PE Pulse

November 2018

Building a better working world

Contents

The PE Pulse has been designed to help you remain current on capital market trends.

It captures key insights from subject-matter professionals across EY member firms and idstills this intelligence into a succinct and user-friendly publication.

The PE Pulse provides perspectives on both recent developments and the longer-term outlook across M&A, cross-border deal flows, IPOs, private equity, debt and bond markets.

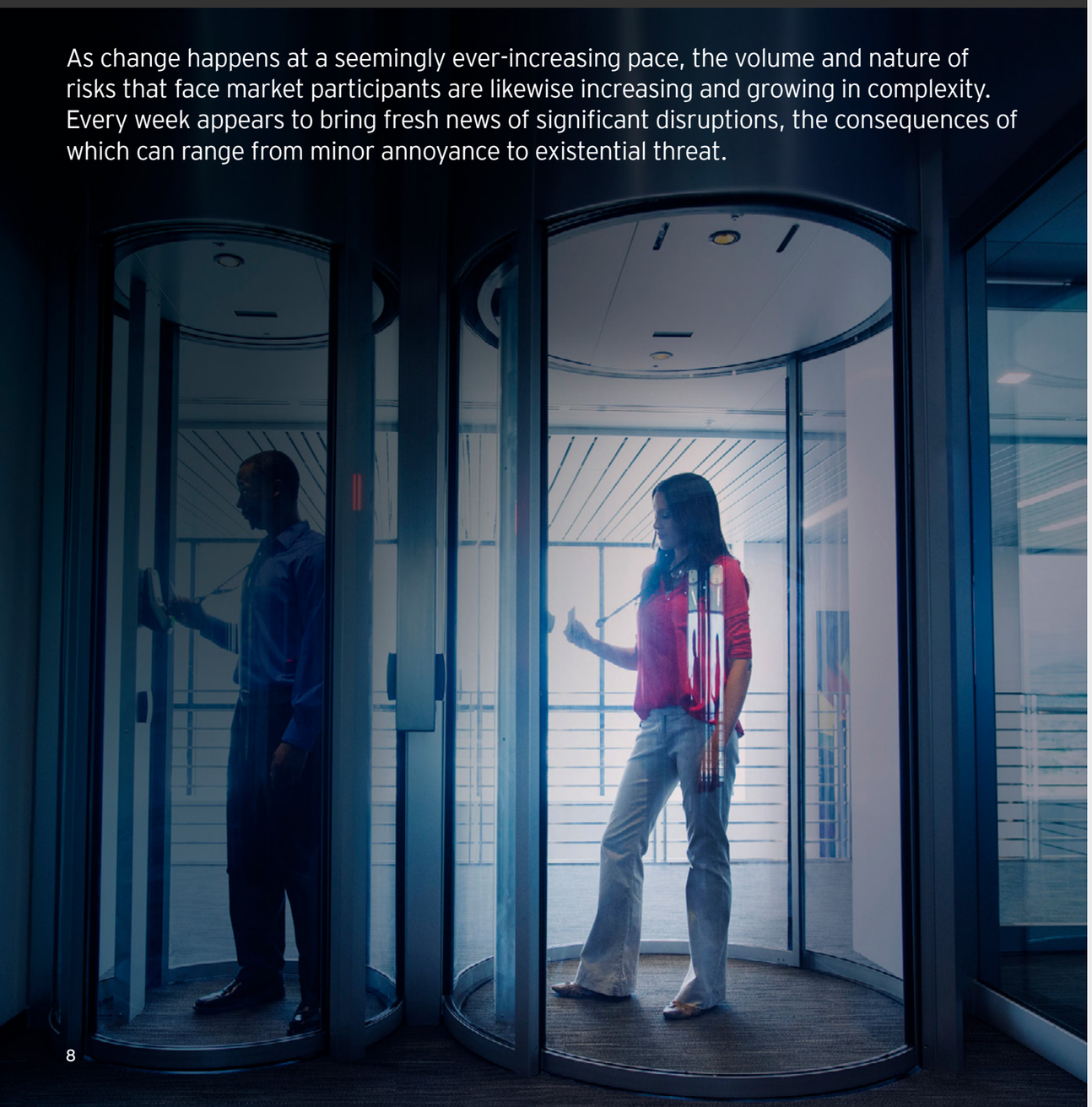
Please feel free to reach out to any of the subject-matter contacts listed on the reverse of this document if you wish to discuss any of the topics covered.

Executive summary

- PE firms are actively pursuing companies in the cybersecurity and risk management spaces.
- They're also applying risk management best practices to their own models across a range of risks, including technology, fraud and geopolitical risk.
- Developing and using a risk playbook can help firms deploy a consistent approach across the entire enterprise.

1 Risk management – the opportunity and imperative

As change happens at a seemingly ever-increasing pace, the volume and nature of risks that face market participants are likewise increasing and growing in complexity. Every week appears to bring fresh news of significant disruptions, the consequences of which can range from minor annoyance to existential threat.



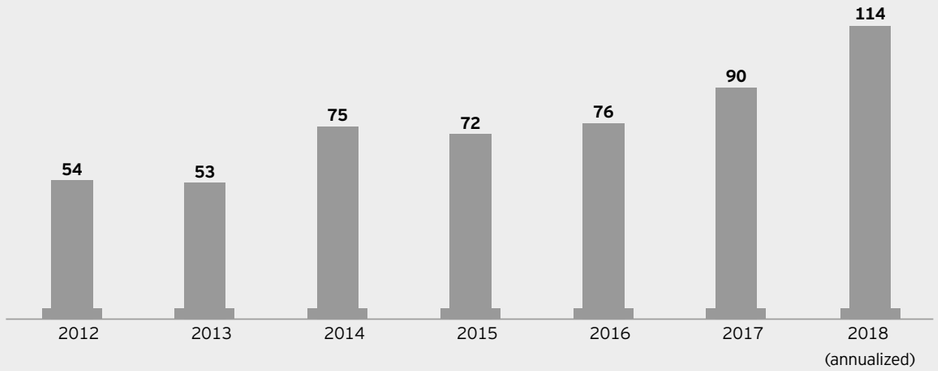
A compelling investment thesis

For PE firms, investing in companies that help businesses address these growing threats is an area of opportunity. Thoma Bravo's recently announced take-private of Imperva for US$2.1b follows on the heels of a spate of deals in the risk management and cybersecurity spaces over the last 24 months. Thoma Bravo's and TPG's $1.1b deal for Intel Security (formerly McAfee), KKR's $2.0b deals for Optiv Security, CVC's $1.4b investment in AVG Technologies and the $7.7b deal for China's Qihoo 360 Technology by a consortium of firms including China Renaissance Capital Investment and CITIC dramatically underscore PE's interest in the space.

In addition to large platform investments, firms are also helping investees build specific capabilities in risk management and cybersecurity through add-on deals, which have accounted for roughly 40% of deals in the space so far this year. For instance, Francisco Partners backed its investee Bomgar, a leading player in privileged access and identity management solutions to further build on its position through three tuck-in deals, acquiring Lieberman Software, Avecto and BeyondTrust Software, respectively.

Number of PE investments in cybersecurity

Source: Pitchbook



Overall, PE firms have invested nearly US$26b in such transactions over the last three years, sensing significant upside opportunities in companies across a range of segments including managed security services, network security, vulnerability management, consulting services, and identity and access management. These deals will only increase in volume in the coming years. According to estimates prepared by IDC, the global cybersecurity market is expected to grow at a CAGR of 10% between 2017 and 2021, ultimately reaching more than US$122b.

Overall, M&A activity is expected to remain high, though perhaps off the levels of the last few years. The recent EY Global Capital Confidence Barometer found that 46% of companies expect to make an acquisition over the next 12 months. At the same time, companies are actively assessing their portfolio of existing businesses, resulting in expected fresh inventory of assets coming to market for which PE is a likely buyer.

Practicing what they preach

"If you're thinking about risk just in terms of cyber, you're thinking about it wrong."
– Gary Sturisky, Ernst & Young LLP Private Equity Advisory Partner

While the investment opportunities are clearly compelling, PE firms aren't just looking at risk management from the investment perspective. They are also applying leading risk management practices to their own operating models.

For example, EY 2018 Global Private Equity Survey found that risk mitigation, including cybersecurity, was a leading concern for firms of all sizes, and was especially pressing at larger houses. Indeed, 22% of private equity firms that were surveyed reported they've already experienced a cybersecurity breach (any many more may yet remain unreported). Notably, more than half (58%) of those breaches were considered moderate or serious.

In response, firms are taking a multi-pronged approach, using externally developed intelligence products to monitor cybersecurity and taking steps to improve employee training (87%), email monitoring (80%) and using external vendors to perform ethical hacks (80%).

Looking beyond information security

Cybersecurity garners the headlines, but it's really just the tip of the risk iceberg. PE firms need to consider a wide array of risks in order to effectively identify, assess and understand their exposures.

Technology risk

Within the realm of technology, increased IT spend to improve a portfolio company's operations is an increasingly important part of an investment thesis. Does the PE firm have an effective IT strategy in place to support the investment thesis for its portfolio? Managers need to understand what horizon technologies pose increase risks of obsolescence, and understand the dynamics that could undermine the IT strategy.

General fraud

Whether it originates within the portfolio or at the firm level, fraud can cause significant disruption and reputational damage. With LPs increasingly focused on transparency throughout the PE enterprise, firms need robust internal controls and processes the address the risks.

Compliance risk

Regulatory noncompliance can have steep costs. Whether it's tax compliance, violations of fiduciary responsibility, compliance with the Foreign Corrupt Practices Act (FCPA) and the UK Anti-Bribery Act, the Alternative Investment Fund Managers Directive (AIFMD) and a host of other regulatory regimes means that PE firms need constant monitoring and assessment of regulatory risks. Firms would be well-advised to consider establishing a compliance office to ensure portfolio companies have the necessary safeguards and controls to minimize regulatory compliance risk.

Geopolitical risks

As the PE industry continues to evolve, firms are going further afield in their search for high quality assets. Increased globalization accompanies a range of related geopolitical risks, including foreign currency issues, the potential for nationalization and repatriation disputes. Firms should include country risk and geopolitical stability assessments to analyze risk prior to investing or conducting business in a specific region. This analysis not only mitigates risk, but can deliver vital insights into new or existing markets. These represent just a handful of the most important risks facing PE firms in today's market.

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Employing a consistent approach – the risk playbook

PE firms can develop and use a risk playbook in order to help them take a consistent approach across the entire enterprise. A playbook approach allows firms of all sizes to identify the full array of exposures and reduce opportunities for oversights. For each potential exposure, the playbook can help firms anticipate and answer key questions, such as:

- Can we define the risk?
- What can we do to mitigate it?
- What's the chance of it occurring?
- What are the best-case, base-case and worst-case scenarios if it does occur?

While companies across all industries need to strive for consistency in their approach to risk management, it's especially important for PE. When risks are aggregated across the portfolio, exposures could surface that aren't visible at the individual company level. Standardized practices can also allow firms to develop real-time monitoring modalities and integrate risk measures into KPI dashboards. For management teams of newly acquired portfolio companies, these standards can provide an upfront view of a firm's risk practices and priorities, and give a clear view of expectations early on in the relationship. Finally, well-codified practices allow for benchmarking over time. This enables firms to view risk outcomes across changing market conditions in order to better quantify and learn from their experiences.

From "risk management" to "risk intelligence"

Ultimately, the goal is to get smarter and more programmatic in dealing with risk, and evolve from "risk management" to "risk intelligence" – from a focus on managing risk simply in order to preserve value, to harnessing and using risk to create value via informed and measured views that assess the likelihood of an occurrence versus its potential impact. With a holistic view that encompasses the entirety of the enterprise, firms can proactively tailor their exposures and make risk an additional engine of growth.

Finally, perhaps the most important component of an effective risk management framework is the piece that many firms overlook – monitoring and oversight. A framework that's not being implemented as designed has limited use provides a false sense of security and may even open the door to unexpected exposures. Periodic reviews on an annual or semiannual basis (or initiated by the occurrence of trigger events within the enterprise) can help close gaps, refine the methodology and ensure that processes are responsive to current market conditions.

Visit ey.com/privateequity for more on risk management in private equity.

Market insights

Executive summary

- Fundraising activity saw increased momentum in 3Q18, up more than 30% from the preceding quarter.
- Activity was driven by closings from a number of large funds by global PE houses. The average size of PE funds closed in 3Q18 increased by more than 50% versus last year.
- PE firms have closed 589 funds so far this year, with total commitments of US$452b.
- Buyout funds accounted for 34% of funds raised, followed by growth capital (20%) and infrastructure (19%).

1 Private equity: fundraising

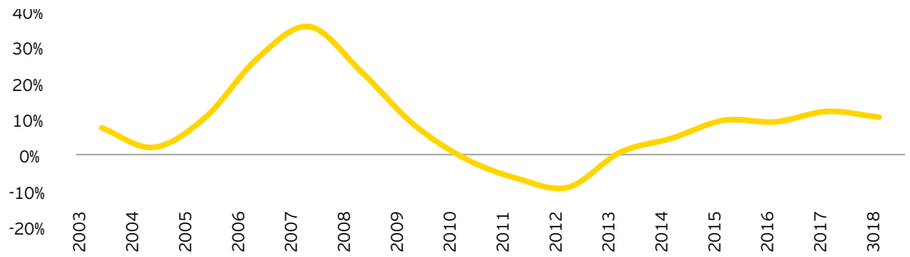
Current state

Investor enthusiasm remains high as fundraising sees continued momentum.

- Fundraising activity increased its pace in 3Q18, almost matching last year's record levels. PE firms raised US$175b during the quarter, compared with US$181b in 3Q17. However, because the first half of this year saw some moderation in closings, aggregate fundraising remains 19% lower than 2017. Activity in 3Q18 was driven by closings by a number of large vehicles from global PE firms, including The Carlyle Group, which closed the largest fund of the year in July with US$18.5b. The average size of PE funds closed so far this year is US$766m, up 32% from last year.
- Buyout funds remain the most active strategy, accounting for more than 34% of funds raised in Q3. Preqin's 2H18 survey suggests that 44% of the PE investors interviewed agree that small to mid-market buyout funds continue to present the best opportunities in the market.

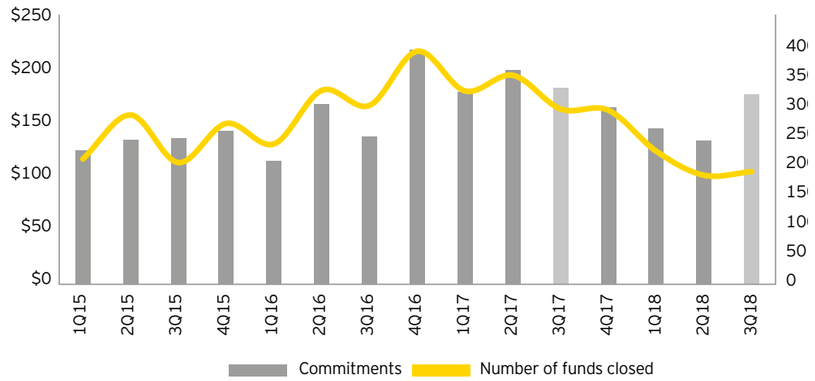
Buyout dry powder – trailing three-year compounded growth rates

Source: Preqin



PE fundraising by quarter (US$b)

Source: Preqin



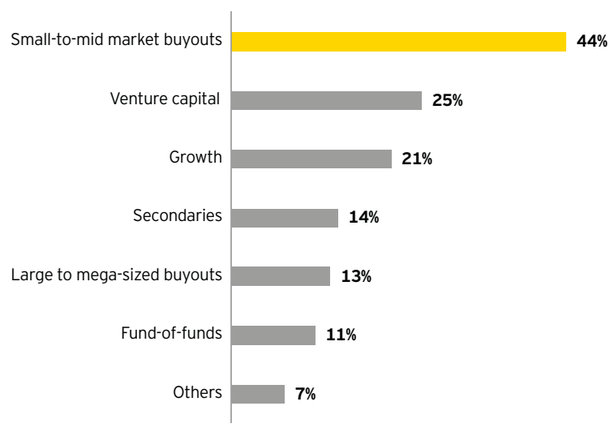
Top funds raised so far this year

Source: Preqin

Fund	Type	Value (US$b)
Carlyle Partners VII	Buyout	$18.5
EQT VIII	Buyout	$13.2
GS Mezzanine Partners VII	Mezzanine	$13.0
Hillhouse Fund IV	Buyout	$10.6
BC European Cap X	Buyout	$8.4
Sequoia Capital Global Growth Fund III	Growth	$8.0
Starwood Global Opportunity Fund XI	Real Estate	$7.6
KKR Global Infrastructure Investors III	Infrastructure	$7.4
GSO Capital Solutions Fund III	Distressed Debt	$7.3
Stonepeak Infrastructure Partners III	Infrastructure	$7.2

Investor attractiveness toward fund types

Source: Preqin's 2H18 survey



Note: % denotes proportion of the respondents that view the fund type to be providing the best opportunity over the next 12 months.

Environment and horizon

Positive outlook for fundraising; consolidation expected among fund managers to boost scale

- As competitive pressures build, some PE firms may be prompted to evaluate options for acquiring smaller peers. A recent survey conducted by Dechert and Mergermarket revealed that 98% of the respondents predict consolidation among fund managers to increase scale for coping with LP pressure for lower fees, increase capital base and increase portfolio diversification.
- A recent report by UBS and Campden Wealth found that PE is the most popular alternative asset class for family offices. The report surveyed 311 family offices across the globe with an average worth of US$1.1b and found that PE accounted for just over 10% of the average portfolio of family offices in North America. It further stated that, in 2017, PE offered returns in the range of 18% to family offices, up from 13% in 2016.
- The trend toward private investors taking stakes in PE management companies continues unabated, with no signs of slowing. Per Pitchbook, there were 14 GP stake investments announced through mid-August this year, exceeding the full-year total from 2017 and almost matching the record levels of 2016.
- CalPERS, the largest pension fund in the US, recently named Ben Meng as its new Chief Investment Officer (CIO). Meng, who was Deputy CIO of China's State Administration of Foreign Exchange (SAFE), had previously served at CalPERS for more than seven years prior to joining the China's Government agency in late 2015.

2 Private equity: acquisitions

Executive summary

- Investment activity remains strong, with 1,276 deals announced so far this year valued at US$352.4b, up 9% from the same time last year.
- A recent survey reported that investors presently see North America as the most favorable investment destination.
- The current high-price environment is prompting firms to innovate new deal structures.

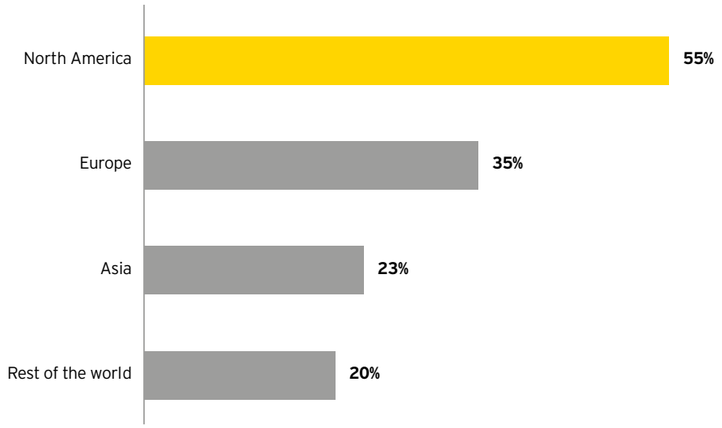
Current state

PE deal activity remains robust, with the Americas building up momentum.

- PE firms remained committed to deploying the industry's record US$637b in dry powder. Firms have announced deals worth US$352b so far this year, up 9% from the same period a year ago.
- Preqin's 2H18 survey revealed that North America was cited by 55% of surveyed investors to be presenting the most favorable investment opportunities in the prevailing global scenario, followed by Europe (35%).

Investor attractiveness toward world regions

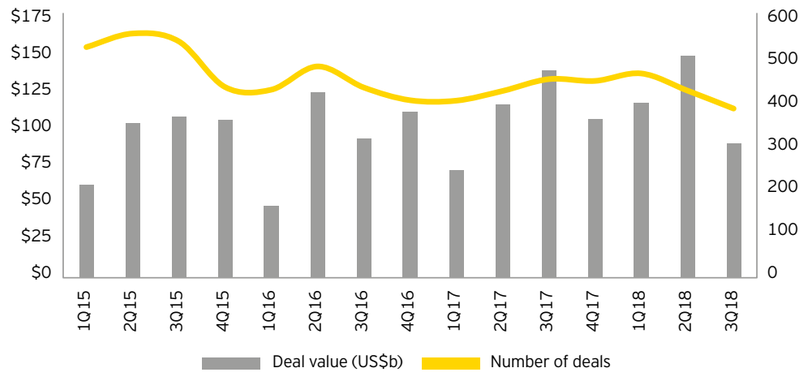
Source: Preqin's 2H18 survey



Note: % denotes proportion of respondents who view the region to be providing best opportunity over the next 12 months .

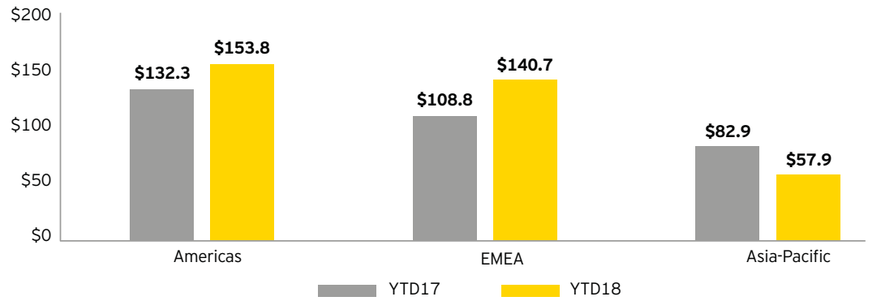
PE acquisition values and volumes by quarter (US$b)

Source: Dealogic



PE deal activity by value (US$b), YTD17 vs. YTD18

Source: Dealogic



Top deals so far this year

Source: Dealogic

Target	Industry	Sponsor	Value (US$b)
Financial & Risk US Holdings Inc. (55%)	Technology	CPPIB, GIC Special Investments, Blackstone	17.5
Ant Small & Micro Financial Services Group Co. Ltd. (9.3%)	Technology	CPPIB, Carlyle Group, Warburg Pincus, Temasek Holdings, General Atlantic, Primavera Capital, Silver Lake	14.0
Akzo Nobel NV (Specialty chemicals)	Materials	GIC Special Investments, Carlyle Group	12.5
TDC A/S	Telecom	Macquarie Infrastructure and Real Assets	10.7
Envision Healthcare	Health care	KKR	9.6
Sydney Motorway Corp. Pty. Ltd. (51%)	Industrial	CPPIB, Abu Dhabi Investment Authority	9.5
BMC Software Inc.	Technology	GIC Special Investments, Golden Gate Capital, Bain Capital, Insight Venture, KKR	8.3
Recordati SpA	Health care	PSP Investments, StepStone Group, CVC Advisers	7.4
NRG Energy Inc (NRG Yield platform)	Utilities	Global Infrastructure Management	7.1
Sedgwick Claims Management Services Inc.	Financials	Carlyle Group, CDPQ, Stone Point Capital, KKR	6.7

Environment and horizon

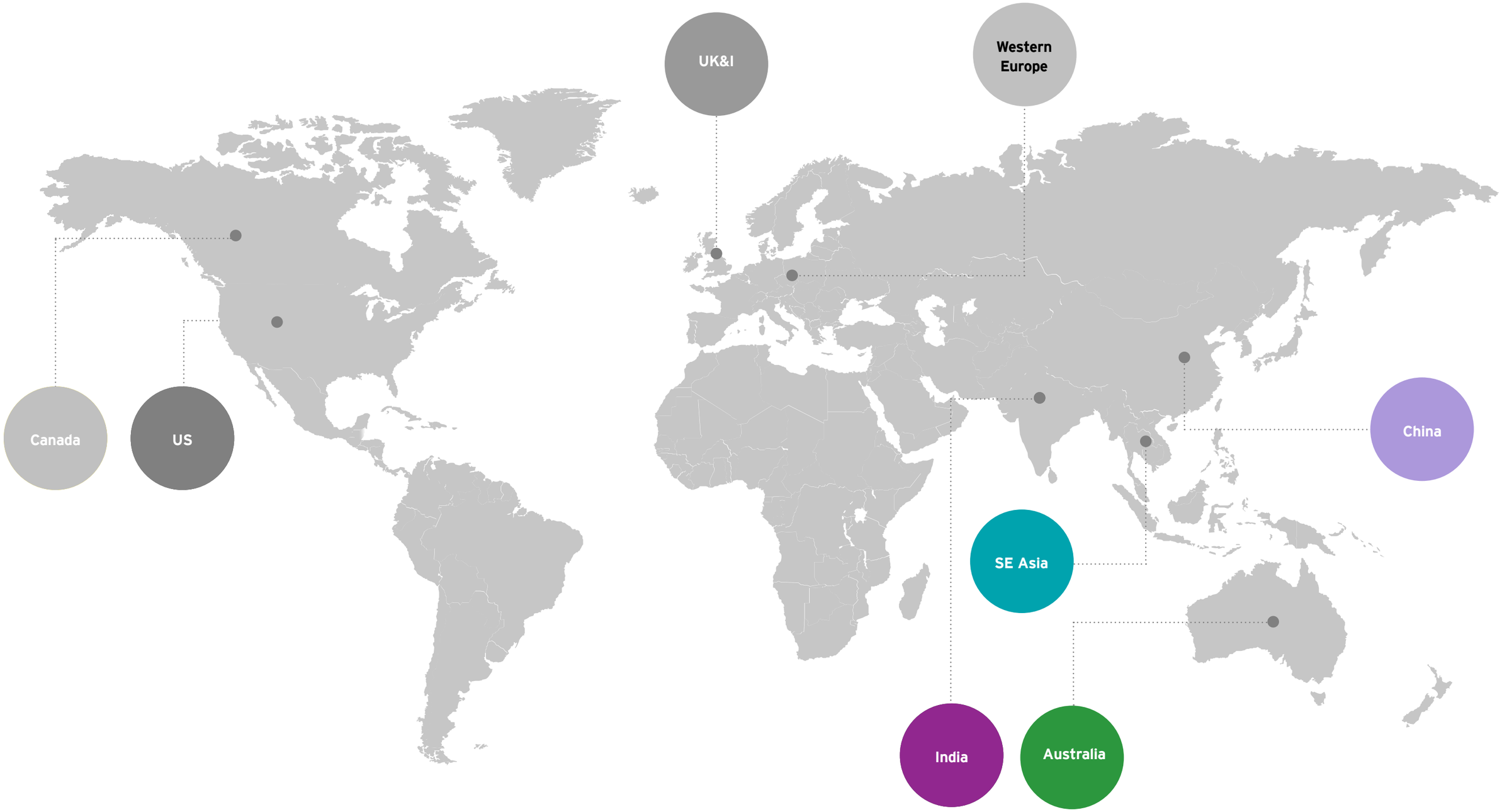
As valuations remain elevated, firms look to new ways to create value

- Despite a handful of high-profile club deals, consortium investments as a proportion of large buyouts have witnessed a decline so far this year. Per Pitchbook data, club deals represented 20% of all LBOs (excluding add-ons) in the US and 17% in Europe thus far in 2018, compared with 25% and 20%, respectively, for the same period last year. While the ability to pool capital and enable larger deals remains a primary motivation for such deals, they also enable PE firms to drive operational value creation through partnerships between GPs with different areas of expertise.
- A recent survey conducted by Dechert and Mergermarket revealed that 97% of respondents preferred to build a vertically integrated portfolio of companies over horizontal combinations. A similar proportion of respondents emphasized pursuing acquisitions based on industry or market differentials.
- The results also highlighted an increasing emphasis on cross-border deals; 65% of respondents reported executing three or more such transactions in the past three years, primarily in a bid to gain exposure to faster-growing economies.
- From a sector perspective, the outlook for continued activity in tech remains strong. In particular, our analysis of Pitchbook data suggests that PE firms are gravitating toward software firms that are experiencing sharp inclines in top-line growth backed by sustainable recurring revenue models, particularly in the software-as-a-service (SaaS) space.

3 Private equity: acquisition activity by region

PE acquisition activity by key regions and countries (YTD 2017 vs. YTD 2018)

Hover on each region for more information



PE deal activity by country and region (by quarter, 2015 through Q3 2018, in US$b)

Target nationality	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	% ▲ Q3 2018 vs. Q2 2018	% ▲ Q3 2018 vs. Q3 2017
Americas																	
Canada	$0.2	$3.2	$1.4	$0.5	$0.3	$1.6	$2.2	$0.7	$0.0	$1.2	$0.1	$4.6	$1.1	$8.7	$0.2	-98%	56%
US	$24.9	$51.9	$58.7	$60.1	$20.2	$65.7	$51.2	$34.2	$35.5	$48.8	$44.4	$36.0	$54.1	$56.7	$31.1	-45%	-30%
Latin America	**$1.5**	**$1.3**	**$0.8**	**$4.0**	**$0.0**	**$3.9**	**$5.3**	**$2.7**	**$0.4**	**$1.1**	**$0.8**	**$7.9**	**$0.5**	**$0.1**	**$0.1**	**97%**	**-86%**
EMEA																	
UK&I	$13.3	$12.6	$8.2	$11.1	$1.6	$4.6	$2.7	$21.2	$5.3	$17.7	$15.1	$14.1	$3.8	$7.3	$8.5	17%	-44%
Germany/Switzerland/Austria	$1.4	$7.0	$5.7	$2.7	$4.0	$10.4	$1.5	$12.6	$4.9	$3.2	$6.1	$4.7	$3.2	$9.5	$4.9	-48%	-19%
Belgium/Luxembourg/ Netherlands/France	$3.2	$6.0	$10.1	$4.0	$3.3	$15.4	$3.6	$2.4	$4.2	$8.2	$4.5	$6.4	$16.5	$9.7	$1.3	-86%	-70%
Nordics	$0.4	$0.8	$5.0	$1.8	$0.2	$3.0	$2.1	$0.8	$0.1	$7.4	$6.9	$5.5	$12.4	$3.0	$11.5	281%	67%
Mediterranean	$2.0	$4.2	$2.7	$4.4	$2.6	$10.0	$5.1	$4.6	$6.3	$2.4	$10.2	$11.1	$10.5	$19.9	$11.5	-42%	13%
Western Europe	**$16.6**	**$18.6**	**$18.3**	**$15.1**	**$4.9**	**$20.0**	**$6.3**	**$23.6**	**$9.6**	**$25.8**	**$19.6**	**$20.5**	**$20.3**	**$17.0**	**$8.5**	**-50%**	**-56%**
Asia-Pacific																	
China	$1.0	$4.7	$0.5	$0.9	$1.6	$1.2	$0.1	$0.9	$5.3	$8.0	$0.8	$0.2	$4.1	$16.7	$0.6	-96%	-22%
SE Asia	$0.5	$0.3	$0.3	$1.5	$0.4	$0.3	$3.5	$0.7	$0.4	$2.3	$17.6	$5.3	$1.1	$0.8	$0.2	-76%	-99%
India	$1.0	$0.6	$1.4	$0.9	$0.1	$1.0	$0.7	$0.6	$2.5	$0.6	$1.8	$0.4	$4.1	$1.7	$2.4	44%	34%
Australia	$6.5	$2.4	$2.7	$10.7	$9.3	$1.6	$9.9	$13.0	$0.5	$2.9	$2.5	$0.6	$1.3	$6.0	$10.3	70%	310%
Japan	$1.8	$2.1	$0.0	$0.8	$0.6	$0.2	$1.1	$5.8	$1.5	$2.2	$21.1	$1.8	$0.2	$0.0	$0.5	2517%	-98%

Analysis as at 30 Sep. 2018.

Note: Data is continually updated and therefore subject to change.

4 Private equity: acquisition activity by sector

Executive summary

- PE firms remain active in the software space; the sector has seen an increase in deal value of 71% over last 12 months versus the prior 12 months.
- Investment in financials have increased to 10% of total PE deal value over the last 12 months, up from 5% during the prior 12 months; increased interest in the insurance sector was the key driver.
- Health care has seen an increase in investment of 11% over the last 12 months, due to a number of large deals in the space, particularly in hospitals and clinics.

Current state

Technology remained the key driver behind the continued momentum in PE deal activity; lines between technology and other sectors blurred further.

- While technology, financial and health care picked up strong momentum, contribution of utilities and real estate to the aggregate deal value fell in last 12 months, compared to the previous year.

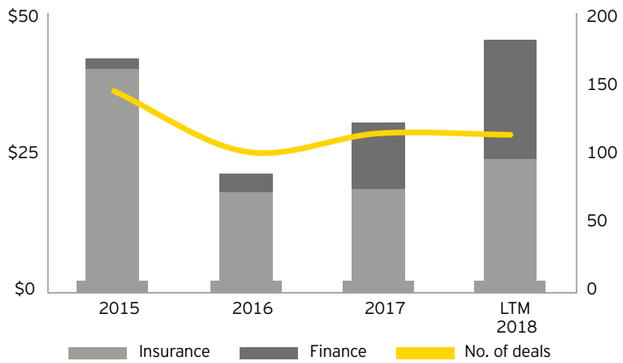
Industry	Prior 12 months		Last 12 months	
	% of value	% of volume	% of value	% of volume
Technology	18%	20%	21%	24%
Materials	7%	12%	10%	12%
Health care	9%	11%	10%	9%
Financials	5%	6%	10%	7%
Industrials	6%	9%	9%	9%
Consumer goods	10%	13%	9%	13%
Utilities	15%	3%	9%	3%
Real estate	14%	3%	8%	3%
Telecom	4%	2%	5%	2%
Consumer services	6%	14%	4%	13%
Oil and gas	2%	2%	3%	2%
Retail	2%	5%	0%	3%

Financials

- PE investment in the financials sector increased markedly over the last 12 months, the result of increased activity in insurance. Brokers, claims servicers and property & casualty were key contributors to the uptick, which was led by The Carlyle Group's US$6.7b acquisition of Sedgewick Claims Management Services Inc. from KKR for US$6.7b. Investment management and banking were other key segments attracting PE interest.

PE acquisition in financials – values and volumes (US$b)

Source: Dealogic



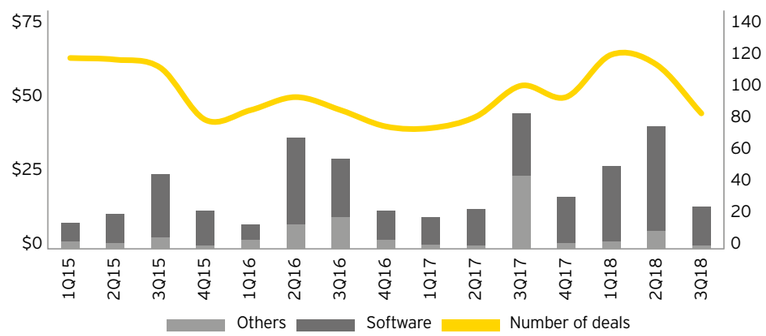
Note: Finance includes banking, capital markets, insurance, asset management, alternative assets; insurance is inclusive of insurance brokers

Technology

- Technology remains active, up more than 22% from a robust 2017.
- Cybersecurity, online payments and education tech were among the key areas garnering significant PE interest.
- Going forward, digital transformation is expected to drive mid-market PE deals, and the Internet of Things (IOT), once a niche segment, is expected to become a mainstream PE investment theme.

PE acquisition in tech – values and volumes by quarter (US$b)

Source: Dealogic

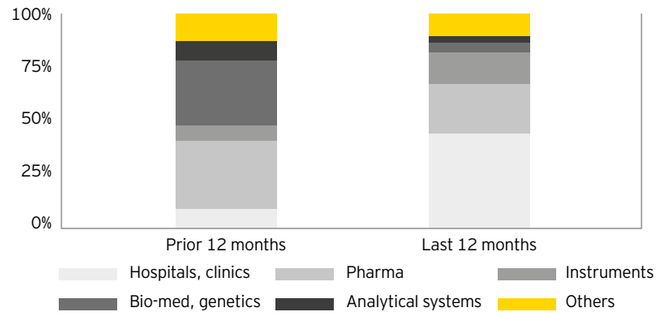


Health

- PE investment in hospitals and clinics as a proportion of aggregate PE deal value in health increased to 44% in past 12 months, compared with last year.
- Aging population in developed nations, consolidation opportunities and development of new drugs and devices are among the key the key drivers of growth in PE deal activity in health.

PE acquisition in health – subsectors as a % of total deal value

Source: Dealogic

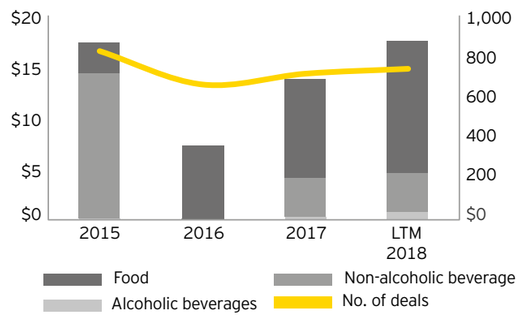


Consumer products

- While PE deal activity in the consumer space during past 12 months remained almost in line with previous years, food and non-alcoholic beverages segments saw a notable increase in investment.
- Innovative and nontraditional subsegments like plant-based proteins are expected drive growth in food segment.
- Favorable demographics driving demand in emerging economies.

PE acquisition in food and beverages – values and volumes (US$b)

Source: Dealogic



5 Private equity: exits

Executive summary

- PE exits have witnessed a modest decline so far this year, with 762 deals valued at US$261b, down 6% from a year ago.
- Declines in exit activity were evident in both M&A and IPOs.
- While Americas and EMEA regions saw declines in exits, activity in Asia-Pacific increased significantly, up 45% versus last year.

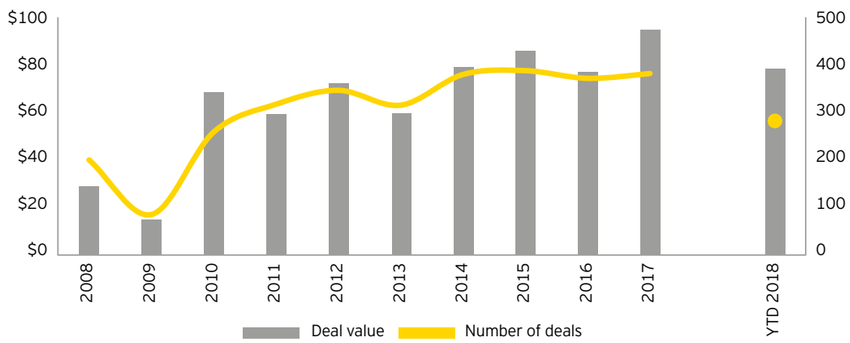
Current state

Exits dipped further; PE firms focus on minority stake sales.

- Exits continue their downward trend, with 762 deals announced so far this year valued at US$261b, down 6% from a year ago.
- Exits by M&A dropped by 6% over the same period versus a year ago, to US$238.6b with declines evident across the Americas and EMEA regions.
  - PE exits through M&A were down 14% by value in the Americas, and down 8% in EMEA.
  - Asia-Pacific saw a notable upswing, with PE exits by M&A value up 64% from last year.
- Proceeds from PE-backed IPOs have declined 16% in 2018 versus last year. The number fell 18%, to 66 deals, from 80 deals announced during same period last year.

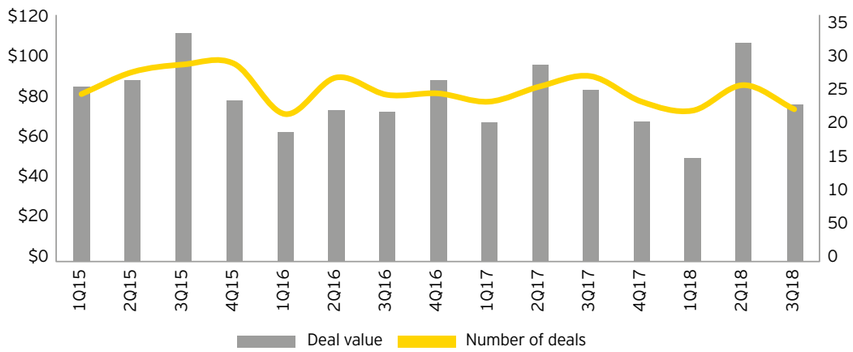
PE secondary buyout deals (US$b)

Source: Dealogic



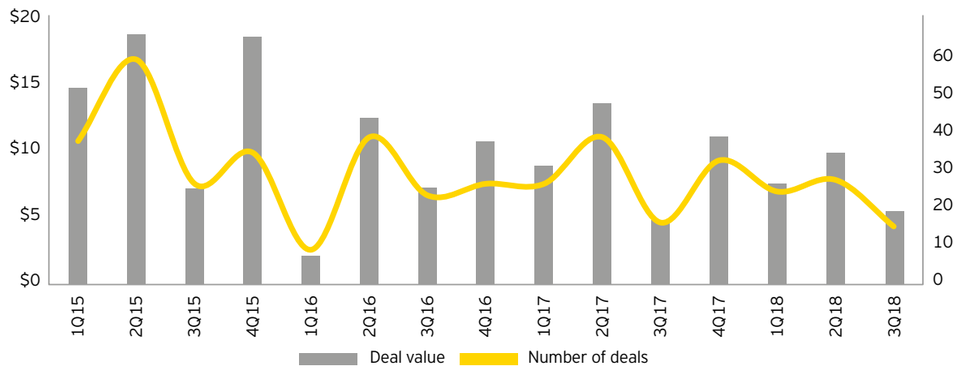
PE M&A exits by quarter (US$b)

Source: Dealogic



PE-backed IPOs by quarter (US$b)

Source: Dealogic



Largest PE exit deals so far this year

Source: Dealogic

Target	Industry	Sponsor	Value (US$b)	Type
Haidilao International Holding Ltd.	Consumer goods	Shanghai Yunfeng Investment Management	12.0	IPO
ADT Inc.	Consumer services	Apollo Global Management	10.5	IPO
BMC Software Inc.	Technology	Bain Capital; Insight Venture Management, Elliott Management, Golden Gate Capital	8.3	M&A
Adyen BV	Technology	General Atlantic	8.3	IPO
Blue Buffalo Pet Products Inc.	Consumer goods	Invus Group	8.0	M&A
Sedgwick Claims Management Services Inc.	Financials	KKR	6.7	M&A
Gates Industrial Corp. plc	Industrials	Blackstone	5.5	IPO
Techem GmbH	Consumer services	Macquarie Infrastructure and Real Assets (MIRA)	5.3	M&A
Sky Betting & Gaming	Consumer goods	CVC Capital; Sky plc	4.9	M&A
Marketo Inc.	Technology	Vista Equity Partners	4.7	M&A

Environment and horizon

GPs remain optimistic toward exit environment over the next year

- The increase in Asia-Pacific exit activity is welcome news for LPs invested in the region. Recent years have seen a dramatic amount of capital raised and deployed across the region; however, exit activity has largely failed to keep pace, the result of stop-and-go IPO activity in China and a historical lack of robust secondary activity. According to recent Preqin data, Asia-Pacific investments now account for approximately one-quarter of the private capital industry's total AUM.
- Sales to other PE firms have seen a downtick in 2018, amid an increase in sales to strategic acquires, which have accounted for 65% of exits so far this year, versus 55% in 2017. Sales to other PE firms have fallen from 36% of aggregate activity to 26%, which is roughly in line with long-term averages.
- According to Pitchbook, while exit activity may have fallen in recent quarters, distributions to LPs remain relatively steady, the result of sales of minority stakes and recapitalizations that allow partial realizations without GPs making a full exit from a portfolio company.

6 Infrastructure

Executive summary

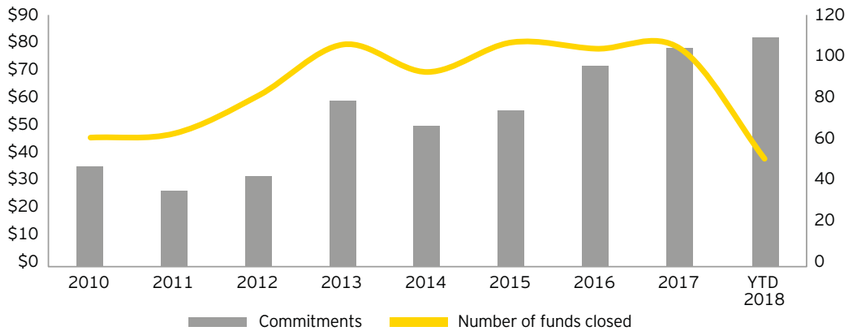
- With three months still remaining in 2018, fundraising for infrastructure funds has already surpassed last year's total and set a new record. Firms have closed 51 vehicles totaling US$81b, up 32% from the same period last year, and surpassing the US$77b that was raised in all of 2017.
- As a result, firms have an estimated US$186b in dry powder ready to deploy.
- Finding attractive opportunities, however, remains challenging. So far this year, firms have announced approximately 1,800 deals valued at US$256b, down 14% from the same period a year ago.

Current state

- With three months left in 2018, fundraising for infrastructure vehicles has already set a new record for commitments gathered in a single year, as investors continue to flock to the asset class. To date, LPs have funded 51 vehicles totaling US$81b in commitments, up 32% from the same period last year, and surpassing the US$77b that was raised in all of 2017.
- The third quarter was particularly active, with funds collecting US$37b in commitments for 20 funds that reached final close, which was nearly double the amount raised in Q2 2018. Two funds – a US$7.0b vehicle from I Squared Capital, and a US$7.4b vehicle from KKR, contributed heavily to the totals.
- Both North America and Europe saw steep increases in fundraising activity versus last year. In North America, fundraising climbed 57% versus last year, and in Europe, fundraising climbed 41% versus last year, to US$34b. Activity in the Asia-Pac region saw a marked decline, with just US$2.6b raised for funds based in the region, down from US$8.2b raised during the same period a year ago.
- As a result of strong fundraising, infrastructure funds have more capital ready to deploy than ever before. Firms currently sit on an estimated US$186b in dry powder, up from roughly US$150b at the beginning of last year. Approximately one-third is focused on core-plus investments, approximately one-fifth is focused on core infrastructure and the balance is split between debt investments, value-added vehicles and other subcategories within the asset class. With an additional US$300b in current portfolio holdings, overall AUM for the asset class exceeds US$460b.
- While fundraising remains robust, the pace of deployment remains stagnant. To date in 2018, firms have announced approximately 1,800 deals valued at US$256b, down 14% from the same period a year ago.

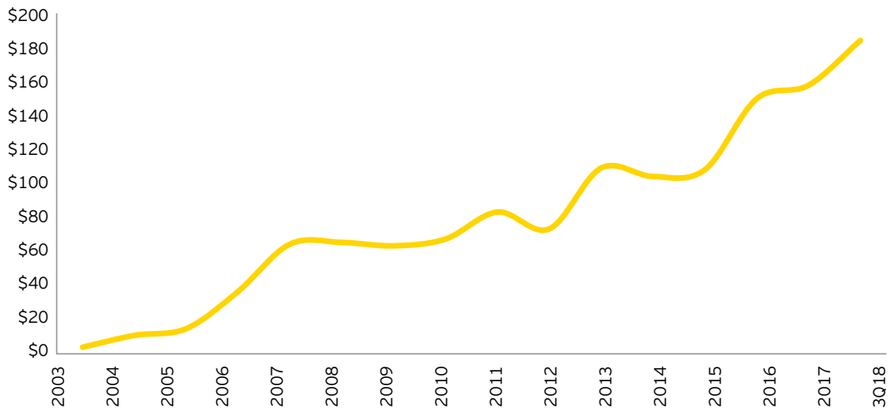
Infrastructure fundraising (US$b)

Source: Preqin.



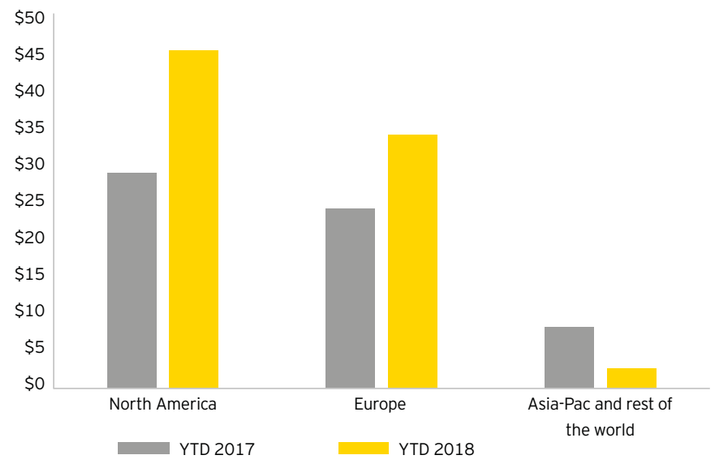
Infrastructure dry powder (in US$b)

Source: Preqin.



Infrastructure fundraising by region (in US$b)

Source: Preqin.



Environment and horizon

- We expect continued strength in fundraising for the sector. LPs remain attracted to infrastructure's unique ability potential for deploying large amounts of capital for long periods of time and limited reinvestment risk relative to many other asset classes. A recent survey from Preqin found that 43% of LPs surveyed expected to increased their allocations to infrastructure over the next year; this was more than 10 percentage points higher than the next closest asset class, private debt.
- Competition for deals for existing assets and a limited number of greenfield opportunities could continue to challenge firms seeking to deploy capital. As a result, many firms are expected to look further afield for attractive assets – increasing activity in the emerging markets, for example, or allocating more capital toward nontraditional projects with a basis in technological innovation and/or disruption.

7 Private credit

Executive summary

- Private credit is seeing another strong year for fundraising, which is up 18% from the same period a year ago.
- Dry powder continues its push into record territory. Firms currently have nearly US$282b in available capital, up 14% from the beginning of this year.
- There are now 370 credit funds on the road, seeking an aggregate US$170b from investors.

Current state

- Private credit is seeing another strong year for fundraising. Through the end of the third quarter, funds have raised more than US$87b for credit strategies, up 18% from the same period a year ago. The second quarter of the year was particularly active, with US$42b raised across various strategies.
- As a result, firms now have nearly US$282b in capital available for deals, up 14% from just nine months ago. The bulk of these assets are concentrated in North America and EMEA (US$178b and US$84b, respectively).
- Direct lending strategies, which last year saw fundraising more than double 2016, have continued to grow in 2018, albeit at a moderated pace. Such funds have raised US$35.7b so far this year, up 8% from the same period a year ago. By contrast, mezzanine funds have seen significant year-over-year growth, bringing in US$22.5b, up from US$9.7b last year.

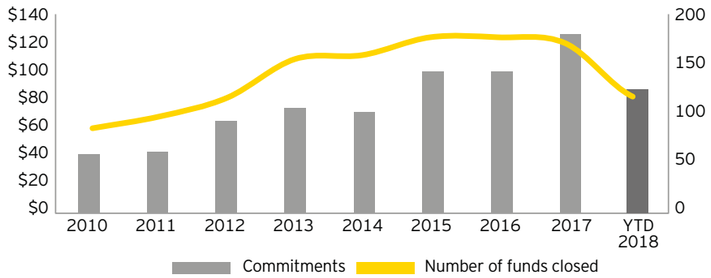
Top credit funds raised so far this year

Source: Preqin.

Fund	Type	Value (US$b)	Closed
GS Mezzanine Partners VII	Mezzanine	$13	28June 18
Ares Capital Europe IV	Direct lending	$7.6	23 July 18
GSO Capital Solutions Fund III	Distressed debt	$7.4	6 April 18
Clearlake Capital Partners V	Special situations	$3.6	16 March 18
CVI Credit Value Fund IV	Distressed debt	$3.0	2 May 18

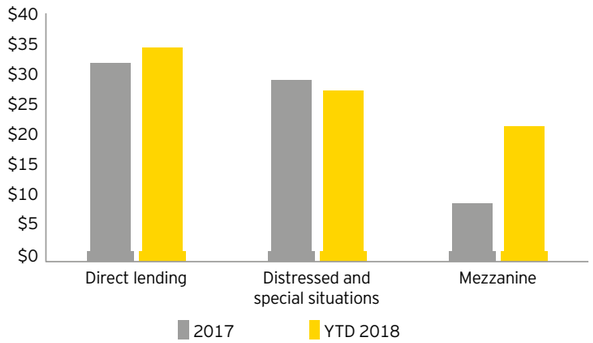
Private credit fundraising (US$b)

Source: Preqin.



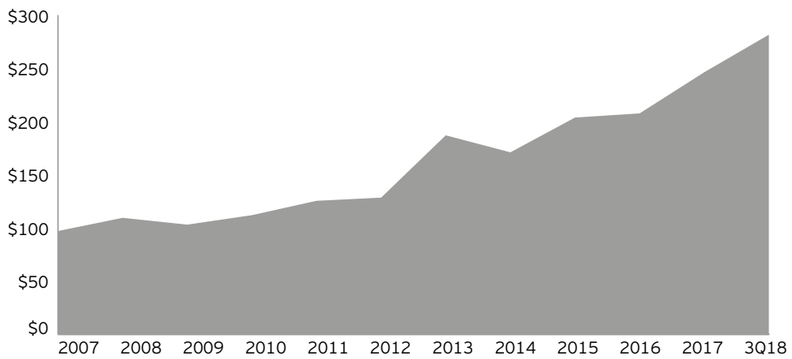
Credit fundraising by type, 1H17 vs. 1H18

Source: Preqin



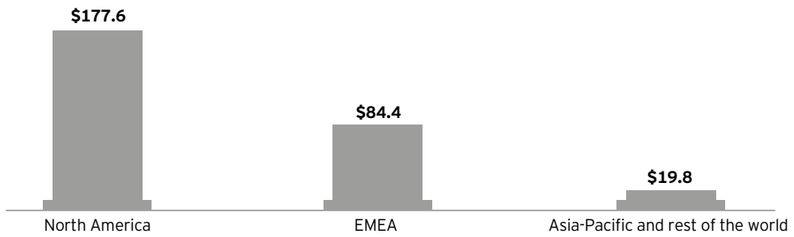
Growth of credit dry powder over time

Source: Preqin.



Current credit dry powder by region

Source: Preqin.



Environment and horizon

- The outlook for fundraising remains strong. Currently, there are approximately 370 credit funds at various stages of the fundraising process; in aggregate, they are seeking more than US$170b from investors. Of those:
  - Approximately one-half are primarily pursuing direct lending strategies
  - 20% are targeting the mezzanine space
  - 16% are targeting special situations and other opportunities
  - 12% are pursuing distressed opportunities

Capital markets overview

Executive summary

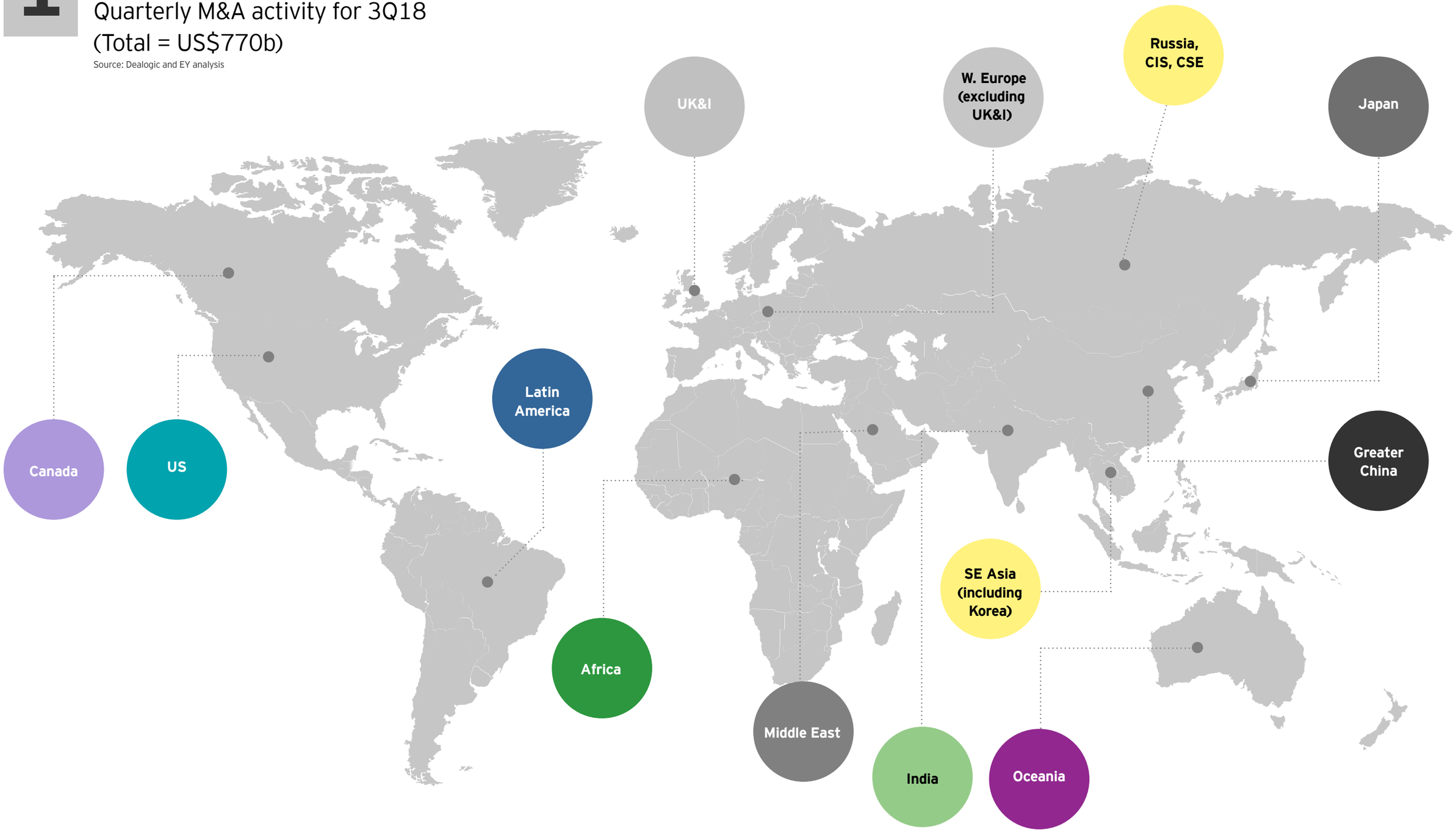
- Global M&A topped US$3t in the first three quarters of 2018 – the first time since the global financial crisis.
- The UK is the most favorable cross-border destination, with US$216b of inbound deals announced so far in 2018.
- According to the *EY 19th Global Capital Confidence Barometer*, confidence in the M&A market remains near record highs, supported by a positive economic environment and strong corporate earnings.
- Rising geopolitical and regulatory concerns are perceived as a growing impediment to dealmaking.
- After a strong flow of deals in this cycle, some corporates are expected to be focusing on the integration of recently acquired assets over the next 12 months.

1 M&A: Global deal activity

Quarterly M&A activity for 3Q18
(Total = US$770b)

Source: Dealogic and EY analysis

Hover on each region for more information

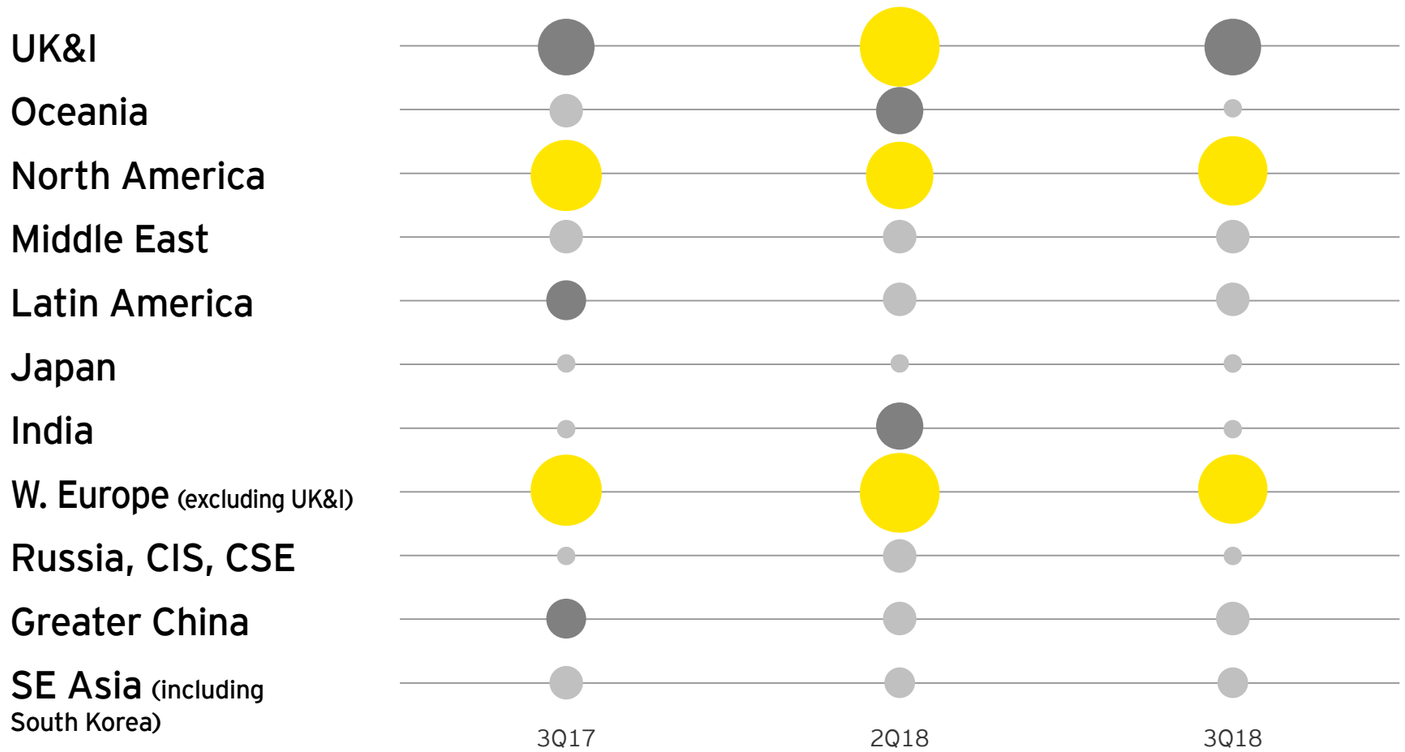


2 Cross-border deal flow

Quarterly deal flow (3Q18)

Source: Dealogic and EY analysis

Inbound deal flow



Hover on each region for top acquirer information

Hover on each bubble for value and volume information

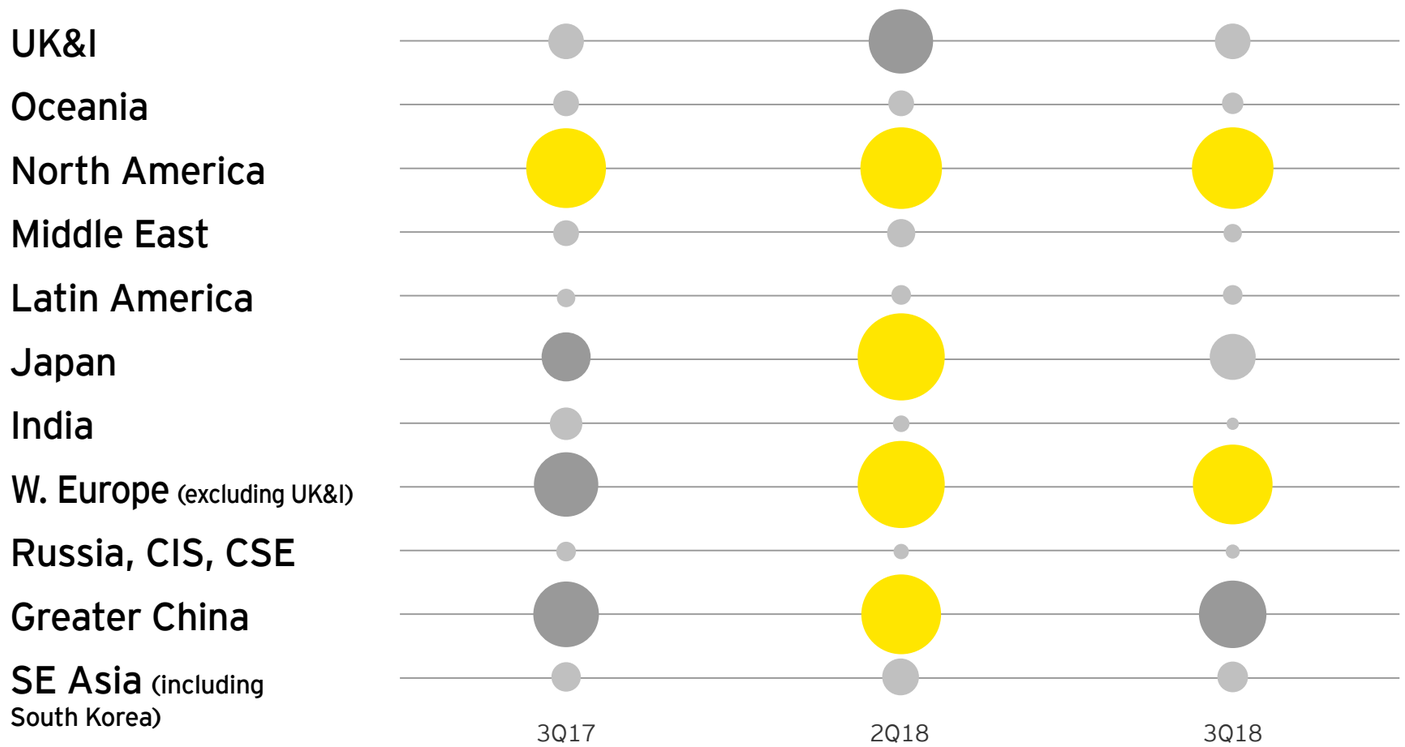
> $50b $20b–$50b < $20b

3 Cross-border deal flow

Quarterly deal flow (3Q18)

Source: Dealogic and EY analysis

Outbound deal flow



Hover on each region for top target information

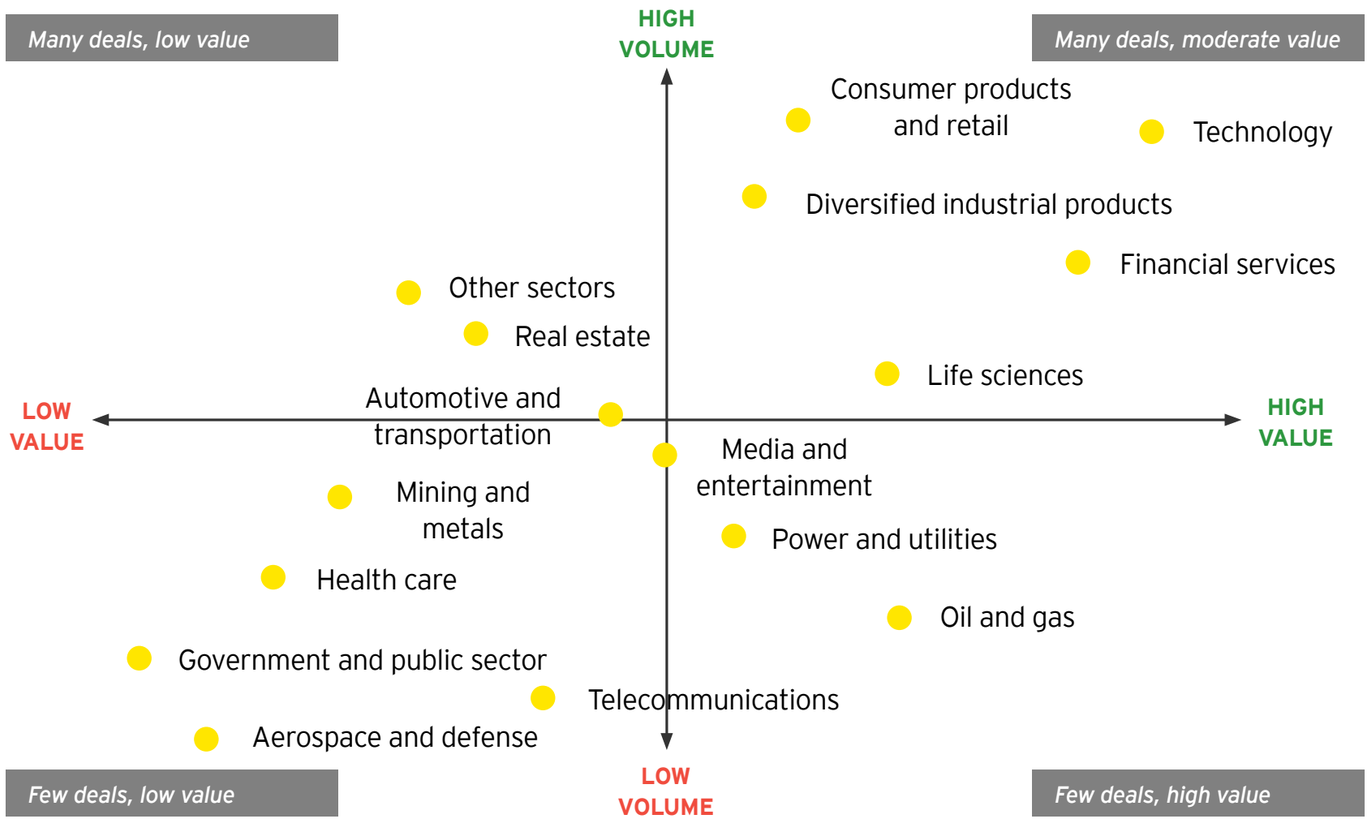
Hover on the bubble for deal value and volume

> $50b $20b–$50b < $20b

4 Global M&A – relative performance by sector

Last 12 months (LTM) to September 2018

Source: Dealogic and EY analysis



Click on each bubble for more details

5 IPOs

Executive summary

- Global IPO activity saw mixed results in 3Q18. While IPO activity registered a YOY decrease of 16% in terms of number of deals, it increased 12% by proceeds, compared with 3Q17.
- While IPO activity in the Asia-Pacific and EMEA regions declined in 3Q18, compared with 3Q17, owing to headwinds from geopolitical uncertainties and trade issues, the Americas kept a strong pace of activity, led by the US.
- There were nine mega IPOs in 3Q18, the same as 3Q17. However, the global average deal size was up from US$112m to US$155m.
- The outlook for rest of the year is mixed, with an expectation of higher proceeds due to proposed mega listings but lower deal volume owing to geopolitical tensions, trade issues and the impending Brexit.

Current state

- Global IPO activity saw mixed results in 3Q18 as the quarter lived up to the expectation of being the quietest period of the year, with the global IPO market feeling the heat from geopolitical uncertainties and trade issues between the US, EU and China. 3Q18 saw 324 deals raising US$50.2b, a YOY decline of 16% in terms of number of deals and a 12% increase by proceeds compared with 3Q17. The increase in proceeds was mainly due to a rise in unicorn IPOs.
- Asia-Pacific saw a decline in the number of IPOs in 3Q18, compared with 3Q17, whereas proceeds were significantly higher, led by a rush of mega IPOs listed on the Hong Kong Stock Exchange. This region's number of deals decreased by 22%, compared with 3Q17, while proceeds improved by 59%. Hong Kong's IPO market experienced a sharp rise in IPO activity this quarter, with volume increasing by 57% and proceeds witnessing an almost six-fold increase, compared with 3Q17. In mainland China, stricter criteria for approving IPOs on its exchanges, combined with weaker market sentiment, slowed IPO volumes substantially over the same period in 3Q17, with a decline of 78% and 57% in terms of number of deals and proceeds, respectively.
- In EMEA, trade uncertainties, the looming deadline for Brexit, and the delay and subsequent withdrawal of the listing of what was anticipated to be the largest IPO ever globally caused IPO activity to decline by 24% and 72% in terms of number of deals and proceeds respectively.
- US markets kept a strong pace in 3Q18, accounting for the majority of IPOs by volume and proceeds across the Americas. The US saw 55 IPOs in 3Q18 raising US$12.3b, an increase of 53% by volume and 157% by proceeds, compared with 3Q17.

324 IPOs in 3Q18
versus 386 in 3Q17

IPOs proceeds rose by 12% YOY

Geopolitical uncertainties and changes in trade policies are impacting IPO markets.

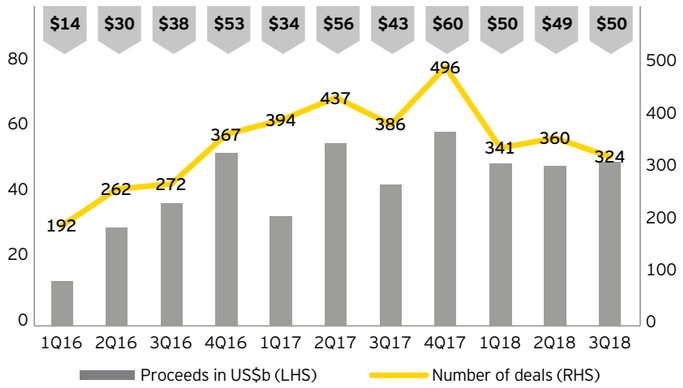
Top 10 IPOs by proceeds, 3Q18

Source: Dealogic, EY research

Issuer name	Issuer location	Sector	Exchange	Proceeds
China Tower Corp. Ltd.	China	Telecommunications	Hong Kong	6,921
Xiaomi Corp.	China	Technology	Hong Kong	5,430
Meituan Dianping	China	Technology	Hong Kong	4,222
Viva Energy Group Ltd.	Australia	Oil and gas	Australia	1,976
Elanco Animal Health Inc.	US	Life sciences	New York	1,736
Pinduoduo Inc.	China	Technology	NASDAQ	1,626
SIG Combibloc Group AG	Switzerland	Diversified industrial products	SIX Swiss Exchange	1,528
Farfetch Ltd.	UK	Technology	New York	1,018
NIO Inc.	China	Automotive and transportation	New York	1,002
Haidilao International Holding Ltd.	China	Real estate	Hong Kong	963

Quarterly IPO activity

Source: Dealogic, EY research



IPO activity by sector and area (% share of global deal numbers)

LTM to September 2018

Source: Dealogic; EY research

	Americas	Asia-Pacific	EMEA	Total
Technology	6%	15%	4%	24%
Real estate	3%	6%	4%	13%
Life sciences	4%	2%	4%	10%
Banking and capital markets	1%	5%	2%	8%
Automotive and transportation	2%	3%	1%	6%
Consumer products and retail	1%	3%	2%	6%
Diversified industrial products	2%	3%	1%	6%
Insurance	2%	2%	0%	5%
Oil and gas	2%	1%	1%	4%
Others	3%	11%	4%	19%
Total	25%	51%	24%	100%

Note: because of rounding, percentages may not add up to total.

Environment and horizon

- Our outlook for global IPO activity is mixed for the rest of 2018. While some planned mega IPOs by unicorn companies may result in higher proceeds, the number of listings is likely to be lower as compared with 2017, on account of geopolitical tensions, trade issues and Brexit.
- There may be a slight downturn in Asia-Pacific IPO activity in the months ahead, as further interest rate hikes and market volatility in the emerging markets may dampen investor enthusiasm for IPOs in this region. As authorities work to standardize listing assessments and shorten wait times for IPO applicants, mainland China should see a slow but steady flow of listings. Additionally, with the new listing regulations, including a weighted voting rights structure and updated rules for pre-profit biotech companies, that went into effect in April 2018, we expect more companies to flock to Hong Kong's IPO market.
- Geopolitical uncertainties and shifts in trade policies across the world will continue to impact EMEA IPO sentiment. However, investor confidence is backed by positive post-IPO returns and outperformance of main equity indices, providing a robust foundation for IPO activity in Q4 2018. In Europe, it is unlikely to stop the potential for a number of mega IPOs to come to market in the months ahead. The continued uncertainty around Brexit is likely to impact the appetite for IPOs in the UK. Across MENA, the IPO pipeline looks robust, with a large number of companies gearing up to go public in the next two years.
- We may see a narrower IPO window in the US as congressional elections in November 2018, along with discussions on US Tax Reform 2.0, are likely to impact the US capital market. However, we expect significant IPO activity in the first half of 2019 as the pipeline remains healthy with issuers from a variety of sectors.

6 Loans

Executive summary

- The third quarter was the lowest in global leveraged loan issuance since 2Q16. US leveraged issuance volume reached its lowest level in over two years as opportunistic issuers stayed away amid higher spreads. The European loan market also recorded its lowest quarterly volume since 3Q16.
- Acquisition financing remains the driving force of the loan supply in both the US and the European markets, accounting for 73% and 57% of YTD volume, respectively.
- The investment-grade loan market has been fairly liquid, and banks continue to allocate capital to their core relationships.
- Opportunistic repricing deals are expected in the coming quarter in the absence of substantial new jumbo financings.

Current state

Leverage finance market

- Total leveraged loan new-issue volume in the US and Europe was down 42% in 3Q18, compared with 2Q18, marking the lowest quarterly total since 2Q16. Uncertainty in the commodities sector and broad volatility across the equity and bond markets supressed the loan market.
- Straight-up loan refinancings in the US were down significantly in 3Q18 (65%), compared with 2Q18, while deals backing dividends to private equity shops were down 85% from the prior quarter. Loan repricing deals, which drove the market in the first half of 2018, dropped by 88% from 2Q18.
- Acquisition financing remains the driving force of the loan supply in both the US and European markets, accounting for 73% and 57% of YTD volume, respectively. This is a notable change in the trend, compared with last year, when refinancings were the major driver. Supply of large LBO-related transactions dominated in September in both the US and Europe.

Investment-grade loan market

- Global investment-grade lending reached US$1,439.1b in the first three quarters of this year, up 24%, compared with the same period last year. On the other hand, investment-grade new issuance was down by 8% in 3Q18, compared with 2Q18.
- M&A and other new lending opportunities slowed down during 3Q18 – lenders are focusing on new event-driven transactions and keep shifting toward larger portions in term loans for smaller issuers.

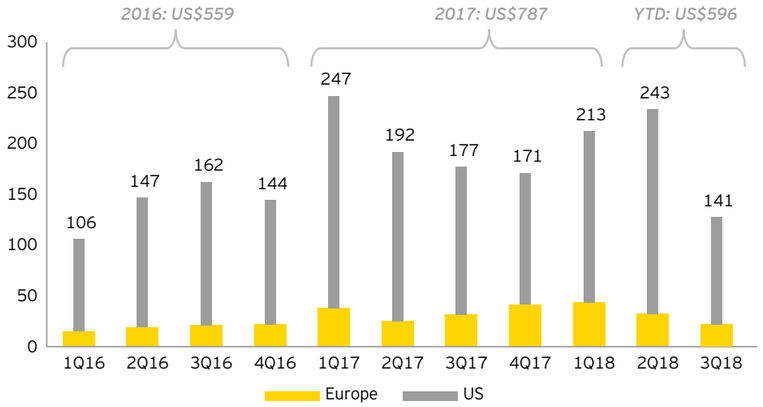
42% quarter-on-quarter fall in leveraged loan new-issue volume in the US and Europe

Acquisition financing contributed **73% and 57%** in the US and European loan volumes, respectively

The third quarter was the lowest in global leveraged loan issuance since 2Q16.

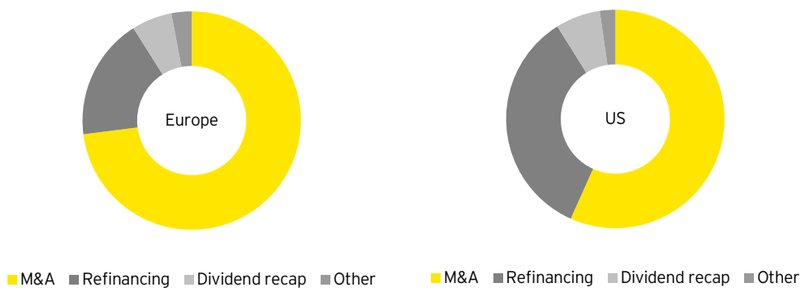
Leveraged loan new-issue volume (US$b)

Source: LCD comps.



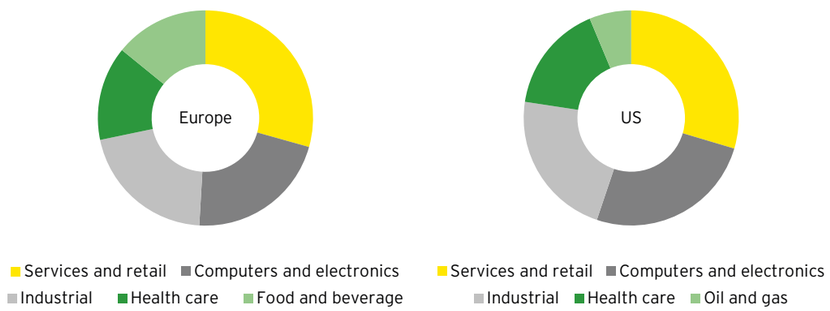
YTD leveraged loan volume by purpose

Source: LCD comps



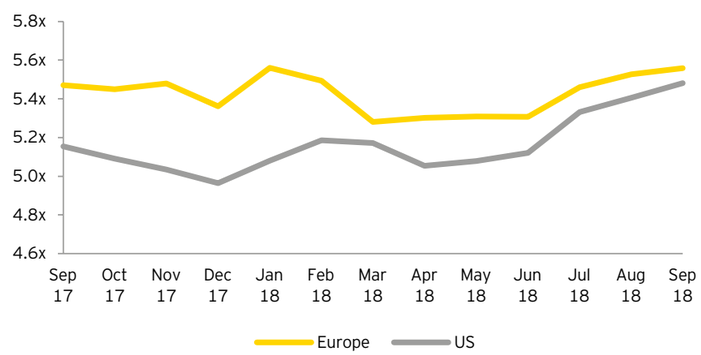
YTD leveraged loan volume by industry (top five)

Source: LCD comps



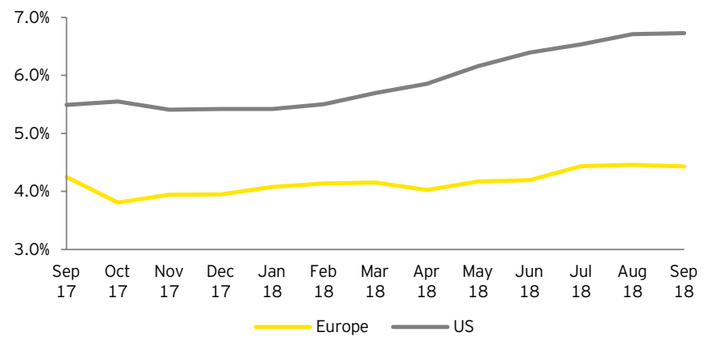
Pro forma debt/EBITDA ratio

Source: LCD comps.



YTM at issue for TLBs rated B (rolling three-months)

Source: LCD comps.



Environment and horizon

- In the absence of substantial new jumbo financings, the US leveraged loan market is poised to face the return of opportunistic repricings in the coming quarter, meaning tighter spreads and looser terms.
- A better balance between investors and borrowers was evident during the third quarter in Europe, but September has shown early signs of conditions starting to favor issuers a little more, with some are being offered better pricing. This trend is expected to continue.
- The investment-grade loan market has been fairly liquid, and banks continue to allocate capital to their core relationships.

7 Bonds

Executive summary

- Global high-yield activity remained low in 3Q18. New-issue bond volume declined in both the European and US markets.
- High-yield bond issuance is 23% below the 2017 pace through all the three quarters this year in the US and Europe, reflecting concerns over trade wars and issuers exhibiting a growing preference for the leveraged loan market.
- The European high-yield market is being hit by opposing forces, as strong inflows of funds create a positive environment boosted further by low supply from borrowers, while at the same time, volatile Italian government bonds and rising treasury yields balance the market.
- The European high-yield market may experience volatility in 4Q18, while the US market is expected to come on track in the coming quarter.

Current state

High-yield market

- Global high-yield activity remained low in 3Q18. New-issue bond volume declined in both the European and US markets.
- High-yield bond issuance is 23% below the 2017 pace through all the three quarters this year in the US and Europe, reflecting concerns over trade wars and issuers exhibiting a growing preference for the leveraged loan market.
- A preference for loan financing remained in force through the third quarter, further evidence that bonds are losing traction as a driver of leveraged buy out (LBO) activity.
- The high-yield market is still driven by refinancing deals, accounting for 63% and 55.9% of the YTD18 volume in the US and Europe, respectively.
- The European high-yield market struggles with opposing technical and macro concerns.
- Strong inflows of funds create a positive environment boosted further by low supply from borrowers, while at the same time, volatile Italian government bonds and rising treasury yields balance the market.

Investment-grade bond market

- The global investment-grade corporate bond market is getting saturated in the rising global interest-rate. Bonds having higher average maturities are expected to impact more due to increase in benchmark rates.
- US high-grade new-issue volume declined by 21% in 3Q18, compared with 2Q18, despite strong volume in September, primarily due to weak supply in July and August due to the seasonal lull.
- An uncertain macroeconomic backdrop, global trade tensions and Italian political turmoil encouraged borrowers and investors to stay away from the market in the first two months of 3Q18.

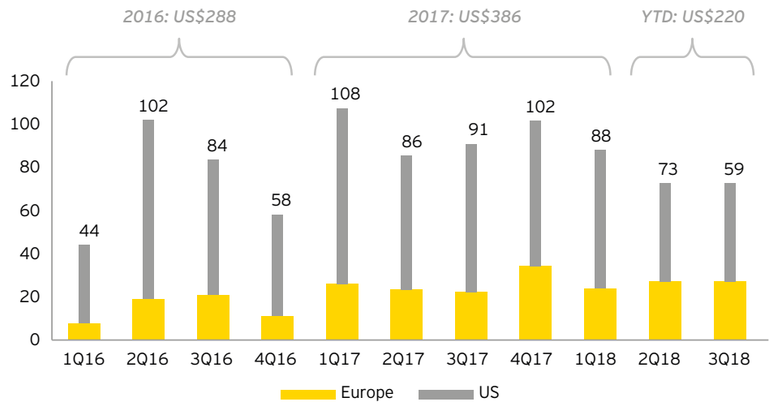
23% YOY
decline in high-yield bond issuance in YTD 2018

63% and 55.9%
share of refinancing deals in the US and European volumes, respectively

Global high-yield activity remained low in 3Q18. New-issue bond volume declined in both the European and US market.

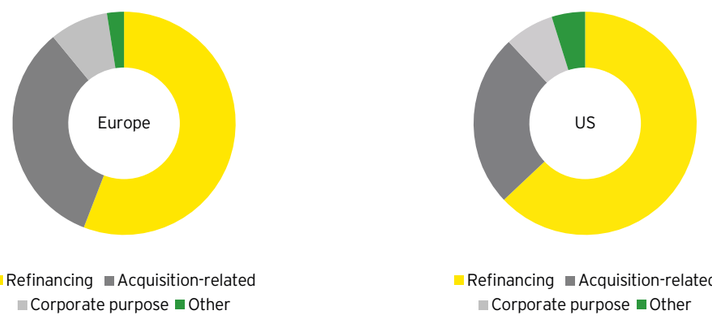
High-yield new-issue volume (US$b)

Source: LCD comps.



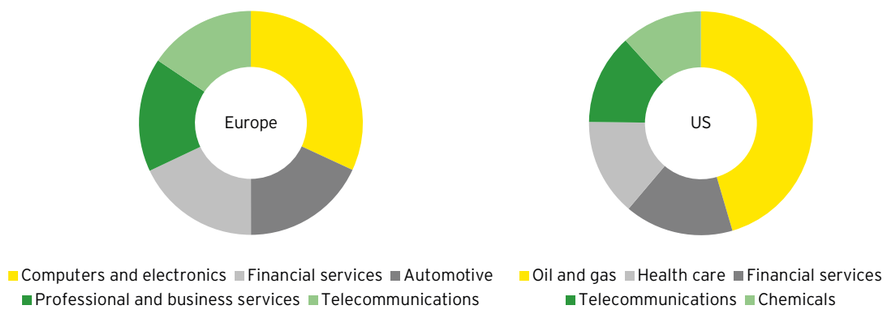
YTD leveraged loan volume by purpose

Source: LCD comps



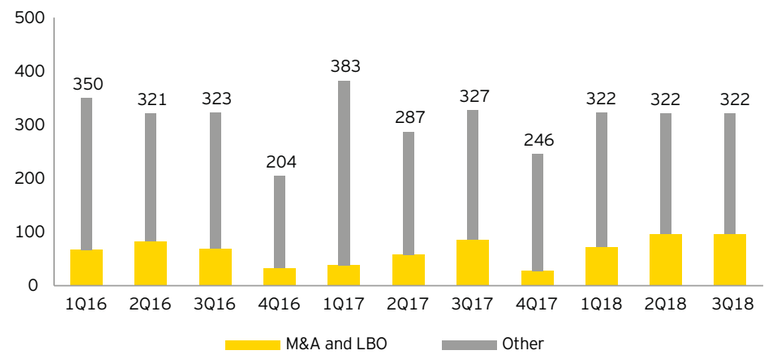
YTD leveraged loan volume by industry (top five)

Source: LCD comps



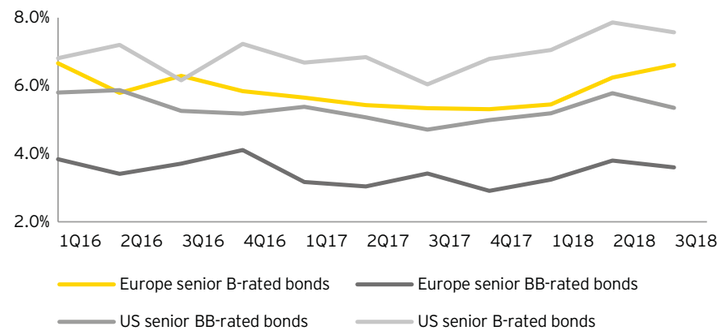
US high-grade bond issuances (US$b)

Source: LCD comps.



New-issue yields

Source: LCD comps.



Environment and horizon

- The dominance of loans was widely expected this year. Sponsors currently prefer the loan product, which is redeemable at par at any time, can be repriced at any time and is cheaper than high-yield. This trend is expected to continue in the coming quarter.
- The European Central Bank's tapering is expected to cause volatility in the European high-yield market in 4Q18. However, the US high-yield market is expected to pick up in the coming quarter due to favorable supply-demand dynamics supported by a strong corporate earnings season.

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