected floating rate cash flows and the net of fixed and floating rate cash flows are discounted using a SOFR-based rate curve.

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<sup>128</sup> Term SOFR swaps are used in the following examples for simplicity purposes. However, there may be limitations on the use of Term SOFR derivatives in accordance with the Alternative Reference Rate Committee (ARRC) scope of use "best practice" recommendations (see <https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2023/ARRC-Term-SOFR-Scope-of-Use-Best-Practice-Recommendations.pdf>).

## D.9.1.1

## Single credit spread (updated September 2023)

Under a single credit spread approach, the credit spread used to adjust the discount rate is determined considering only the current mark-to-market value (or current exposure) of the instrument. If the swap is currently in an asset position, all cash flows within the swap are discounted based on a curve adjusted for the counterparty's nonperformance risk. Alternatively, if the derivative is currently in a liability position, all cash flows are discounted based on a curve adjusted for the reporting entity's own nonperformance risk. An example of the single credit spread approach is provided below.

**Illustration D.9.1-1: DCF approach using a single curve**

Interest rate swap terms and inputs	
Notional	200,000,000
Fixed rate	4.00%
Floating rate	3-month Term SOFR
Term to maturity (years)	4.78
Counterparty's credit spread	1.50%
"Own credit" spread	3.00%

Remaining Periods	Period Days (Actual)	Implied Forward Rate	Receive Fixed Cash Flow	Pay Float Cash Flow	Net Cash Flow	Discount Factor	PV Net Cash Flow (USD)	Zero Coupon Rate (Annual)	Applicable Credit Spread	Credit Adjusted Zero Rate	Credit Adjusted DF	Post CVA Value (USD)	
1	92	4.2500%	2,044,444	(2,172,222)	(127,778)	0.998686	(127,610)	4.4627%	1.5000%	5.9627%	0.998257	(127,555)	
2	90	4.6279%	2,000,000	(2,313,962)	(313,962)	0.987264	(309,964)	4.7446%	1.5000%	6.2446%	0.983389	(308,747)	
3	91	4.9595%	2,022,222	(2,507,292)	(485,069)	0.975040	(472,962)	4.9260%	1.5000%	6.4260%	0.967792	(469,446)	
4	92	4.9476%	2,044,444	(2,528,781)	(484,337)	0.962866	(466,351)	4.9871%	1.5000%	6.4871%	0.952303	(461,235)	
5	92	4.7620%	2,044,444	(2,433,935)	(389,490)	0.951289	(370,518)	4.9706%	1.5000%	6.4706%	0.937495	(365,145)	
6	91	4.3953%	2,022,222	(2,222,072)	(199,849)	0.940836	(188,025)	4.8855%	1.5000%	6.3855%	0.923908	(184,643)	
7	91	4.0415%	2,022,222	(2,043,213)	(20,991)	0.931321	(19,549)	4.7675%	1.5000%	6.2675%	0.911313	(19,129)	
8	92	3.7463%	2,044,444	(1,914,789)	129,656	0.922489	119,606	4.6379%	1.5000%	6.1379%	0.899416	116,614	
9	94	3.5082%	2,088,889	(1,832,036)	256,853	0.914116	234,794	4.5070%	1.5000%	6.0070%	0.887962	228,076	
10	88	3.3277%	1,955,556	(1,629,309)	326,247	0.906729	295,817	4.3921%	1.5000%	5.8921%	0.877736	286,358	
11	91	3.2162%	2,022,222	(1,625,968)	396,254	0.899417	356,398	4.2842%	1.5000%	5.7842%	0.867536	343,765	
12	95	3.1515%	2,111,111	(1,663,294)	447,817	0.891999	399,452	4.1859%	1.5000%	5.6859%	0.857159	383,850	
13	90	3.1423%	2,000,000	(1,571,145)	428,855	0.885046	379,556	4.1076%	1.5000%	5.6076%	0.847460	363,437	
14	91	3.1756%	2,022,222	(1,605,432)	416,790	0.877998	365,941	4.0431%	1.5000%	5.5431%	0.837696	349,143	
15	91	3.2026%	2,022,222	(1,619,075)	403,147	0.870948	351,120	3.9898%	1.5000%	5.4898%	0.827990	333,802	
16	92	3.2130%	2,044,444	(1,642,177)	402,267	0.863855	347,501	3.9437%	1.5000%	5.4437%	0.818270	329,163	
17	90	3.2061%	2,000,000	(1,603,070)	396,930	0.856986	340,163	3.9038%	1.5000%	5.4038%	0.808885	321,071	
18	91	3.1889%	2,022,222	(1,612,176)	410,046	0.850133	348,594	3.8671%	1.5000%	5.3671%	0.799539	327,848	
19	91	3.1806%	2,022,222	(1,607,956)	414,266	0.843352	349,372	3.8339%	1.5000%	5.3339%	0.790318	327,402	
20	92	3.1860%	2,044,444	(1,628,377)	416,067	0.836541	348,058	3.8042%	1.5000%	5.3042%	0.781093	324,987	
Mark-to-market value								2,281,392	Credit adjusted MTM				2,099,617

Notes:

- The measurement date is not assumed to coincide with the start date of the swap
- Discount factors are derived from the SOFR curve
- Net present value of cash flows represent net cash flows discounted to the current measurement date using applicable discount factor

Derivative is an asset  
Credit valuation adjustment (181,776)  
CVA is a "credit" balance

In this example, the mark-to-market value of the swap (where the entity receives 4.00% fixed quarterly and pays three-month Term SOFR) before credit spreads are taken into consideration is an asset of \$2.28 million. Because the swap is in an asset position, the counterparty's credit spread of 1.50%<sup>129</sup> is used for discounting all cash flows of this swap, even though some of the component cash flows are payables. This approach results in the projected negative cash flows (i.e., where projected future cash flows based on the current yield curve result in a net payable by the reporting entity for that particular swap) being discounted based on a rate that is commensurate with the nonperformance risk of the counterparty and not of the reporting entity. Using the single credit spread DCF approach, the credit-adjusted net present value (NPV) of the swap is an asset of \$2.10 million. That is, the asset has decreased by approximately \$0.18 million.

<sup>129</sup> For simplicity purposes, the credit spreads in all of the illustrative examples in this appendix are kept constant (i.e., the term structure of credit spreads is ignored). However, in reality, credit spreads tend to increase with the maturity of the instrument.

A potential limitation in using either own credit spreads or counterparty credit spreads for discounting an entire term structure of cash flows in a swap, is that cash inflows and outflows are assumed to be of equal nonperformance risk when this may not be the case.<sup>130</sup> The implications of using such an approach when net cash flows are expected to “flip” during the life of the instrument can be observed by comparing the results between the single credit spread approach and the multiple credit spread approach for an identical swap, as illustrated in the next section.

### D.9.1.2 Multiple credit spreads (updated September 2023)

The multiple credit spread approach considers the nature of the component cash flows (i.e., either net pay or receive) in determining which credit spread is used to compute the credit adjusted discount rate.

An example of the multiple credit spread approach is provided below.

Illustration D.9.1-2: DCF approach using multiple curves											
Interest rate swap terms and inputs											
Notional	200,000,000										
Fixed rate	4.00%										
Floating rate	3-month Term SOFR										
Term to maturity (years)	4.78										
Counterparty's credit spread	1.50%										
"Own credit" spread	3.00%										

Remaining Periods	Period Days (Actual)	Implied Forward Rate	Rec Fixed Cash Flow	Pay Float Cash Flow	Net Cash Flow	Discount Factor	PV Net Cash Flow (USD)	Zero Coupon Rate (Annual)	Applicable Credit Spread	Credit Adjusted Zero Rate	Credit Adjusted DF	Post CVA Value (USD)
1	92	4.2500%	2,044,444	(2,172,222)	(127,778)	0.998686	(127,610)	4.4627%	3.0000%	7.4627%	0.997835	(127,501)
2	90	4.6279%	2,000,000	(2,313,962)	(313,962)	0.987264	(309,964)	4.7446%	3.0000%	7.7446%	0.979584	(307,553)
3	91	4.9595%	2,022,222	(2,507,292)	(485,069)	0.975040	(472,962)	4.9260%	3.0000%	7.9260%	0.960698	(466,005)
4	92	4.9476%	2,044,444	(2,528,781)	(484,337)	0.962866	(466,351)	4.9871%	3.0000%	7.9871%	0.942002	(456,246)
5	92	4.7620%	2,044,444	(2,433,935)	(389,490)	0.951289	(370,518)	4.9706%	3.0000%	7.9706%	0.924090	(359,924)
6	91	4.3953%	2,022,222	(2,222,072)	(199,849)	0.940836	(188,025)	4.8855%	3.0000%	7.8855%	0.907516	(181,367)
7	91	4.0415%	2,022,222	(2,043,213)	(20,991)	0.931321	(19,549)	4.7675%	3.0000%	7.7675%	0.892006	(18,724)
8	92	3.7463%	2,044,444	(1,914,789)	129,655	0.922489	119,606	4.6379%	1.5000%	6.1379%	0.899416	116,614
9	94	3.5082%	2,088,889	(1,832,036)	256,853	0.914116	234,794	4.5070%	1.5000%	6.0070%	0.887962	228,076
10	88	3.3327%	1,955,556	(1,629,309)	326,247	0.906729	295,817	4.3921%	1.5000%	5.8921%	0.877736	286,358
11	91	3.2162%	2,022,222	(1,625,968)	396,254	0.899417	356,398	4.2842%	1.5000%	5.7842%	0.867536	343,765
12	95	3.1515%	2,111,111	(1,663,294)	447,817	0.891999	399,452	4.1859%	1.5000%	5.6859%	0.857159	383,850
13	90	3.1423%	2,000,000	(1,571,145)	428,855	0.885046	379,556	4.1076%	1.5000%	5.6076%	0.847460	363,437
14	91	3.1756%	2,022,222	(1,605,432)	416,790	0.877998	365,941	4.0431%	1.5000%	5.5431%	0.837696	349,143
15	91	3.2026%	2,022,222	(1,619,075)	403,147	0.870948	351,120	3.9898%	1.5000%	5.4898%	0.827990	333,802
16	92	3.2130%	2,044,444	(1,642,177)	402,267	0.863855	347,501	3.9437%	1.5000%	5.4437%	0.818270	329,163
17	90	3.2061%	2,000,000	(1,603,070)	396,930	0.856986	340,163	3.9038%	1.5000%	5.4038%	0.808885	321,071
18	91	3.1889%	2,022,222	(1,612,176)	410,046	0.850133	348,594	3.8671%	1.5000%	5.3671%	0.799539	327,848
19	91	3.1806%	2,022,222	(1,607,956)	414,266	0.843352	349,372	3.8339%	1.5000%	5.3339%	0.790318	327,402
20	92	3.1860%	2,044,444	(1,628,377)	416,067	0.836541	348,058	3.8042%	1.5000%	5.3042%	0.781093	324,987
Mark-to-market value							2,281,392	Credit adjusted MTM				2,118,198

Notes:	Derivative is an asset	Credit valuation adjustment (163,194)	CVA is a "credit" balance
1) The measurement date is not assumed to coincide with the start date of the swap			
2) Discount factors are derived from the SOFR curve			
3) Net present value of cash flows represent net cash flows discounted to the current measurement date using applicable discount factor			

The interest rate swap used in Illustration D.9.1-2 is identical to the swap in Illustration D.9.1-1. Under the multiple credit spread approach, negative net cash flows are discounted using a credit-adjusted discount factor calculated using the reporting entity’s own credit spread of 3.00%. Positive net cash flows are discounted using a credit-adjusted discount factor calculated using the counterparty’s credit spread (1.50%). Under this approach, the credit-adjusted NPV of the swap is an asset of \$2.12 million. That is, the CVA serves to reduce the mark-to-market asset value by \$0.16 million.

<sup>130</sup> If all the cash flows of the swap in this example had been payables, or the two counterparties had equivalent credit spreads, the limitation of this methodology would not have had an effect.

## D.9.2 Variable exposure approach (updated September 2023)

The variable exposure approach is based on the premise that the CVA on a derivative contract (or portfolio of contracts) can be estimated as the cost to purchase protection against the risk of loss if the counterparty were to default. To protect itself from credit-related losses on a derivative transaction, an entity could theoretically purchase credit protection on the amount of exposure to a given counterparty where the exposure amount varies over time and the exposure is calculated as the sum of all outstanding expected cash flows as of that period.<sup>131</sup>

For example, an end-user in a receivable (i.e., asset) position on an interest rate swap is exposed to the nonperformance risk of its dealer counterparty. To avoid credit losses upon default by the dealer, the end-user could purchase credit protection on the dealer, for example in the form of a single-name credit default swap (CDS). The cost of that protection will be determined based on the size of the exposure (as this will determine the notional amount of the CDS), the creditworthiness of the dealer (indicated by current credit spreads) and the period of protection (i.e., the maturity of the CDS). Therefore, instead of incorporating nonperformance risk into the discount rate used to present value the projected future cash flows, this approach attempts to quantify nonperformance risk based on the cost to purchase protection for non-constant levels of exposure expected over the life of the instrument. Examples of the variable exposure approach are provided below.

In these examples, the mark-to-market value of the swap is determined based on SOFR rates and represents the current exposure of the swap at the measurement date. The current exposure is then adjusted based on the projected net cash payments or receipts to be made over the life of the instrument, determined using the current yield curve as of the measurement date. As such, the exposure over the life of the instrument using this method is variable.

**Illustration D.9.2-1: Variable exposure approach**

Remaining Periods		Period Days (Actual)	Implied Forward Rate	Rec Fixed Cash Flow	Pay Float Cash Flow	Net Cash Flow	Discount Factor	PV Net Cash Flow (USD)	Zero Coupon Rate (Annual)	Variable Exposure	Applicable Credit Spread	Period Cost of Protection	
1		92	4.2500%	1,661,111	(2,172,222)	(511,111)	0.998686	(510,439)	4.4627%	(4,633,547)	3.0000%	4,247	
2		90	4.6279%	1,625,000	(2,313,962)	(688,962)	0.987264	(680,187)	4.7446%	(4,123,107)	3.0000%	30,923	
3		91	4.9595%	1,643,056	(2,507,292)	(864,236)	0.975040	(842,665)	4.9260%	(3,442,920)	3.0000%	26,109	
4		92	4.9476%	1,661,111	(2,528,781)	(867,670)	0.962866	(835,450)	4.9871%	(2,600,255)	3.0000%	19,935	
5		92	4.7620%	1,661,111	(2,433,935)	(772,824)	0.951289	(735,178)	4.9706%	(1,764,806)	3.0000%	13,530	
6		91	4.3953%	1,643,056	(2,222,072)	(579,016)	0.940836	(544,759)	4.8855%	(1,029,627)	3.0000%	7,808	
7		91	4.0415%	1,643,056	(2,043,213)	(400,157)	0.931321	(372,675)	4.7675%	(484,868)	3.0000%	3,677	
8		92	3.7463%	1,661,111	(1,914,789)	(253,678)	0.922489	(234,015)	4.6379%	(112,193)	3.0000%	860	
9		94	3.5082%	1,697,222	(1,832,036)	(134,813)	0.914116	(123,235)	4.5070%	121,822	1.5000%	(477)	
10		88	3.3327%	1,588,889	(1,629,309)	(40,420)	0.906729	(36,650)	4.3921%	245,057	1.5000%	(899)	
11		91	3.2162%	1,643,056	(1,625,968)	17,087	0.899417	15,369	4.2842%	281,707	1.5000%	(1,068)	
12		95	3.1515%	1,715,278	(1,663,294)	51,983	0.891999	46,369	4.1859%	266,338	1.5000%	(1,054)	
13		90	3.1423%	1,625,000	(1,571,145)	53,855	0.885046	47,664	4.1076%	219,969	1.5000%	(825)	
14		91	3.1756%	1,643,056	(1,605,432)	37,623	0.877998	33,033	4.0431%	172,305	1.5000%	(653)	
15		91	3.2026%	1,643,056	(1,619,075)	23,981	0.870948	20,886	3.9898%	139,272	1.5000%	(528)	
16		92	3.2130%	1,661,111	(1,642,177)	18,934	0.863855	16,356	3.9437%	118,386	1.5000%	(454)	
17		90	3.2061%	1,625,000	(1,603,070)	21,930	0.856986	18,794	3.9038%	102,030	1.5000%	(383)	
18		91	3.1889%	1,643,056	(1,612,176)	30,879	0.850133	26,252	3.8671%	83,236	1.5000%	(316)	
19		91	3.1806%	1,643,056	(1,607,956)	35,100	0.843352	29,601	3.8339%	56,985	1.5000%	(216)	
20		92	3.1860%	1,661,111	(1,628,377)	32,734	0.836541	27,383	3.8042%	27,383	1.5000%	(105)	
<b>Mark-to-market value</b>								<b>(4,633,547)</b>	<b>Credit valuation adjustment</b>	<b>100,113</b>			
									<b>CVA is a "debit" balance</b>				
									<b>Derivative is a liability</b>				
									<b>Credit adjusted MTM (4,533,434)</b>				

**Notes:**  
 1) The measurement date is not assumed to coincide with the start date of the swap  
 2) Discount factors are derived from the SOFR curve  
 3) Net present value of cash flows represent net cash flows discounted to the current measurement date using applicable discount factor

<sup>131</sup> In practice, CDS contracts typically have a constant notional amount.

**Illustration D.9.2-2: Variable exposure approach with a bilateral collateral arrangement**

Interest rate swap terms and inputs	
Notional	200,000,000
Fixed rate	3.25%
Floating rate	3-month Term SOFR
Term to maturity (years)	4.78
Counterparty's credit spread	1.50%
"Own credit" spread	3.00%
Collateral threshold	\$2,000,000

Remaining Periods	Period Days (Actual)	Implied Forward Rate	Rec Fixed Cash Flow	Pay Float Cash Flow	Net Cash Flow	Discount Factor	PV Net Cash Flow (USD)	Zero Coupon Rate (Annual)	Variable Exposure	Applicable Credit Spread	Period Cost of Protection
1	92	4.2500%	1,661,111	(2,172,222)	(511,111)	0.998686	(510,439)	4.4627%	(2,000,000)	3.0000%	1,833
2	90	4.6279%	1,625,000	(2,313,962)	(688,962)	0.987264	(680,187)	4.7446%	(2,000,000)	3.0000%	15,000
3	91	4.9595%	1,643,056	(2,507,292)	(864,236)	0.975040	(842,665)	4.9260%	(2,000,000)	3.0000%	15,167
4	92	4.9476%	1,661,111	(2,528,781)	(867,670)	0.962866	(835,450)	4.9871%	(2,000,000)	3.0000%	15,333
5	92	4.7620%	1,661,111	(2,433,935)	(772,824)	0.951289	(735,178)	4.9706%	(1,764,806)	3.0000%	13,530
6	91	4.3953%	1,643,056	(2,222,072)	(579,016)	0.940836	(544,759)	4.8855%	(1,029,627)	3.0000%	7,808
7	91	4.0415%	1,643,056	(2,043,213)	(400,157)	0.931321	(372,675)	4.7675%	(484,868)	3.0000%	3,677
8	92	3.7463%	1,661,111	(1,914,789)	(253,678)	0.922489	(234,015)	4.6379%	(112,193)	3.0000%	860
9	94	3.5082%	1,697,222	(1,832,036)	(134,813)	0.914116	(123,235)	4.5070%	121,822	1.5000%	(477)
10	88	3.3327%	1,588,889	(1,629,309)	(40,420)	0.906729	(36,650)	4.3921%	245,057	1.5000%	(899)
11	91	3.2162%	1,643,056	(1,625,968)	17,087	0.899417	15,369	4.2842%	281,707	1.5000%	(1,068)
12	95	3.1515%	1,715,278	(1,663,294)	51,983	0.891999	46,369	4.1859%	266,338	1.5000%	(1,054)
13	90	3.1423%	1,625,000	(1,571,145)	53,855	0.885046	47,664	4.1076%	219,969	1.5000%	(825)
14	91	3.1756%	1,643,056	(1,605,432)	37,623	0.877998	33,033	4.0431%	172,305	1.5000%	(653)
15	91	3.2026%	1,643,056	(1,619,075)	23,981	0.870948	20,886	3.9898%	139,272	1.5000%	(528)
16	92	3.2130%	1,661,111	(1,642,177)	18,934	0.863855	16,356	3.9437%	118,386	1.5000%	(454)
17	90	3.2061%	1,625,000	(1,603,070)	21,930	0.856986	18,794	3.9038%	102,030	1.5000%	(383)
18	91	3.1889%	1,643,056	(1,612,176)	30,879	0.850133	26,252	3.8671%	83,236	1.5000%	(316)
19	91	3.1806%	1,643,056	(1,607,956)	35,100	0.843352	29,601	3.8339%	56,985	1.5000%	(216)
20	92	3.1860%	1,661,111	(1,628,377)	32,734	0.836541	27,383	3.8042%	27,383	1.5000%	(105)
Mark-to-market value								(4,633,547)	Credit valuation adjustment		66,231

CVA is a "debit" balance

Derivative is a liability

Credit adjusted MTM (4,567,316)

In Illustrations D.9.2-1 and D.9.2-2, the mark-to-market value of the swap (where an entity receives 3.25% fixed and pays three-month Term SOFR) before credit spreads are taken into consideration is a liability of \$4.63 million. As noted above, the cost of protection from the perspective of the party in an asset position is a function of the size of the exposure, the counterparty's credit spreads and the protection period.

In Illustration D.9.2-1, the cost of protection for the initial period, with payment expected at the end of the first period, on an exposure of \$4.63 million and an annualized counterparty credit spread of 3.00% has a value of approximately \$4,247.<sup>132</sup> The exposure for the next period is determined by adjusting the current exposure by the present value of the cash payment or receipt expected to be made at the end of the first period (a payment of \$0.51 million, in the example), thereby reducing the exposure on the swap in the second period to a liability of approximately \$4.12 million.

The variable exposure methodology incorporates the fact that swap exposures can change over time, albeit in a less complex manner than an expected future exposure methodology. Under such an approach, the exposure for a swap (or portfolio of swaps) can "flip" from an asset to a liability. However, unlike the more complex expected future exposure techniques, the variable exposure approach does not consider any variability associated with future interest rate changes. Instead, changes to current exposure are based solely on expectations regarding future interest rates that are incorporated into the current yield curve (e.g., current forward and discount rates as of the measurement date).

<sup>132</sup> In the first calculation period, protection is only needed from the measurement date (e.g., 31 December 20X0) to the next payment date (e.g., 11 January 20X1).

Note that Illustration D.9.2-1 shows the consideration of bilateral exposure because the swap exposure flips from a liability of approximately \$0.11 million in the eighth period to an asset of approximately \$0.12 million in the ninth period. When the exposure for a given period is a liability, the cost of protection is determined based on the credit spread of the reporting entity (i.e., own credit). Although the swap is a liability today, under the variable exposure approach it is expected to be in an asset position for much of its life (based on the assumption that the current yield curve remains unchanged). The CVA for this swap calculated using this variable exposure approach is \$0.10 million, which serves to decrease the mark-to-market liability value of the swap.

Illustration D.9.2-2 demonstrates how collateral can be incorporated into the variable exposure approach. In this example, a bilateral collateral arrangement is deemed to be in place, with a threshold level of \$2 million for both parties. A collateral arrangement is incorporated under the variable exposure approach by capping the exposure at any point in time at the collateral threshold level. For example, although the calculated exposure in the first period was a liability of \$4.63 million (see Illustration D.9.2-1), the credit exposure is limited to the uncollateralized amount (i.e., the threshold level of \$2 million). Under the terms of the collateral arrangement, the counterparty to this swap will be required to post collateral (e.g., cash or liquid securities) to cover the amount in excess of the threshold. Thus, the reporting entity would only need to purchase protection up to \$2 million of exposure. As the collateral threshold serves to reduce the liability exposures in this example, the CVA for this swap is reduced from \$0.10 million, without a collateral threshold, to \$0.07 million with a collateral threshold.

Because the variable exposure approach is based on exposures (which can be aggregated as of the measurement date) instead of cash flows, this methodology more easily allows for the consideration of netting agreements and collateral arrangements on a portfolio basis. Collateral thresholds are applied to the aggregate exposure resulting from transactions between the two counterparties, not at the individual transaction level.

### D.9.3 Constant exposure approach (updated September 2023)

Similar to the variable exposure approach, a CVA under the constant exposure approach is determined based on the hypothetical cost of purchasing credit protection. However, in a constant exposure approach, protection is assumed to be purchased for a single constant amount (or exposure) for the entire life of the instrument or the weighted average life of a portfolio, which may be an appropriate methodology for certain derivative instruments or portfolios of certain derivatives where a netting agreement and credit support annex are in place, as discussed below. That is, the constant exposure approach assumes that the credit exposure of a derivative contract (or portfolio) remains constant over its life. At each measurement date, a CVA is determined based on an exposure equal to the lower of the current mark-to-market value of the instrument (or portfolio) or the applicable collateral threshold.

The constant exposure approach is similar to the single credit spread DCF approach in that derivative assets only consider counterparty nonperformance risk, and derivative liabilities only consider own nonperformance risk, over the life of the instrument. However, because the constant exposure approach is based on exposures and not cash flows, it more easily lends itself to portfolio valuations that require consideration of the effects of netting agreements and collateral arrangements. The illustration below shows an example of the constant exposure approach.

Illustration D.9.3-1: Constant exposure approach										
Swap	Notional	Mark-to-Market Value	Maturity Date	Own Collateral Threshold	Counterparty Collateral Threshold	Uncollateralized Exposure	Weighted-Average Term to Maturity	Applicable Credit Spread	Estimated CVA	Credit Adjusted Portfolio MTM
1	\$ 25,000,000	\$ 4,503,500	3/17/2032							
2	\$ 50,000,000	\$ (1,230,500)	2/26/2035							
3	\$ 35,000,000	\$ 3,501,250	6/21/2028							
Portfolio basis		\$ 6,774,250		\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	8.19	1.3500%	\$ (442,337)	\$ 6,331,913

Illustration D.9.3-1 shows how the constant exposure approach is applied to a portfolio of three swaps (i.e., Swap 1, Swap 2 and Swap 3). The total market value of the portfolio is \$6.77 million, which is greater than the bilateral collateral threshold of \$4 million, and therefore, the counterparty would be expected to post collateral for the amount above the threshold (i.e., the counterparty would have posted \$2.77 million in collateral for the exposure in excess of the threshold). Protection is assumed to be purchased for a single constant exposure of \$4 million for the remaining weighted average term to maturity of the portfolio. Assuming a counterparty credit spread of 1.35% per annum and a weighted average term to maturity of 8.19 years, the estimated CVA is \$0.44 million, representing a reduction in the asset to \$6.33 million.

In general, the constant exposure approach may be suited for portfolios with a relatively large number of transactions where the net mark-to-market value of the portfolio significantly exceeds the collateral threshold for the reporting entity or the counterparty (depending on whether the net exposure is positive or negative). Under these circumstances, the assumption that the exposure will remain constant (at the threshold level) over the life of the portfolio is more reasonable. In addition, the constant exposure approach may be appropriate to calculate nonperformance risk for certain instruments, such as options and forwards that have only a single cash flow or settlement amount payable at maturity.

When applying the constant exposure approach to a portfolio, it is also common for constituents to use a weighted average term-to-maturity and a credit spread applicable for that term (by counterparty) to determine the cost of protection and therefore the CVA.

## D.10 Valuation inputs

In addition to the methodology employed, the inputs used in the various approaches may also require judgment, as applicable market data may not always be easy to obtain. Regardless of methodology, PD, LGD and/or credit spread assumptions are important inputs when determining a CVA. While the sources of information may vary, the objective remains unchanged, that is, to incorporate inputs that reflect the assumptions of market participants in the current market.

When available, current market-implied information should be used. For example, CDS spreads may provide a good indication of the market's current perception of a particular reporting entity's or counterparty's creditworthiness. However, CDS spreads will likely not be available for smaller public companies or private entities. In these instances, reporting entities may need to consider other available indicators of creditworthiness, such as publicly traded debt or loans.

In the absence of any direct indicator of creditworthiness, reporting entities may need to estimate credit spreads by comparison to industry peers or benchmarks (i.e., based on credit rating by region and/or sector). In either case, identifying the appropriate peer group or benchmark is critical. The basis for selecting the proxy or benchmark, including any analysis performed and assumptions made, should be documented. Such an analysis may include calculating financial ratios to evaluate the reporting entity's financial position relative its peer group and their credit spreads. (These ratios may consider liquidity, leverage and/or other indicators of general financial strength.)

The use of historical default rates would seem to be inconsistent with the "exit price" notion in ASC 820, particularly when credit spread levels in the current environment differ significantly from historical averages. Therefore, when current observable information is deemed unavailable, management should adjust historical data to arrive at its best estimate of the assumptions market participants would use to price the instrument in an orderly transaction in the current market.

## D.11 Assessment of methodologies used

The methodologies discussed in this appendix represent some of the more common approaches that have been observed in practice. However, reporting entities may be using other approaches.

While all of the methodologies use certain simplifying assumptions, the effect that these assumptions can have on the fair value measurement will vary based on the facts and circumstances of the derivative instrument or portfolio being measured. For example, using current exposure instead of expected future exposure is likely to have less of an effect on instruments that are significantly in or out of the money versus those that are closer to being at the money. Therefore, differences between current exposure approaches and expected future exposure methodologies may be less pronounced when the CVA is likely to be larger (i.e., instruments that are deep in or out of the money) and more pronounced when the CVA is likely to be smaller. Likewise, the consideration of expected future exposure is likely less relevant when default by the counterparty (or the reporting entity) is imminent. Various other factors, such as the similarity of credit spreads between a reporting entity and its counterparties, or low collateral thresholds, may also mitigate the effect of certain simplifying assumptions.

Determining the appropriate methodology to assess the nonperformance risk on derivatives (and derivative portfolios) requires significant judgment. As previously noted, we believe the degree of sophistication in the methodology used by a reporting entity can be influenced by many factors, including the size and nature of its derivative portfolio. Regardless of the approach used, reporting entities should appropriately document their methodology and significant assumptions, including judgments made by management and any related analyses performed.

In addition, as suggested by the SEC staff in their September 2008 “Dear CFO” letter,<sup>133</sup> reporting entities should consider disclosing how nonperformance risk affected the valuation of their derivative portfolios and the resulting gains or losses included in earnings related to changes in nonperformance risk, when material to the results of operations. At the 2008 AICPA National Conference on Current SEC and PCAOB Developments, staff of the SEC Division of Corporation Finance also suggested that a clear discussion in MD&A of how counterparty and own nonperformance risk is estimated when measuring the fair value of derivatives is considered a leading practice.

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<sup>133</sup> Available at <http://www.sec.gov/divisions/corpfin/cfacctfinrptfrms.shtml>.

# E Summary of important changes

## September 2023 edition

- Section 3**      **Scope and practicability exceptions**
- ▶ Section 3.4 was updated to include discussion in Question 3.2-1 on the accounting for impaired loans in the scope of ASC 820 after the adoption of ASU 2016-13.
- Section 5**      **The asset and liability**
- ▶ Section 5.2.1A was updated to include discussion on the Board's Basis for Conclusions related to restrictions on assets after the adoption of ASU 2022-03.
- IA.1**          **Fair value measurement considerations for the banking industry**
- ▶ Question IA.1-2 was updated to clarify instances in which a negative allowance may be recognized by a creditor when accounting for collateral repossessed in a lending relationship.
- IA.4**          **Fair value measurement considerations for the life insurance industry**
- ▶ Section IA.4, *Embedded derivatives in life and annuity contracts and market risk benefits*, was updated to clarify the impact of ASU 2018-12 on the accounting for features deemed to be MRBs.
- IA.5**          **Fair value measurement considerations for the real estate industry**
- ▶ Question IA.5-2 was updated to clarify the valuation considerations for measuring the fair value of an equity interest in an entity holding real estate financed with debt.
- Appendix D**      **Credit valuation adjustment for derivatives contracts**
- ▶ Sections D.9.1.1, D.9.1.2, D.9.2 and D.9.3 were updated to reflect the transition from the London Interbank Offer Rate (LIBOR) to SOFR as a reference rate.

## September 2022 edition

- Section 1**      **Introduction and overview**
- ▶ Section 1.3 was updated to highlight a potential GAAP difference between ASC 820 and IFRS 13 when measuring the fair value of equity securities subject to contractual sale restrictions after the adoption of ASU 2022-03.
- Section 5**      **The asset and liability**
- ▶ Section 5.2.1 on restrictions on assets was updated to replace Illustration 5.2-1 with Example 6 from ASC 820 to illustrate the distinction between restrictions that are characteristics of the asset and of the entity holding the asset and their effects on fair value measurement before the adoption of ASU 2022-03.
  - ▶ Section 5.2.1A was added to discuss restrictions on assets after the adoption of ASU 2022-03.
  - ▶ Subsection 5.2.1A.1 was added to discuss the effective date and transition guidance for ASU 2022-03.
  - ▶ Section 5.3 was updated to clarify in Question 5.2-1 that this interpretation is applicable when the restriction is deemed to be a characteristic of the asset.

- Section 6**      **Exit price**
- ▶ Section 6.2 on the principal (or most advantageous) market was updated to reflect the issuance of ASU 2022-03.
- Section 9**      **Application to liabilities and instruments classified in a reporting entity's shareholders' equity**
- ▶ Section 9.1.1 on the use of a corresponding asset to measure a liability was updated to reflect the issuance of ASU 2022-03.
- Section 12**     **Valuation techniques**
- ▶ Section 12.1 was updated to add a table that summarizes the valuation approaches that would most likely be used to value different asset types.
- Section 13**     **Inputs to valuation techniques**
- ▶ Section 13.2 on premiums or discounts was updated to reflect the issuance of ASU 2022-03.
- Section 14**     **The fair value hierarchy**
- ▶ Section 14.1.1 was updated to add a graphic that illustrates the classification within the fair value hierarchy for disclosure purposes.
- Section 18**     **Net asset value as a practical expedient**
- ▶ Section 18.1.1.1 on readily determinable fair value was updated to reflect the issuance of ASU 2022-03.
- Section 20**     **Disclosures**
- ▶ Section 20.8 was added to discuss disclosure requirements for equity securities subject to contractual sale restrictions after the adoption of ASU 2022-03.
- IA.2**            **Fair value measurement considerations for the private equity industry**
- ▶ Question IA.2-2 includes a discussion of LP interests that may be subject to sale restrictions and was updated to reflect the issuance of ASU 2022-03.
- IA.3**            **Fair value measurement considerations for investments in hedge funds**
- ▶ Section IA.3.3 includes a discussion of an investor's interest in a hedge fund that may be subject to sale restrictions and was updated to reflect the issuance of ASU 2022-03.
  - ▶ Question IA.3-5 includes a discussion of an investment in a hedge fund that may be subject to lock-ups, gates or other restrictions and was updated to reflect the issuance of ASU 2022-03.
- IA.4**            **Fair value measurement considerations for the life insurance industry**
- ▶ Question IA.4-9 was updated to clarify that this interpretation applies to both variable annuity contracts and variable life contracts.
  - ▶ Question IA.4-11 includes a discussion of an insurance company's investment in separate account assets that may be subject to lock-ups or other restrictions and was updated to reflect the issuance of ASU 2022-03.

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