

Analytics mindset

Bank investment portfolios

The following files are used for this case and are presented in the order of use by the type of file.



Case study
and
solutions

[Analytics_mindset_case_studies_Bank_Investment_Portfolios.docx](#)

[Analytics_mindset_case_studies_Bank_Investment_Portfolios.pdf](#)

[Analytics_mindset_case_study_solutions_Bank_Investment_Portfolios.docx](#)

[Analytics_mindset_case_study_solutions_Bank_Investment_Portfolios.pdf](#)



Data sets

[Analytics_mindset_case_studies_Bank_Investment_Portfolios.xlsx](#)



Analytics
workbooks

Part 2:

[Analytics_mindset_case_study_solutions_Bank_Investment_Portfolios.twbx](#)



Videos

Part 2:

[This user guide for the EYARC Access has removed video links for external distribution. See the user guide on the EYARC site for links.](#)

Overview

This case is designed for a financial accounting course that teaches investment accounting. This case also may be used in a data analytics course. The case is designed to be flexible so that it can be implemented in class, used as homework, or as a student project or part of an exam.

In this case, students will learn more about the classification, measurement and recognition of debt investments; learn the economics and valuation of debt investments; and consider the influence of banking regulations (Basel III in the US) and reporting incentives on accounting judgments.

A key feature of this case is that it walks students through the entire analytics mindset approach. The students get practice developing their analytics mindset with rich, real-world data. As a reminder, an analytics mindset is the ability to:

- ▶ Ask the right questions
- ▶ Extract, transform and load relevant data (i.e., the ETL process)
- ▶ Apply appropriate data analytics techniques
- ▶ Interpret and share results with stakeholders

This is a three-part case. The following is a brief overview of the background and each part.

Background: Students are given background information about accounting for investments (specifically, debt securities), banking regulations (Basel III in the US and treatment of accumulated other comprehensive income (AOCI)), and important capital ratios and classifications for banks under banking regulations. Students are also provided information about each data field given to them in their data set.

Part 1: This part focuses on helping students ask the right questions before beginning their analysis. Students must prepare responses to questions about the nature of debt securities and how they are valued and accounted for, as well the implications of regulatory capital. Students are required to read excerpts of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) No. 320, *Investments – Debt and Equity Securities*.

Note that if you are teaching a data analytics course, you can provide the Part 1 solutions to the students for background reading and instruct them to begin with Part 2.

Part 2: This part focuses on the ETL process and applying appropriate data analytics techniques. The data extraction process has already been completed for the students. Students will receive one data file that includes all of the data needed for the analysis. There is no data transformation requirement. Students are required to load their data correctly into the recommended visualization tool. We have utilized Tableau. Students are then asked to review a series of questions and, using data analytics techniques, develop the appropriate analyses into dashboards.

Note that if you don't require Part 2 of the case (if students aren't prepared to develop the analytics or due to time), you can provide the completed Tableau workbook to the students and only require them to interpret what they see in Part 3.

Part 3: In this part, students assume the role of a data analyst for the Federal Reserve. They are required to interpret the results of their analyses and provide an oral or written presentation (as directed by their instructor) utilizing their visualizations to the Federal Reserve Board. Students are provided a series of questions to guide them in sharing their observations.

Note:

- ▶ *If a written presentation is required, students should be encouraged to write concise statements that summarize the visualization. The visualization will tell most of the story; the writing will just provide the concrete takeaways, rather than trying to replicate the visualizations in written form.*
- ▶ *Students should be encouraged to develop any additional dashboards that they believe would be helpful in conveying their insights.*

Advanced preparation

It is recommended that you expose students to the definition and importance of the analytics mindset and related competencies prior to covering this case. The EYARC offers lecture notes, slides and a competency framework in the *Introduction to the analytics mindset* module that you can use for this purpose.

While the case helps the students produce their visualizations in a manner that would present the information clearly, students should always focus on design elements, such as simplicity, color, clutter, emphasis, ordering and other design principles. You can cover this learning using material in the EYARC *Introduction to data visualization* module. This can be done in advance in the classroom or as required reading prior to completing the case. You can also use this material as a rubric to assist with the assessment.

Data

The data for this case is real-world investment portfolio and capital ratios data from approximately 5,000 banking institutions that operate in the United States¹ (over 264,000 rows of data). These banks are all FDIC-insured banking institutions and range in size from the largest banks in the world to small regional banks. The spreadsheet contains quarterly financial information for fiscal years 2009 to 2018, inclusive.

Analytics tools

We have designed this case to be flexible with respect to the tools that can be used to perform the analyses. We provide the case solutions using Tableau. The case also could be adapted to be completed using other technology.

How-to videos

How-to videos have been prepared to accompany this case, as listed with the links in this guide. These links have *not* been included in the case solutions file. These videos can help instructors learn the Tableau steps themselves, and they can be provided directly to students to supplement in-class instruction and facilitate their completion of the case in Tableau.

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Excerpts of *FASB Accounting Standards Codification*[®] No. 320, *Investments – Debt and Equity Securities*, provided in the appendix of Part 1 of the case study, are copyrighted by the Financial Accounting Foundation, 401 Merritt 7, PO Box 5116, Norwalk, CT 06856-5116, and are reproduced with permission. Such documents may be further reproduced for academic classroom use only and not as part of a commercial distribution.

¹ This data was compiled from the following publicly available source: “Bulk Data Download,” *Federal Financial Institutions Examination Council website*, <https://cdr.ffiec.gov/public/PWS/DownloadBulkData.aspx>, accessed June 20, 2019.