

The Pulse of Fintech 2018

Biannual global analysis of investment in fintech

Welcome MESSAGE

Welcome to the 2018 end-of-year edition of KPMG's *The Pulse of Fintech* — a biannual report highlighting key trends and activities within the fintech sector globally and in key markets around the world.

Fintech investment increased substantially in 2018, with total global investment dollars across M&A, PE and VC more than doubling from \$50.8 billion in 2017 to \$111.8 billion in 2018. Mega deals throughout the year — including Vantiv's acquisition of Worldpay for \$12.86 billion in Q1, Ant Financial's record-shattering VC raise of \$14 billion in Q2, and PE firm Blackstone's \$17 billion investment in Refinitiv in Q3 — helped to spur interest and activity in the fintech market.

The Americas, Europe and Asia all saw significant growth in fintech investment, although the total number of deals globally only increased slightly. This modest increase was driven primarily from the US and the Americas, where deal volume saw solid increases year-over-year. Both Asia and Europe saw a decline in their fintech deal volume, mirroring a trend seen across the broader investment market.

M&A and buyouts accounted for the largest fintech investments during the year in both the Americas and Europe, while VC investments reigned supreme in Asia. At a technology level, payments and lending continued to attract the most significant investment dollars globally, although insurtech and regtech were also quite high on the radar of investors.

The outlook is positive for fintech investment heading into 2019, in part due to the strong and highly diverse fintech hubs cropping up around the world, as well as growing recognition from both incumbents and scaled fintech companies that M&A is an important part of their growth strategies. There is likely to be an increase in investment focused on solutions targeted to the needs of unbanked and underbanked people in the developing world, including southeast Asia and Africa, even as more developed regions see a growth in fintechs that can reduce operating costs, improve service quality and expand customer reach.

We discuss these and a number of other trends in this edition of the *Pulse of Fintech*, in addition to examining other questions driving interest in the fintech market globally, including:

- Why is global growth pivotal for fintech success?
- Will regtech be the next big fintech play?
- How are corporates reshaping the fintech industry?
- How is blockchain investment evolving into a product play?

We hope you find this edition of *The Pulse of Fintech* insightful and informative. If you would like to discuss any of the information contained in this report in more detail, contact a KPMG advisor in your area.

All currency amounts are in US\$ unless otherwise specified. Data provided by PitchBook unless otherwise specified.



KPMG Fintech professionals include partners and staff in over 50 fintech hubs around the world, working closely with financial institutions, digital banks and fintech companies to help them understand the signals of change, identify the growth opportunities and to develop and execute on their strategic plans.

Ian Pollari

Global Co-Leader of Fintech, KPMG International and Partner, KPMG Australia

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Global Co-Leader of Fintech, KPMG International and Partner, KPMG in the UK

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- Global expansion and investment a top priority for Chinese fintechs and big techs

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In 2018, global investment in fintech companies hit

\$111.8B

with

2,196 deals





Global fintech investment doubles amid mega deals

Fintech investment globally more than doubled during 2018, driven in part by a small number of mega deals, including the acquisition of WorldPay by Vantiv and the \$14 billion VC funding round raised by Ant Financial in H1'18. The second half of 2018 also saw a significant number of large deals, including PE firm Blackstone's \$17 billion investment in Refinitiv (formerly the financial and risk group of Thomson Reuters) and the \$3.5 billion acquisition of prepaid card company Blackhawk Network by Silver Lake and P2 Capital Partners.

All told, 2018 was a year of multiple record highs across fintech investment, including VC, CVC, M&A and PE.

While new startups sprouted across emerging fintech subsectors, highly mature areas like payments saw some consolidation. For example, in 2018 Denmark payments firm Nets merged with German-based Concardis in a multi-billion-dollar deal. At the same time, Nets also carried out a number of other deals, including the acquisition of Poland-based payment firm Dotpay/eCard.

Growth a top priority for challenger banks across the globe

The growth agenda was a hot topic for fintechs globally during 2018, with later stage and unicorn fintechs raising large rounds, building international partnerships and making their own acquisitions to drive global expansion activities.

This was particularly true among digital challenger banks, which have historically focused on their domestic markets. In 2018, a number of challenger banks made big plays to expand beyond their borders — including Nubank in Brazil, N26 in Germany and several UK-based challenger banks. The growth objective of these companies has been a strong attractor for global investors. For example, China-based technology giant Tencent joined insurance company Allianz in March to invest \$160 million in German digital bank N26 to help fuel the bank's international growth. A number of other Asia-based fintechs have also targeted the use of acquisitions as a means for scaling globally.

In addition to global expansion, many challenger and digital banks also focused on broadening their service offerings throughout 2018 — expanding from niche offerings into a wider range of services similar to those offered by traditional banks. In order to compete effectively both regionally and globally, it is expected that such expansion of services — whether internally or as a result of partnerships — will continue to be a big priority for digital banks. For example, Marcus from Goldman Sachs acquired Clarity Money a personal financial management app for an undisclosed price. According to Goldman this acquisition will bring it more than a 1 million customers.

Big tech players coming onto the scene

Investors focused a significant amount of attention on Software-as-a-Service (SaaS) business models in 2018 and investors in the fintech market were no different.

Many of the big tech players are continuously working to expand their cloud-services offerings, including Alibaba, Google and others. While some of these companies are looking to compete directly with financial institutions, others have primarily focused on developing cloud, AI and machine learning products to enable banks and other financial institutions to launch their own fintech solutions or enhance their internal efficiencies.

In 2018, a number of large fintech players also made their own fintech investments. In September, PayPal acquired Europe-based payments platform iZettle for \$2.2 billion, while earlier in the year Workday purchased Adaptive insights for approximately \$1.6 billion. Stripe and Credit Karma were also quite active in the M&A space in 2018.



Global fintech investment doubles amid mega deals (cont'd)

Open data driving significant fintech developments

Open banking and open data continued to be key topics among fintech investors — not only in markets that have mandated or are in the process of implementing open data regimes, but also in markets interested in leveraging best practices as they are developed.

In 2018, a number of fintech companies have recognized the opportunity to help enable banks to comply and get ready for open banking (e.g. data sharing, customer management, consent, entitlement, digital identity management), with many investments and activities crossing national borders in order to take advantage of leading practices. For example, in the VC space, Australia-based Data Republic raised \$22 million in Series B funding in Q4'18 led by Singapore-based Innov8 and Singapore Airlines. At the same time, Ireland-based Priviti worked to help banks in Australia become compliant with open data regulations 1.

It is expected that open banking will lead to more competition as established fintechs work to become more competitive and new fintech companies look to enter the market. Growth, however, will continue to be a key obstacle, with customer acquisition and scaling as particular challenges. As a result, it is likely that open banking will primarily be a catalyst for the development of partnerships that will allow fintechs to grow. These partnerships will likely be a mix of fintech-fintech partnerships and partnerships between traditional companies and fintechs.

Jurisdictions such as Australia have also designed their open data regimes to have broad applicability with banking only the first sector to be targeted. As policies are tested and applied, they will likely be applied to other sectors, such as energy, telecommunications and others — which could foster additional cross-industry partnerships and investments.

Regulatory changes driving uptick in regtech investment

The regulatory environment continued to shift in 2018, with the degree of change not expected to drop off in the near future. The implementation of MiFID II, Payments Service Directive (PSD2), General Data Protection Regulation (GDPR), new IFRS standards and the EU Benchmark Regulation forced many organizations to adjust their operations in 2018, while the Fundamental Review of the Trading Book (FRTB) and the Central Securities Depositories Regulation (CSDR) are expected to drive further change in 2019 and beyond.

The ongoing regulatory changes helped increase interest in regtech during 2018, both from traditional corporates looking for ways to better manage their compliance obligations and from other investors. While regtech investments primarily focused on compliance management and reduction of risk exposure, there was also increasing interest in data and predictive analytics — as evidenced by the \$17 billion Refinitiv deal.

The US and Europe attracted the majority of regtech investment globally in 2018, although regtech interest in Asia also grew. Over time, Singapore, Hong Kong (SAR) and India are expected to become strong hubs for regtech in the Asia region, in part due to their significant investments in digital transformation, the rapid expansion of their domestic enterprises and their focus on development-related infrastructure.

"The growing complexity, costs and risks in managing regulatory and legal obligations on a global basis is a persistent challenge for the financial services industry. Through the application of AI and machine learning, global and regional banks are able to now gain access to emerging regtech solutions that can help them to more accurately assess and monitor their compliance obligations across multiple markets in real time and with greater confidence."



lan Pollari
Global Co-Leader of Fintech
KPMG International

www.finextra.com/pressarticle/75308/irish-priviti-sniffs-open-banking-opportunity-in-australia/openapis



Global fintech investment doubles amid mega deals (cont'd)

Blockchain development shifting to product focus

During 2018, there was a subtle shift in blockchain development and investment, with an increasing focus on startups building specific products and solutions for the market, such as Inventium — a firm developing a platform for corporate debt trading and securitization and Figure — a company building a home equity loan product blockchain. This shift comes after an extended period of investment geared primarily toward exploratory and project-based blockchain firms.

While the US attracted the majority of blockchain-focused investment in 2018, other jurisdictions continued to evolve into blockchain epicentres, attracting their own significant blockchain investments. In fact, Switzerland attracted two large blockchain deals during the same period — a \$103 million raise by SEBO Crypto and a \$102 million raise by Dfinity and WeShare in China also raised \$90 million. Other blockchain hubs that evolved significantly during 2018 included Montpellier in France and Bahrain and Dubai in the Middle East.

Blockchain investment is expected to continue heading into 2019, with an increasing focus on companies interested in leveraging the technology to offer specific products. Addressing critical technical issues such as privacy, anonymity, data segregation and scalability will also be a high priority for blockchain investors. On a global basis, there might also be some movement to create standards and frameworks to govern the development of effective blockchains for widespread use.

Insurtechs maturing rapidly, attracting larger funding rounds

Over the past year, insurtech matured significantly as a sector, with insurtech companies attracting larger and larger funding rounds globally. On a global level, there were 13 insurtech deals over \$100 million during 2018, including a \$375 million raised by Oscar Health Insurance in the US and \$200 million raised by PolicyBazaar in India.

Insurtech solutions expanded rapidly over 2018, although claims management and the unbundling of insurances services and processes continued to be key segments of investment. The focus of many insurtechs also shifted to platform-based models, with companies looking for ways to plug into different distribution networks or payments systems, work with different insurers, or offer white-label products and services. Traditional insurers have generally embraced this platform-model — seeing it as one way to embrace innovation across their value chain without developing solutions independently.

During 2018, there was also a profound shift in how traditional insurance companies and insurtechs viewed data, with both recognizing the critical role of data in terms of creating and selling on-demand insurance products. This knowledge saw many organizations rethinking their data management strategies in order to enhance trust with their consumers and encourage them to share more of the vital data required for the provision of tailored products and services.

"The fintech industry is particularly resilient, partly because of the very strong participation of corporates. In 2018, we saw corporate VC investment more than double, while corporates also drove a large degree of the M&A activity. And it's not just the traditional financial institutions getting involved in fintech deals. Globally, many of the big tech giants are also investing in fintech. Even when other investors might be more cautious heading into 2019, corporate participation will likely remain strong as they are primarily investing for strategic reasons."



Anton Ruddenklau Global Co-Leader of Fintech KPMG International



Global fintech investment doubles amid mega deals (cont'd)

Insurtechs maturing rapidly, attracting larger funding rounds (cont'd)

Looking ahead, Asia is poised to see substantial growth in insurtech investment, in part by US and Europe-based traditional insurers looking to use Asia to test alternative insurance offerings. Compared to the US and Europe, Asia is seen to have relatively low barriers to entry, a high population base and fairly light regulations — making it highly conducive for testing innovative options.

Corporate investment hits new high

Corporate VC investment in fintech for 2018 of \$23.1 billion nearly doubled the previous high of \$11.6 billion seen in 2016, with the number of corporate fintech deals growing for the eighth successive year. Increasing corporate participation highlights fintech going mainstream as well as a competitive response to the emerging threat of Fintech companies that have scaled, with both traditional financial institutions and a broad range of companies outside of the financial services industry participating through investments and acquisitions, including some of the world's largest technology companies and payment platforms. The growing maturity of the sector has also led some more advanced fintechs to make their own investments as part of their drive to expand either geographically or on a product basis and in some cases, partnering with/taking investment from financial services incumbents. There is expanding interest in partnering with fintechs to provide services, in addition to increasing interest from corporates with homegrown fintech offerings to provide B2B services to corporate clients and other financial institutions (e.g. Open banking, regtech, cyber, etc.).

Trends to watch for 2019

The future looks bright across all areas of fintech, with bigger and bigger deals expected heading into 2019 as existing fintechs look for additional capital in order to fuel global growth. Investments in regtech and insurtech are also expected to rise as the sectors continue to mature and evolve.

There will likely be increasing participation in the fintech space from big tech players such as Google, Alibaba, Microsoft and others — whether through direct acquisition of fintech companies or by forming partner-enable models with financial institutions. Enablement will continue to be a key focus for fintechs, with many traditional corporates looking for ways to enable their own digital transformations.



Top 10 predictions for 2019

The global fintech ecosystem continued to mature at an accelerated pace over the course of 2018. With big developments ranging from the rise of open banking, increasing regulatory clarity and maturation of Al and blockchain, 2019 promises to be another big year for fintech. Here are our top 10 predictions for 2019.

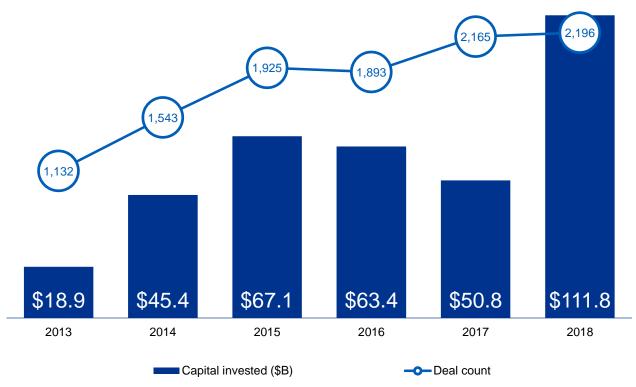
- Consolidation: In 2019 we will see increasing levels of consolidation in mature areas such as payments and lending, as well as emerging areas like blockchain as startups look to scale and fuel international growth.
- Bigger deals: Deal sizes are expected to continue to grow in 2019, as investors focus on later stage fintechs with a proven track-record in an effort to reduce risk.
- Global expansion: Challenger banks will continue to grow their service offerings and expand across international borders.
- **Open banking:** Regulations around open banking in Europe and elsewhere will prove to be a boon for technology giants and startups alike as they increasingly play a role in financial services.
- **Blockchain:** There will be a dramatic increase in levels of investment in companies dedicated to building specific products and solutions based on blockchain technology.
- Insurtech accelerates: Asia will see substantial growth in insurtech investment, in part by US and Europe-based traditional insurers looking to use Asia to test alternative insurance offerings.
- Regtech rises: Investments in regtech will accelerate in 2019, as startups focus on helping incumbent financial institutions reduce costs associated with complying with increasingly stringent regulations.
- Financial institutions: Corporate investment will remain strong, with an expected increase in partnerships in particular due to open banking and also for investments to continue to form a core part of M&A strategies for incumbents.
- 9 Collaboration in Asia: Collaboration between fintechs and banks in Asia is expected to continue to grow, particularly in areas like KYC, AML and digital identity management including facial recognition and voice recognition.
- Digital banking: Traditional banks and corporates will increasingly expand into digital banking, introducing nimble, standalone digital banks that operate independently and do not rely on their existing legacy systems





A blockbuster year

Total investment activity (VC, PE and M&A) in fintech 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Note: refer to the Methodology section at the end of the document to understand any possible data discrepancies between this edition and previous editions of The Pulse of Fintech.

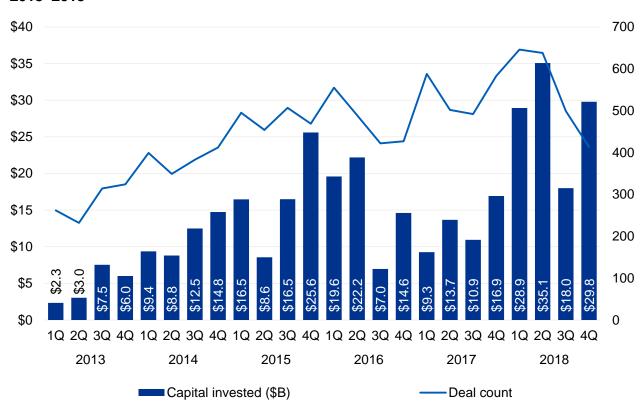
The value of the deal where Legal & General Investment Management acquired the Canvas ETF platform from ETF Securities has not been disclosed and is not reflected in the Pulse of Fintech

For the annual edition of the Pulse of Fintech, looking at the year-over-year growth in both volume and aggregate value of dollars invested across all private investment transactions, it is remarkable just how swiftly the sector grew. 2018 was a stark high in both measures, however, even as incoming consolidation within the sector, plus rising financial asset valuations worldwide, contributed to deal volume flatlining between 2017 and 2018. This past year was characterized by mega-deals of all kinds, from Ant Financial's \$14 billion late-stage VC financing to the \$12.8 billion acquisition of Worldpay; and 2019 may see even more to come.



A blockbuster Q2 helped establish a record year

Total investment activity (VC, PE and M&A) in fintech 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Note: refer to the Methodology section at the end of the document to understand any possible data discrepancies between this edition and previous editions of The Pulse of Fintech

Breaking down the year-over-year growth illustrates the sheer scale, but quarterly figures shows just how much even one company can impact fintech trends — granted, that company has to raise a multibillion-dollar infusion of funding, but still, the outlier quarters on the above chart are primarily propelled by Ant Financial, which raised the largest venture round in history in Q2 of 2018; Worldpay, which was bought for \$12.9 billion; and last but not least Refinitiv, which was bought by a consortium for \$17 billion in October.

"Even taking out the three big outliers in 2018 (Ant Financial, WorldPay & Refinitiv), the numbers in 2018 are still remarkable. We're seeing the value of investment into fintech excluding the outliers up 33 percent, while the number of deals has remained around the same. This means that the average investment per fintech deal is getting bigger — the fintech firms that are getting acquired or funded globally are more mature. Deal size is a strong function of the maturity of the market."

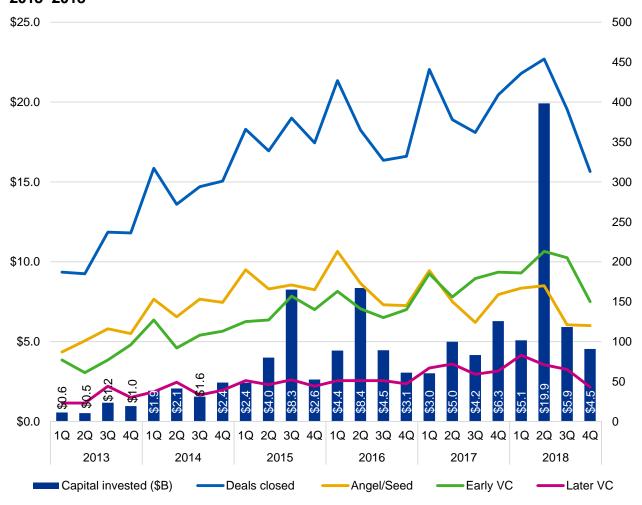


David Milligan Global Lead, KPMG Matchi and Associate Director KPMG in South Africa



Quarterly volume reveals fintech's volatility as it grew to all-time highs in 2018

Global venture activity in fintech 2013–2018



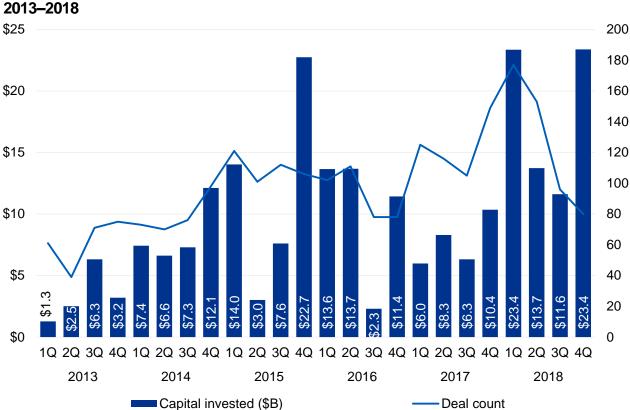
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

As is clear from the trendline above, there is considerable variance quarter over quarter in fintech investment trends in the venture universe. However, its growing popularity over time is undeniable, with 2018 seeing new highs; the downturn at the end of the year is likely more temporary than anything else as all drivers of fintech's popularity remain by and large intact.



The M&A cycle reaches a peak in 2018

Global M&A activity in fintech



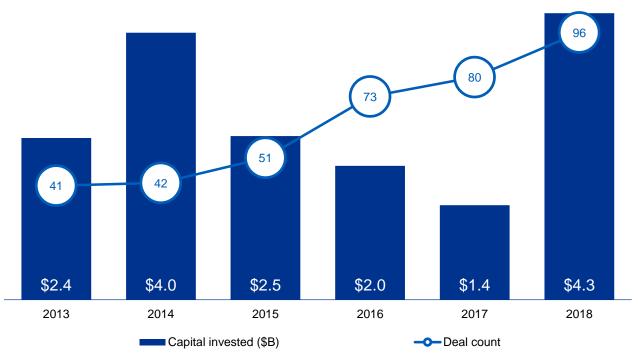
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Finishing strong in the final quarter despite a downturn in volume, the fintech M&A cycle is clearly being propelled higher and higher throughout the quarters by some mega-deals due to consolidation and also via the growing incidence of incumbent giants purchasing fintech startups.



PE shops seek greater exposure earlier

Global PE growth investment activity in fintech 2013–2018



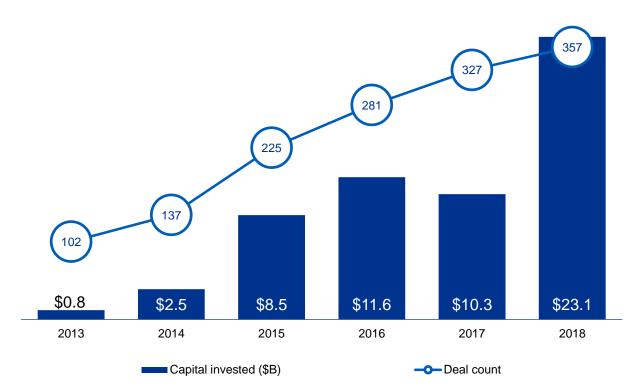
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Among the general M&A cycle, financial sponsors' activity is most intriguing to unpack, as it often lags both venture and strategic investors' efforts, given PE buyout shops typically focus on the most mature part of the cycle. Consequently, though their volume remains relatively low in proportion to VC or M&A counts, it is clear PE firms are increasingly looking to gain exposure even earlier than normal within their purview and are ramping up their investing pace for minority stakes more and more.



Corporates play an integral role in fintech

Global venture capital activity in fintech with corporate participation 2013–2018



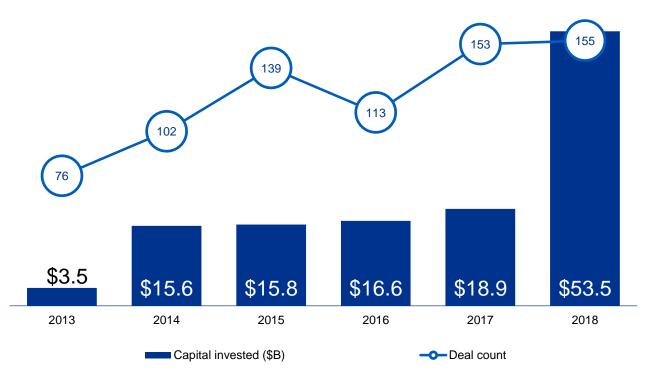
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Especially within fintech, the role of corporate investors and their venture arms has been more pronounced across the global landscape than in many other sectors, primarily due to fintech's unique properties and business opportunities within legacy financial services. Consequently, corporations have played an integral role, more so in some regions than others, but definitely across the landscape on the whole. It's worth noting that this goes beyond legacy financial corporations becoming involved; rather, traditional technology businesses have also sought to gain some exposure, often for financial reasons beyond necessarily planning for strategic initiatives down the road.



A record year for cross-border buying

Global cross-border M&A activity in fintech 2013–2018



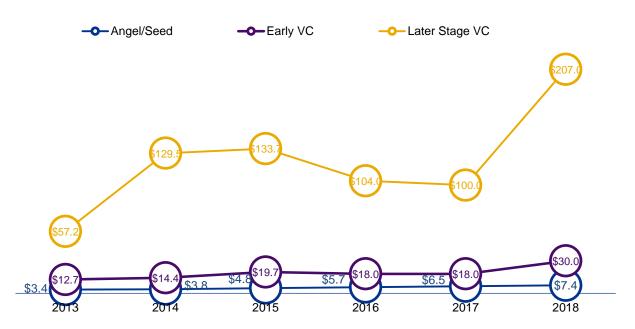
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Analyzing the rates of cross-border activity, wherein an acquirer buys a company headquartered in a separate country, it is clear that as fintech has evolved, more leaders within key fintech niches and financial services companies are seeking to expand their geographic reach at a minimum and likely augment their product and service lines to boot. 2018's clear peak in volume — and massive surge in deal value — speaks to the stage of the M&A cycle within financial services and fintech, as acquirers are willing to pay up in order to consolidate a more commanding position within their focus areas.

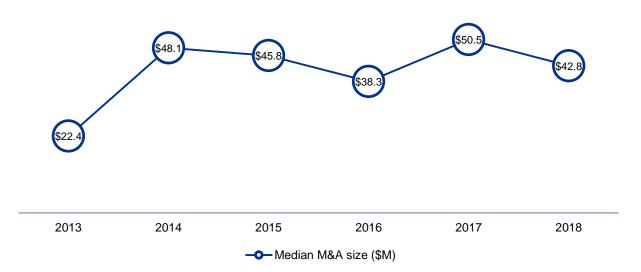


Late-stage valuations surge amid global inflation

Global median venture pre-money valuations (\$M) by stage in fintech 2013–2018



Global median M&A (\$M) size in fintech 2013–2018

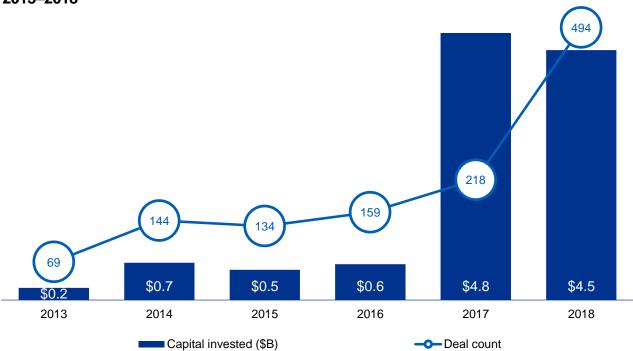


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



The blockchain boom

Global private investment (VC, PE and M&A) in blockchain & cryptocurrency 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Last year saw more private investment by count within the blockchain and cryptocurrency space than ever before, plus a sustained amount of capital invested and for good reason; after the mania surrounding initial coin offerings (ICOs) began to die down, it was clearer to more sober, institutional investors which business opportunities truly could be rendered more efficacious with utilization of blockchain technology and potentially cryptocurrency monetization. Accordingly, it is likely that investment will proceed at substantial if not quite record paces throughout 2019, as investors continue to seek out which companies can truly prove out the promise of the blockchain.

"A lot of people expected 2018 to see a huge amount of institutional crypto investment — and that simply didn't happen. Creating a whole asset class or a new global currency requires a lot of trust and infrastructure and those take time to build. Many of the largest blockchain deals of 2018 were all focused on crypto infrastructure and services. 2019 going into 2020 is really when many of these investments into crypto will start to become real and bear fruit."

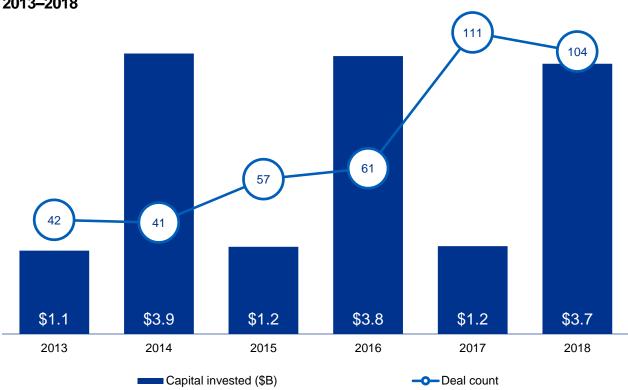


Kiran NagarajCryptoassets Lead, KPMG Blockchain Services, KPMG in the US



Regtech solutions surge in popularity





Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Regtech pure-play solutions are not as prolific as other fintech segments, but as regulatory burdens continue to evolve and proliferate, business use cases become increasingly clear; hence the surge in private investment volume across the past two years, even if deal value has been fairly erratic over the past few years. Given the surge in overall value this last year, plus sustained high volume it is likely that more robust deal values could be seen going forward, as incumbents or larger financial services groups eye market leaders.

"The dominance of the US and Europe in regtech investment and innovation is gradually shifting. The Asia Pacific region is expected to be the engine of regtech growth due to the presence of emerging countries as well as the financial hubs in Hong Kong (SAR), Singapore and India. Such growth is to be expected because of accelerated adoption of new technologies, high investments in digital transformation, swift expansion of domestic enterprises, extensive development of infrastructure and crucially the rapid growth of the middle class and GDPs in the region."

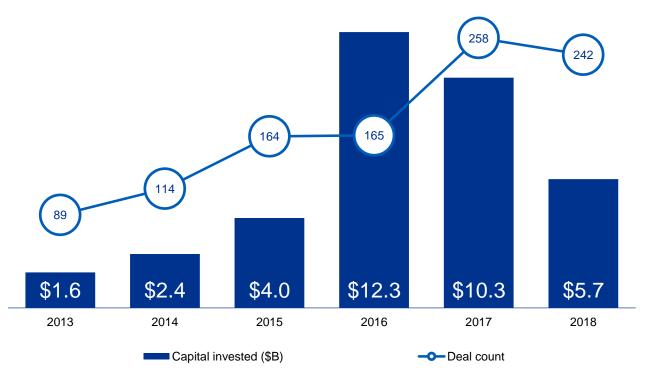


Fabiano GobboGlobal Leader, Financial Risk Management
KPMG International



Insurtech sees active interest as value falls

Global private investment (VC, PE and M&A) in insurtech 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Interestingly, after seeing not only record high in volume but also deal value in 2017, the insurtech space saw a significant decline in value, even as volume persisted at a near-record level. Primarily driven by outliers, earlier annual tallies suggest the entrance of not only late-stage growth investors but also strategic acquirers willing to pay significant premiums for innovations within insurance product and services lines; that interest is persisting, but check sizes have taken a breather, though it's worth noting \$6 billion is still easily the third-highest annual total ever.

"Al and Machine Learning are incredibly important and are going to redefine insurance in the coming years. But it's still very early days. It will be almost impossible to really drive Al value on anything more than the most basic of insurance products until you've dealt with some of your fundamentals — your data, your legacy systems and the way your products are constructed and serviced."



Will Pritchett
Global Lead of Insurtech
KPMG International



Top 10 global fintech VC, PE and M&A deals in 2018



- Refinitiv \$17B, Eagan, US
 Institutional/B2B
 Buyout
- 2 Ant Financial \$14B, Hangzhou, China Payments/transactions Series C
- Worldpay \$12.9B, London, UK
 Payments/transactions

 M&A
- Nets \$5.5B, Ballerup, Denmark
 Payments/transactions
 Buyout
- Blackhawk Network Holdings \$3.5B, Pleasanton, CA
 Payments/transactions
 Buyout

- VeriFone \$3.4B, San Jose, US
 Payments/transactions
 Buyout
- **iZettle** \$2.2B, Stockholm, Sweden Payments/transactions *M&A*
- Fidessa Group \$2.1B, Woking, UK
 Institutional/B2B
 Buyout
- Ipreo \$1.9B, New York, US Institutional/B2B M&A
- IRIS Software Group \$1.7B, Datchet, UK Institutional/B2B Buyout

Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



In 2018, fintech investment in the Americas hit

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1,245 deals





US dominates fintech investment in Americas, although Latin America sees growth

Total fintech investment in the Americas soared to a new record in 2018, with \$54.5 billion invested across 1,245 deals. By comparison, 2017 saw \$29 billion raised across 1,039 deals. While the US accounted for the vast majority of this investment (\$52.5 billion), other regions also saw sizeable deals during the year and strong fintech activity in general. Brazil had a particularly strong year, with Nubank and PagSegaro both reaching unicorn status. PagSegaro also hosted a solid IPO exit during the year.

Later stage deal sizes growing in Americas

While the median pre-valuation size was down for Angel and Seed stage deals in the Americas, the median pre-valuation size of early stage and late stage deals went up dramatically. The year-over-year difference for late stage deals was particularly noteworthy — from \$95 million in 2017 to \$182.5 million this year.

The increasing sizes reflect the growing maturity of the fintech space and the ongoing growth of early fintech leaders into dominant market forces. Many of these companies have successfully built a bulwark within their domestic market and are now eyeing global expansion in order to scale their activities and revenues accordingly.

Canada's fintech market relatively steady in 2018, but poised for growth

Canada's fintech market remained stable in the second half of 2018, in part due to a \$153 million raise by Montreal-based revenue-enhancement company Plusgrade in November. The company is expected to use the funds to expand its product offerings and further expand its global reach.

Canada's big banks continued to focus a significant amount of attention on the robo advisory space, with RBC announcing the full roll-out of its RBC InvestEase platform late in 2018. Other banks have formed partnerships with robo advisory focused fintechs, such as TD Bank's agreement with US-based Hydrogen Technology Corp to launch a robo advisory service in 2019. In December, wealth management company Vangard Investments Canada also announced plans to launch a digital advice platform particularly for retail investors.

Given Canada's role as a global leader in artificial intelligence and machine learning, it is expected that there will be increasing investor interest related to Al-driven fintech offerings in the country over time. The Canadian government is also undertaking a number of initiatives that should have a positive impact on fintech investment, including a payments modernization initiative and consideration of a shift to open banking. Changes to Canada's Bank Act are also expected during 2019, which will likely allow Canadian banks to more readily invest in fintech startups; to date, the Canadian banks have been held back from making many such investments.

Brazil fintech market continues to strengthen and mature

Brazil's fintech market was particularly strong in the second half of 2018, led by Nubank's \$180 million raise in October. The investment in Nubank was led by China-based Tencent Holdings — highlighting the increasing potential foreign investors see in the Latin America market. With a valuation of \$4 billion, Nubank is one of Brazil's largest privately held companies and, by far, it's highest valued fintech to date.

The general fintech market in Brazil showed strong maturation over the course of 2018, particularly in the payments and lending spaces. This maturation was visible in the successful IPO exits of payments companies PagSegaro and Stone Pagamentos. PagSegaro raised \$2.3 billion in January on the NYSE, while Stone Pagamentos raised \$1.15 billion on the Nasdaq in October.

While Brazil is expected to continue to see very high interest rates, the prospects for the country are positive heading into 2019. As the country's fintech companies continue to grow and mature, deal sizes are expected to grow. More foreign investment is also expected as global investors look to take advantage of the relatively underserved Latin American market.



US dominates fintech investment in Americas, although Latin America sees growth (cont'd)

Latin America growing on the radar of fintech investors, including corporates

In Latin America, financial inclusion has been a key driver of investment in the fintech space, with as much as 42 percent of new fintech startups focusing on unbanked and underbanked individuals and small businesses ².

At the same time, the region has begun to see a number of global corporates investing in the region in order to broaden their reach and gain market share. In October 2018, for example, Visa invested in Brazil-based payments processing company Conductor, with the two companies expected to work closely together to develop issuer-focused solutions for tokenizing payments via mobile wallets and improve access to Visa APIs³.

On the funding side, global investors have also focused more heavily on Latin America over the past year. For example, in December, Canada-based Scotiabank and US-based QED Investors launched a second fund focused on Latin America. The focus of the QED LatAm Fund II will be to promote the growth of fintechs in the region.

Startup incubators remain critical to development of fintechs in Latin America

A number of strong incubators in Latin America continued to drive fintech innovation in Latin America during 2018. In July, Startupbootcamp Fintech enlisted a new cohort of startups, including companies from countries across the region, including Chile, Equador, Peru, Cost Rica and Mexico. The projects pitched by these companies reflected a growing diversity of fintech in the region, ranging from traditional payments activities to automated accounting, smart payments, neobanking and savings marketplaces⁴.

Trends to watch for in 2019

Looking ahead to 2019, fintech investment in the Americas is expected to continue to grow, although there may be some holdback early in the year as a result of the volatility in the public markets that closed out 2018, particularly in the US.

In Latin America, Brazil is expected to continue to see strong growth in its fintech market, with companies capturing larger and larger deals. Other regions within Latin America are also poised to see increasing investment, particularly from global investors.

In Canada, regulatory and legislative changes are expected to improve the environment for fintech investment and help drive spur new fintech activities related to open banking and real-time transactions.

"We've arrived at a point in the evolution of blockchain where the conventional models that are more product oriented are now beginning to get expressed. The earlier approaches to blockchain experimentation among clients or consortia looked at blockchain in order to promote innovation. They are now being complemented by the emergence of product-specific startups."



Eamonn Maguire

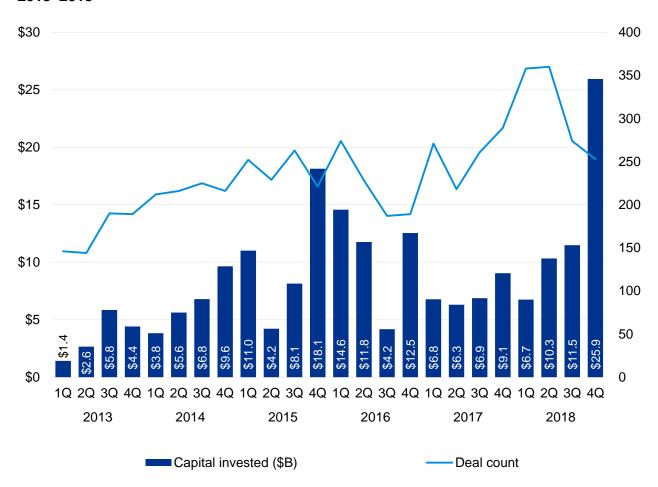
Global Financial Services Lead, KPMG Blockchain Services, KPMG International

- ² https://www.finextra.com/pressarticle/76575/latin-america-builds-up-fintech-credentials
- ³ https://www.zdnet.com/article/visa-announces-first-fintech-investment-in-brazil/
- 4 https://www.startupbootcamp.org/blog/2018/07/new-era-startupbootcamp-fintech-latin-america-added-new-investment-partner-picked-second-cohort/



A record Q4 propels 2018 even higher

Total investment activity (VC, PE and M&A) in fintech in the Americas 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

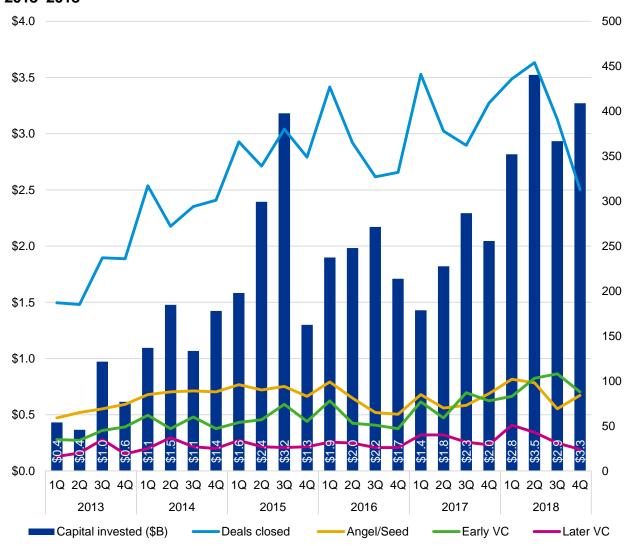
Note: Please refer to the methodology at the end of the Pulse of Fintech in order to review any disparities between this edition of the Pulse of Fintech as compared to prior editions.

Up until Q4, 2018 saw fintech investment in the Americas stay well on the upper end of historical totals, with volume higher than ever; and then the Refinitiv buyout occurred, the largest private investment transaction to happen in fintech in the Americas.



Early-stage volume ticks up as new niches rise

Venture investment in fintech companies in the Americas 2013–2018



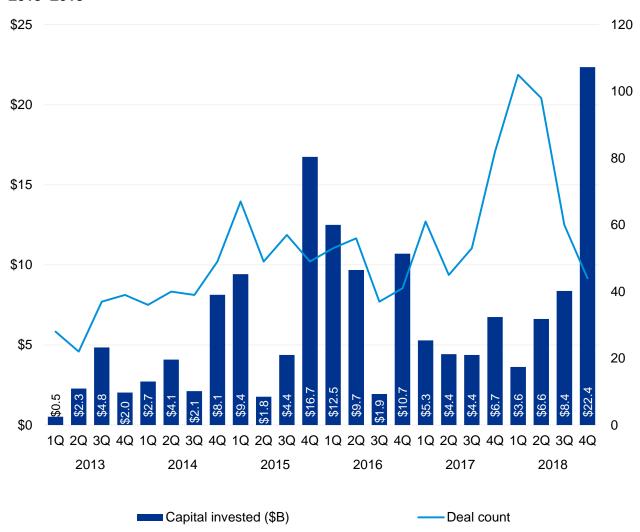
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook), January 4, 2019.

Fintech venture investment within the Americas is variable, yet has clearly reached new highs throughout 2018, even if volume declined. Interestingly, angel, seed and early-stage deal flow rebounded a tad or at the least stayed historically high throughout past year, indicating newer niches of fintech are being explored by both entrepreneurs and investors.



The M&A cycle revs, then takes a breather

M&A activity in fintech in the Americas 2013–2018



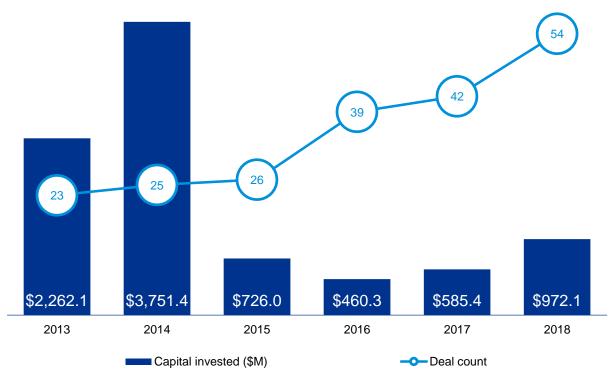
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

After a record first half, the M&A cycle in terms of volume declined in the Americas, in a cyclical move that is likelier than not given the size of the ecosystem and consequent impact of timing. Interestingly, we are seeing the emergence of mega-deals within the fintech ecosystem in tandem, in a sign of the cycle's maturation.



PE backers are increasingly interested

PE growth investment activity in fintech in the Americas 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Over the back half of this decade, an arena of private growth investment emerged between traditional late-stage venture capital, the private, mature company sphere where PE buyout shops traditionally focused and public markets. Within this environment, the phenomenon of unicorns and other relatively young, private companies raking massive sums from private investors came to life and fintech was no exception. Consequently, more PE firms are taking note and looking to gain exposure earlier in companies' lifecycles.

"The plethora of capital that is available in the private markets, combined with the need for many fintechs to really focus on their business models will mean that not as many fintechs will come public in 2019, as compared to the broader tech sector."



Brian HughesNational Private Markets Group Leader, and Co-Lead, Venture Capital, KPMG in the US_



A record proportion for corporate players

Venture capital activity in fintech in the Americas with corporate participation 2013–2018



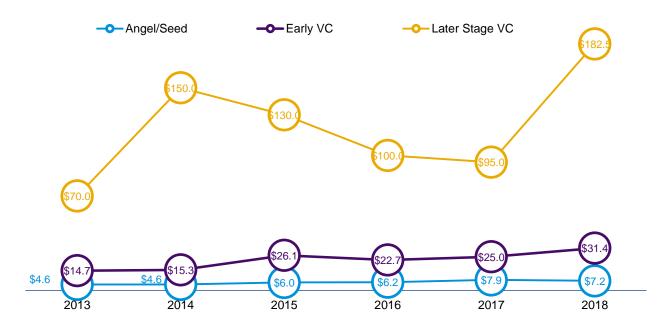
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Last year saw a record sum of VC invested in rounds that involved corporate players, unsurprisingly. Beyond just financial services corporations getting involved, traditional corporate venture arms are also backing fintech startups in large rounds, as their value plays can be significant and suited to the check sizes that such firms have to write. The increasing volume, which hasn't taken a breather once this decade, is likely due to the increasing proliferation of startups across all fintech niches plus the overall surge in corporate participation in the venture realm in general.

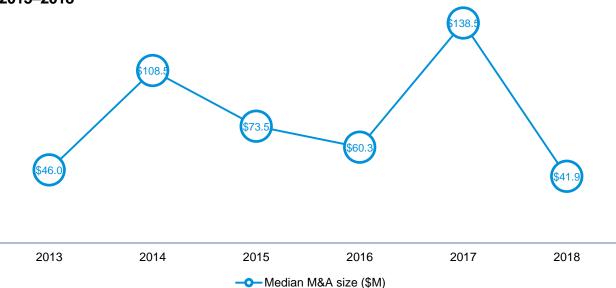


M&A skews to smaller end as VC soars

Median venture pre-money valuations (\$M) by stage in fintech in the Americas 2013–2018



Median M&A size (\$M) in the Americas 2013–2018

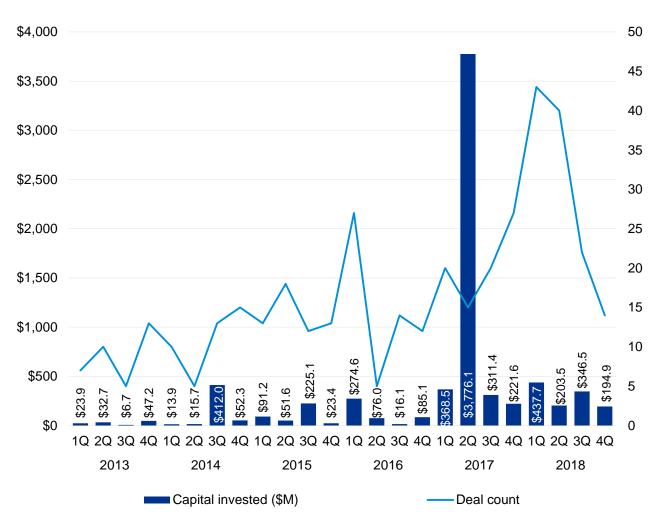


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



After a strong first half, fintech cycle wound down

Total investment activity (VC, PE and M&A) in fintech in Canada 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

"Over the next year, one area to watch in Canada will be how the fintechs are positioning for open banking and for payments modernization. And, once the banks are able to do more investing than they have been — what impact that will have in terms of the investment dollars available to the Canadian fintech community."

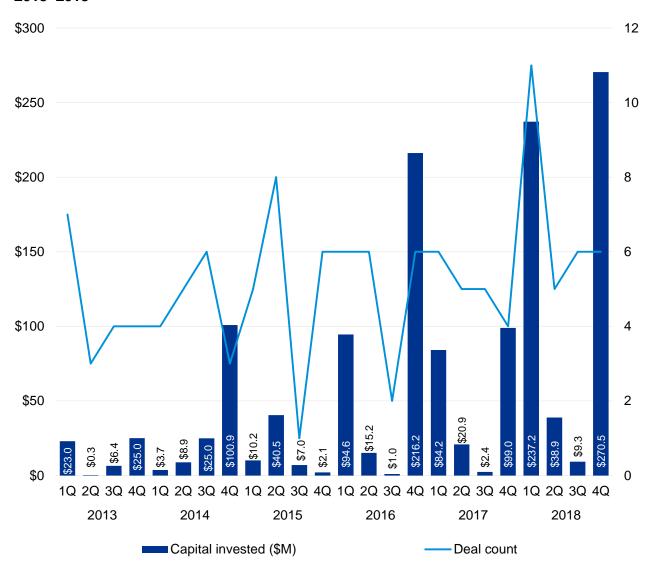


John Armstrong
National Industry Leader, Financial Services
KPMG in Canada



Brazil sees a record Q4, bolstering 2018

Total investment activity (VC, PE and M&A) in fintech in Brazil 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



In 2018, US fintech companies received investment of

\$52.5B

across

1,061 deals





Record level of fintech deals brings investment to new heights in the US

The fintech market in the US was very strong throughout 2018, with no shortage of opportunities for investment, high valuations and strong participation from a wide range of investors, including corporates and PE firms.

M&A drives total fintech investment to new record

The total number of fintech deals in the US reached a new high of 1,061 during 2018, bucking the inverse trend seen in the wider investment market. Total fintech investment also reached a new record, more than doubling year-over-year, from \$24 billion to \$52.5 billion.

VC deals accounted for well over half of the total number of deals, although the level of investment was driven primarily by M&A activity, including the massive \$17 billion investment in October by Blackstone Group into Refinitiv — formerly the financial and risk group of Thomson Reuters, the \$3.5 billion buyout of Blackhawk Networks by Silver Lake and P2 Capital Partners in June and a \$3.4 billion buyout of VeriFone by Francisco Partners in August.

Strong number of \$100 million+ megadeals drives VC investment growth

VC investment related to fintech in the US was particularly strong this year, if overshadowed by the large M&A and buyout activity. A significant number of \$100 million+ megadeals — including a \$392 million raise by Dataminr, a \$375 million raise by Oscar, \$363 million raise by Robinhood and a \$300 million raise by Coinbase — helped propel fintech-based VC investment from \$7 billion in 2017 to over \$11 billion in 2018. The number of fintech deals also reached a new high of 773, up from 661 the previous year.

The focus of investors on late-stage deals and the growth in average fintech deal sizes in the US mirrored trends seen in the broader VC market.

Payments space continues to attract investors

The payments space continued to attract a significant amount of attention from investors in the US during 2018. This attention focused less on pure-play payments firms and more on companies looking to add value across the payments value chain or at embedding payments into broader technology applications in order to improve efficiencies or address gaps.

The concept of embedding payments functions into other technologies was of particular interest to investors given its potential applicability across less digitally advanced sectors or functions, such as healthcare or accounting. As a result, companies like OpenDR — which provides an integrated payments solution for healthcare, have become more attractive to investors.

Robo advisors expanding their offerings in preparation for a potential downturn

As the market became less stable in 2018, a number of dedicated robo advisors in the US recognized that simply focusing on assets under management is not likely to make them game winners should there be a significant downturn. As a result, a number of the larger robo advisors took action to expand their services to cater to the shifting needs of their client base.

For example, Betterment introduced individual financial advice packages in 2018 in order to help their clients through various life stages, in addition to Smart Saver — a low risk savings option⁵. Wealthfront also introduced a number of new programs, including a financial planning service for individuals wanting to take an extended leave of absence in order to travel⁶.

⁵ https://www.investmentnews.com/article/20180817/FREE/180819935/betterment-introduces-investor-solution-for-rising-interest-rates

⁶ https://www.businessinsider.com/wealthfront-time-off-work-for-travel-2018-12



Record level of fintech deals brings investment to new heights in the US (cont'd)

Insurtech investment booming

Investment in insurtech grew substantially during 2018 in the US, in part due to the diversity of insurtech activities, ranging from healthcare to automotive and home insurance. Healthcare related insurtech was a big winner throughout the year, led by two raises by Oscar Heath totalling \$540 million and a \$300 million raise by Devoted Health.

Other insurtech companies also held sizeable funding rounds, including Root Insurance — an app-based car insurance platform — which raised \$100 million and home loan provider Hippo, which raised \$95 million across two funding rounds in 2018. In H2'18, mature insurtech Lemonade also announced plans to expand into the European market, highlighting the rapid maturation of the sector.

Platform business leading fintech investment

When looking at the wide variety of fintech investments made in the US, one clear trend that stood out during 2018 was the large emphasis on platform businesses. Many of the largest deals in 2018 related to late-stage platform-based companies, including Dataminr, Bright Health, Oscar, Tradeshift, Coinbase, Stripe and others.

These companies showcase the diversity of fintech in the US, crossing subsectors such as payments, health insurance, wealth management, digital currencies and business commerce. At the same time, they suggest that fintech leaders are beginning to rise to the top in the eyes of fintech investors. This is enabling them to attract larger and larger funding rounds.

Partnering with big tech becoming a priority

Over the past year, there was a growing trend toward partnering between fintechs and big tech companies like Google, Microsoft, Amazon and PayPal. While some of these large companies have introduced their own fintech offerings, others have opened the door to partnering with fintechs in order to obtain collective benefits.

For fintechs, the value of working with the big tech companies revolves quite plainly around access to the companies' massive base of customers. At the same time, the tech companies are able to provide their customers with increasingly integrated experiences across the customer value chain. Over time, such partnerships could make or break the success of US-based fintechs, particularly in areas where customer acquisition is complex or prohibitively expensive.

Mid-tier corporate investors getting into the fintech game

During 2018, the US also saw a number of mid-sized banks and financial institutions recognize that they must also become innovative if they want to continue to grow and be sustainable. As a result, there was broader participation by these mid-tier companies in the fintech investments that were made in the US this year.

Trends to watch for in 2019

Over the next few quarters, there will likely continue to be a significant amount of funding available for fintechs, particularly those in B2B, regtech, or insurtech. Corporate investment will also remain strong, although there may be an increase in emphasis on partnership models over standard direct investment.

There is also expected to be a growing emphasis on consolidation, particularly in the payments space as companies look to grow and achieve the scale required to grow globally.

"Mid-tier banks are increasing their investments across categories that make sense to them — some in insurance, some in payments, some in lending. Part of this is a reflection of their desire to look for opportunities and to accelerate their own growth. We're going to continue to see this kind of activity in 2019 and beyond."

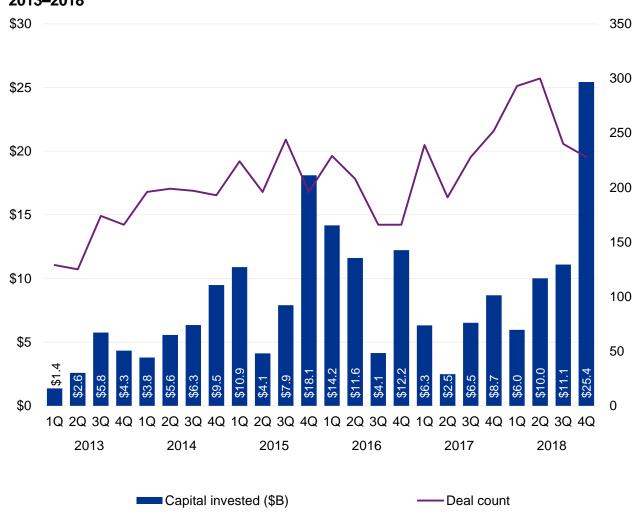


Robert Ruark Principal, Strategy, KPMG in the US



Refinitiv pushes US past \$25B in Q4

Total investment activity (VC, PE and M&A) in fintech in the US 2013–2018



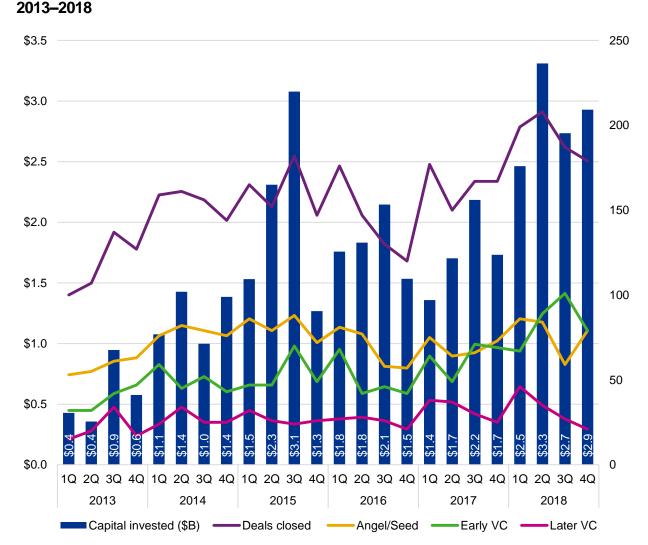
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019. Note: Please refer to the methodology at the end of the report to review any disparities between this edition of the Pulse of Fintech and the prior editions.

Although without the \$17 billion Refinitiv transaction the US would have seen a healthy \$8 billion (approximately) in investment, that still would have been down from prior highs. In general, volume is more telling on a quarterly basis for trend analysis and the fact fintech investing volume sustained such a pace in the US speaks to not only how consolidation is beginning to occur, but also how venture investors are delving into new fintech niches.



Volume and VC invested at all-time highs

Venture investment in fintech in the US



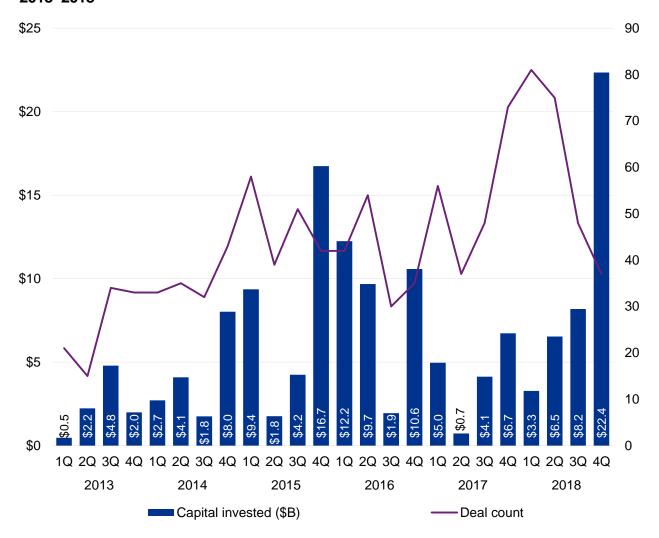
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Although without the similar scale of outliers as observed within China, the US fintech scene saw a quarterly high in venture investment in Q2 2018, helping power the year to a record finish. More importantly, volume at the early stage is also quite strong, signifying that future pipelines of companies for investors' purview are refilling.



Refinitiv contributes to a record Q4

M&A activity in fintech in the US 2013–2018



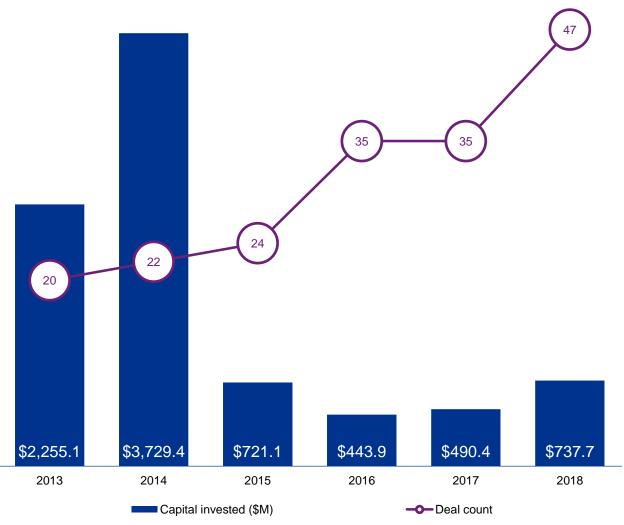
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Especially within the US, the first indications of significant consolidation within payments and other more mature fintech segments are stirring, signaling additional integration and unification is in the offing.



PE firms push more avidly into fintech

PE growth investment activity in fintech in the US 2013–2018



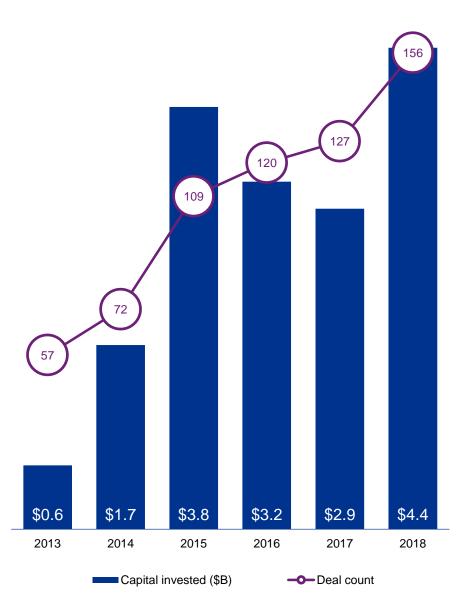
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Especially within the US, PE firms have become more active in not only backing late-stage venture-backed companies across the board in order to gain exposure to fast-growing privately held technology firms, but also with regard to fintech, given the arena's favorable dynamics and often well-established, provable business cases.



Corporates join in at an unprecedented rate

Venture activity in fintech in the US with corporate participation 2013–2018



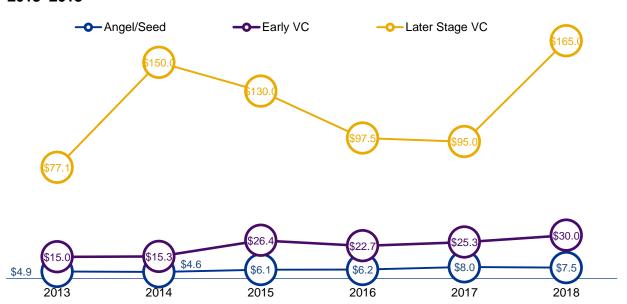
More so than in other sectors, fintech enjoys healthy if not remarkable interest from corporate venture arms, plus other larger corporations. Part of that is clearly due to financial services giants looking to gain some strategic exposure to enterprises pursuing innovative products and services, in a type of outsourced R&D, all said and done. However, financial interests still clearly play a role, as evidenced by the sums that are being poured into often primarily late-stage rounds.

Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

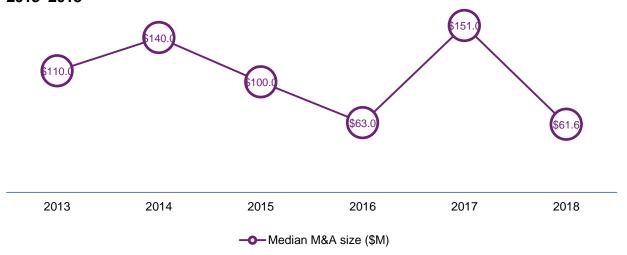


M&A skews toward smaller enterprises while late-stage valuations nearly double

Median pre-money venture valuations (\$M) by stage in fintech in the US 2013–2018



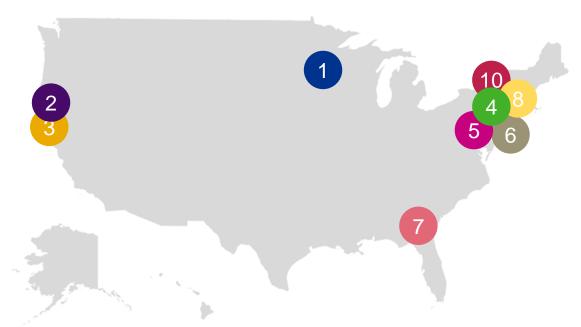
Median M&A size (\$M) in fintech in the US 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



Top 10 US fintech VC, PE and M&A deals in 2018



- Refinitiv \$17B, Eagan, MN Institutional/B2B Buyout
- 2 Blackhawk Network Holdings \$3.5B, Pleasanton, CA
 Payments/transactions
 Buyout
- VeriFone \$3.4B, San Jose, CA
 Payments/transactions
 Buyout
- 4 Ipreo \$1.9B, New York, NY Institutional/B2B

 M&A
- IntraLinks \$1.5B, New York, NY
 Institutional/B2B

 M&A

- 6 Eze Software \$1.45B, Boston, MA Investment banking/capital markets M&A
- PowerPlan \$1.1B, Atlanta, GA Institutional/B2B *M&A*
- 8 Cayan \$1.05B, Boston, MA
 Payments/transactions
 M&A
- 8 **GE Healthcare IT** \$1.05B, Boston, MA Institutional/B2B Corporate divestiture
- OpenLink Financial \$1B, Uniondale, NY Investment banking/capital markets Buyout

Source: Pulse of Fintech Q3'17, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019. *Note: In the prior edition of the Pulse of Fintech, the closing date of Access Point Financial was assumed to be in Q3 given all available data; since then, some confidential information has been disclosed which revealed that the transaction's official closing date was officially pushed forward into Q3.



In 2018, investment in fintech companies in Europe hit

\$34.2B

with

536 deals





Strong M&A activity triples total fintech investment in Europe

Total fintech investment in Europe rose significantly in 2018, despite the total number of deals dropping. H2'18 was relatively light on big deals, however, with only PayPal's acquisition of iZettle for \$2.2 billion making it into the year's top ten deals. Europe's other big deals — including the \$12.86 billion acquisition of WorldPay by Vantiv and the \$5.5 billion merger of Denmark payments firm Nets and German-based Concardis — all occurred in H1'18.

VC investment remains high in Europe despite year-over-year decrease

Europe attract its second largest amount of fintech VC investment ever in 2018, despite a year-over-year decline. VC investors showed a strong preference for late stage funding rounds, with companies pulling in large rounds right through Series F and Series G. As a result, the average size of deals grew significantly even as the number of VC deals declined.

UK remains leader in fintech investment despite Brexit concerns

Despite concerns about Brexit, the UK remained a leader in the fintech space during 2018, accounting for half of the region's top VC deals — including a \$110 million raise by Monzo and an \$80 million raise by BitFury during Q4'18. While late stage companies were able to obtain funding, there was a noticeable squeeze earlier in the funding cycle as investors focused on more secure bets. This was true even for early-stage focused funds, which faced challenges deploying capital due to an increasing degree of risk aversion.

Throughout 2018, the UK also government continued to build fintech bridges with other jurisdictions so as to reduce regulatory barriers and support growth in a post-Brexit world.

Challenger banks expanding offerings and reach

Challenger banks attracted significant VC investment throughout 2018, with UK-based Revolut raising \$250 million, Germany-based N26 raising \$160 million, Russia-based Sovcombank raising \$145 million and UK-based Monzo raising \$110 million. The latter investment led Monzo to achieve coveted unicorn status with a \$1.3 billion valuation. Monzo was the third challenger bank to achieve unicorn status this year, following on the heels of Revolut and Atom Bank.

During 2018, European challenger banks continued their efforts to expand both their product breadth and their geographic footprint. Revolut announced plans early in the year to expand into North America and Asia⁷, while N26 announced its expansion to other countries within Europe in November⁸. SolarisBank in Germany also raised funds during 2018 to fuel international expansion⁹.

Ireland and Lithuania seeing increasing interest from global fintechs and financial institutions

During 2018, Ireland saw increasing interest from companies looking to establish a European market presence. Many of these investments chose Ireland in an effort to negate Brexit-related concerns. One study showed that over 55 fintech or financial services companies established a presence in Ireland during the year, estimating that over 4,500 jobs would be created as a result¹⁰. At year end, the Central Bank of Ireland had approximately half of the 100 plus applications for authorization. Applications received cover almost every financial sector including banking, insurance, asset management and payments. This activity suggests global companies are concerned about a hard Brexit and are working to mitigate challenges by establishing a presence in Ireland.

⁷ https://www.cnbc.com/2018/02/26/fintech-lender-revolut-breaks-even-as-it-prepares-global-expansion.html

⁸ https://www.crowdfundinsider.com/2018/11/141003-n26-expansion-german-challenger-bank-brings-services-to-denmark-norway-poland-sweden/

⁹ https://www.bankingtech.com/2018/03/solarisbank-in-e56-6-million-funding-round/

¹⁰ https://www.idaireland.com/newsroom/ida-ireland-2018-results-highest-number-ever-emp#.XDyqJKB7BXI.email



Strong M&A activity triples total fintech investment in Europe (cont'd)

Lithuania also saw an increasing number of global and UK-based companies applying for electronic money institution (EMI) licenses during 2018. Revolut and Google Payments both obtained EMI licenses through the Bank of Lithuania late in 2018.

Fintech investors in Germany cherry-picking investments

In Germany, there was some concern regarding the potential saturation of fintech, particularly in areas like payments. While a number of German-based startups have been able to raise large funding rounds, including N26 (\$160 million) and Deposit Solutions (\$100 million), investors have become very selective with their investments, focusing on companies with the highest revenue potential.

Traditional corporates continued to be active in the fintech space in Germany during 2018, focusing on fintech partnerships and solutions able to help them improve processes, better respond to customers and allow them to offer services expected to be more profitable in the future.

Israel fintech remains highly focused on cybersecurity

In 2018, Israel-based fintech investment focused significantly on cybersecurity solutions for banks and financial institutions, including identification authentication and fraud detection. Israel also saw increasing cross-sector activity, such as insurtech companies working with automotive companies to develop new business models and service offerings. On the regulatory front, Israel also decided to use Berlin Standard with respect to APIs — a move expected to drive additional fintech activity in the future as bans work to implement the standard within their operations.

Consolidations increasing as fintech investors push for profitability

M&A was a significant factor in the strength of Europe's fintech market in 2018, with a significant degree of consolidation in subsectors considered to be somewhat oversupplied — such as payments. These consolidations were not limited to the likes of WorldPay and iZettle; numerous small companies also consolidated as companies looked to achieve scale. For example, Nets acquired Poland-based payment firm Dotpay/eCard, even as it was merging with German-based Concardis.

PSD2 slowly driving fintech investment

PSD2 came into effect in 2018, putting pressure on banks to ensure they were equipped with the APIs necessary to facilitate open banking. This process has been somewhat slower than expected due to challenges associated with making data available in a secure manner, with expected benefits slow to materialize. It is expected that 2019 will see a pick-up in activity as more fintechs build businesses around the information now becoming available.

In the wake of GDPR, regtech also saw an increase in investment in Europe, driven in part by corporates looking to find better ways to manage their regulatory requirements.

Trends to watch for in 2019

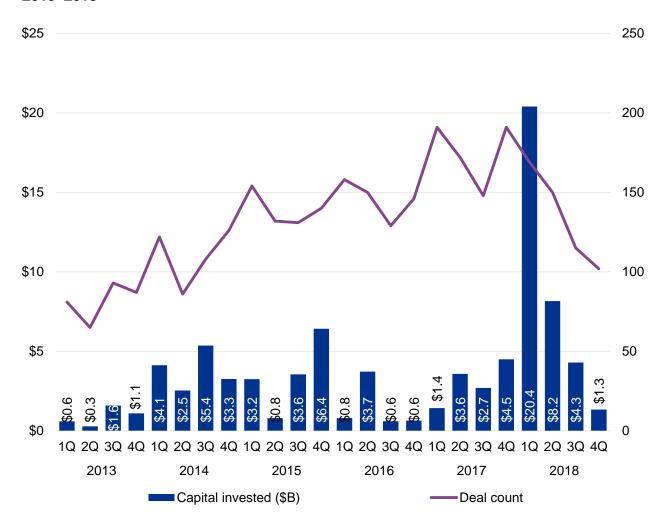
In 2019, Europe is expected to see more consolidation within the fintech space as winners set themselves apart from their competition. Consolidation will likely be driven both from fintechs looking to buy in order to achieve greater scale and from traditional banks looking to buy in order to drive their own strategic objectives.

Over the next few quarters, there is expected to be an increase in fintech activity related to open banking, in addition to further increases in investments related to regtech and insurtech.



Quarterly outliers mask a downturn

Total investment activity (VC, PE and M&A) in fintech in Europe 2013–2018



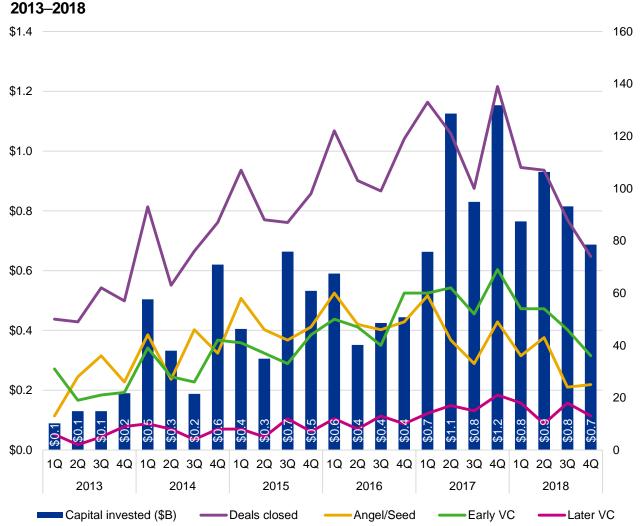
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019. Note: Please refer to the end of the document for any changes in methodology between this and prior editions of the Pulse of Fintech.

The quarter-over-quarter downturn in fintech volume in Europe should not be over-interpreted; figures are still a reasonably healthy historical levels, reviewing trends over the whole decade. That said, uncertainty around Brexit may be impacting the close rates of deals within the United Kingdom in particular and early-stage venture financing has been sliding in general due to pricing pressures among other factors.



A steady downturn in volume belies VC invested

Venture investment in fintech companies in Europe



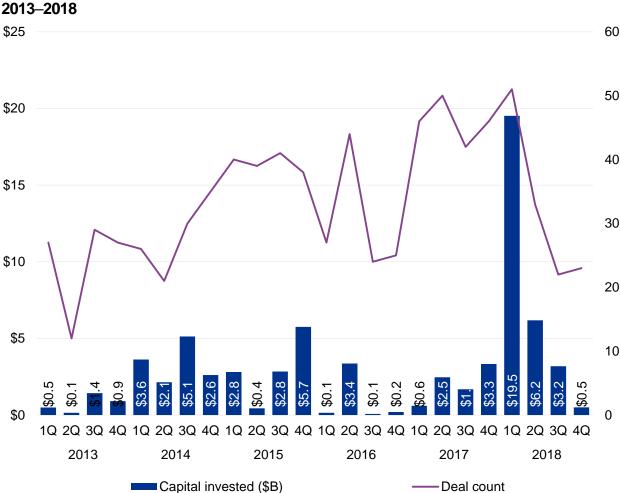
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

In line with the broader European venture scene, even as volume has deflated somewhat quarter over quarter, VC invested stayed strong, in an indication of the concentration at the late stage and the toll of pricing pressures, as well as potentially some diminishing in UK venture volume given ongoing Brexit concerns.



The M&A cycle starts strong, ends muted

M&A activity in fintech in Europe



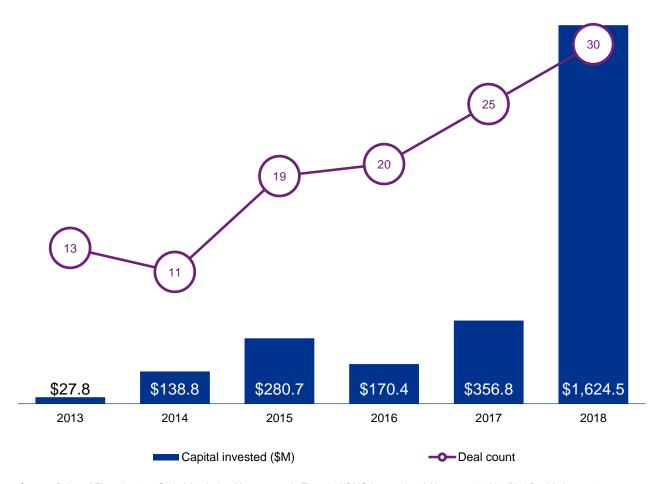
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

After a blockbuster Q1 marked by the acquisition of Worldpay, M&A volume finished the rest of the year at a muted level, due to a combo of several factors, namely, consolidation efforts in key fintech segments being quite temporal, the potential for fintech acquirers like traditional financial services incumbents biding their time until high valuations for potential venture-backed targets declines and ongoing political and economic fears.



PE investors pick up the pace

PE growth investment activity in fintech in Europe 2013–2018



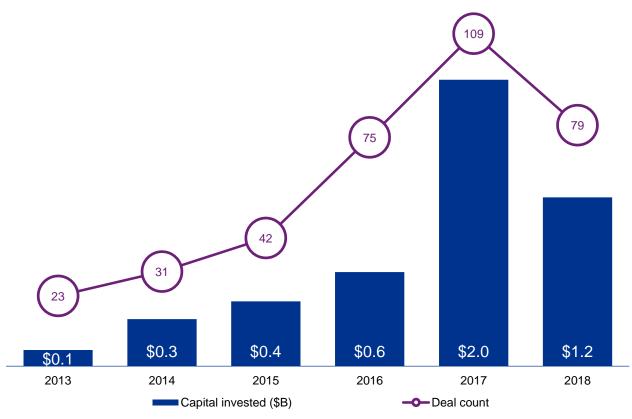
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Over the past several years, PE investment in fintech has enjoyed a slow but steady rise, culminating in the highest tally yet for both volume and deal value last year. Such a rise is most likely attributable to PE investors' growing interest in technology businesses overall, with fintech proving a natural fit given the extant capabilities many PE firms have within financial services.



CVCs take a rare breather

Venture activity in fintech in Europe with corporate participation 2013-2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Interestingly, after a stark rise in volume and value overall in the rounds participated in, there was a downturn in Europe. Despite the decline occurring over the entirety of a year, it is still too early to say if this is anything more than an outlier, as all the incentives for corporate investors to stay active across the European scene are in place — moreover, the broader venture scene is still recording significant corporate participation. Consequently, fintech likely saw more of a temporal outlier than anything else; a likely contributor was the fact that there simply aren't that many corporate investment arms domestically focused primarily on the segment.

"In 2018, we've seen a lot of financial services companies and fintechs establish operations or grow their footprint in Ireland. Traditionally these companies may have built their businesses in the UK but are choosing Ireland because of the Brexit uncertainty. Many of these companies are working with the Central Bank of Ireland to obtain licenses that will enable them to continue to deliver their products and services across the European market in the event of a hard Brexit."



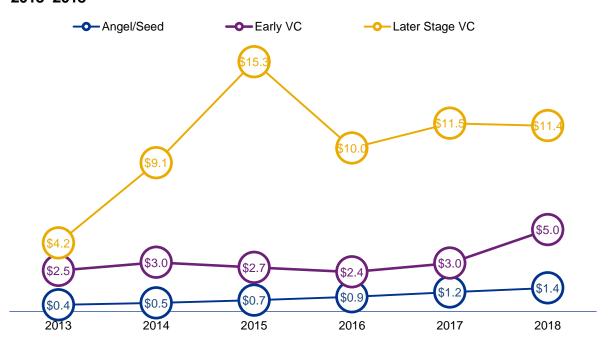
Anna Scally Partner, Fintech Lead, KPMG in Ireland

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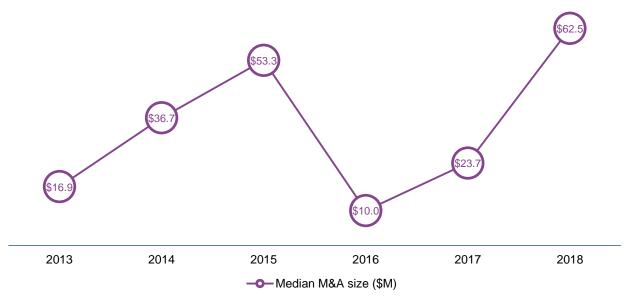


M&A soars to a record median high

Median venture financing size (\$M) by stage in fintech in Europe 2013–2018



Median M&A size (\$M) in fintech in Europe 2013–2018

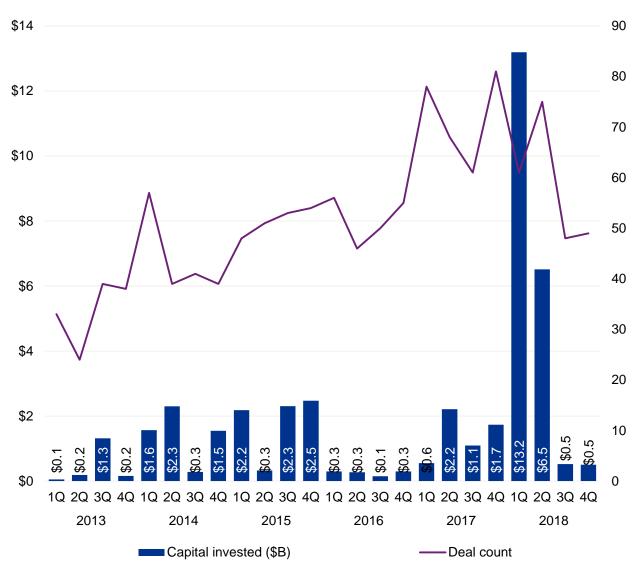


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



A blockbuster first half

Total investment activity (VC, PE and M&A) in fintech in the United Kingdom 2013–2018

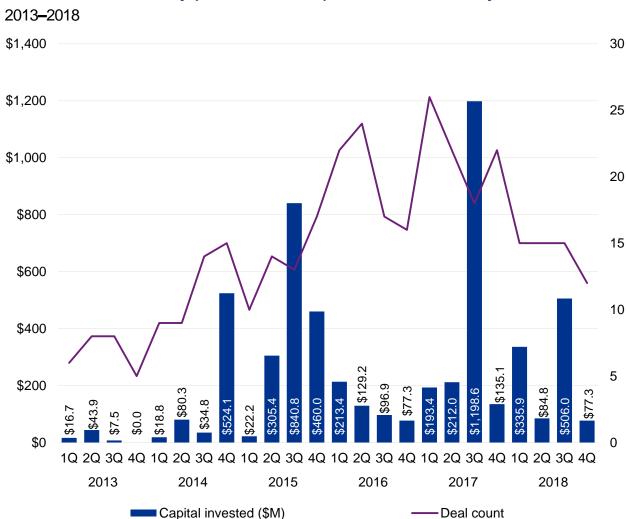


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



After a record year, a return to historical health

Total investment activity (VC, PE and M&A) in fintech in Germany



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

"We are starting to see that startups are capable of raising big numbers — beyond Series A and B. It's quite new for the German market in a way that is very promising. When a company has a go-to business model, they can find the money they need to grow. At the same time, investors are really focused on business models where they think they can earn money."



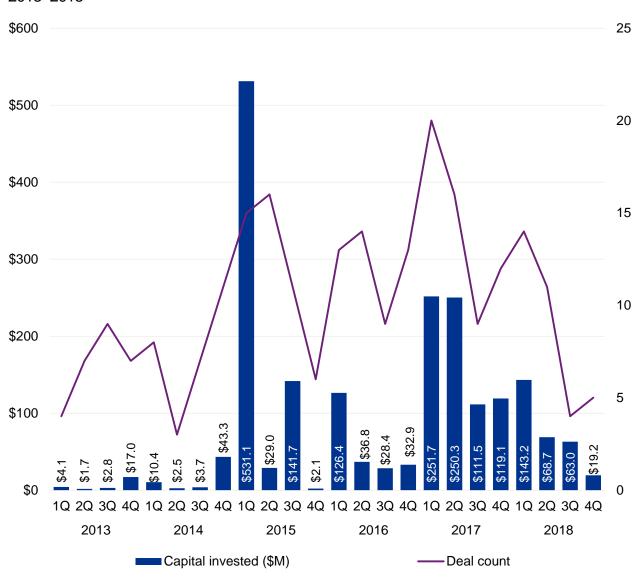
Sven KorschinowskiPartner, Financial Services
KPMG in Germany



H1 2018 volume remains muted

Total investment activity (VC, PE and M&A) in fintech in France

2013-2018

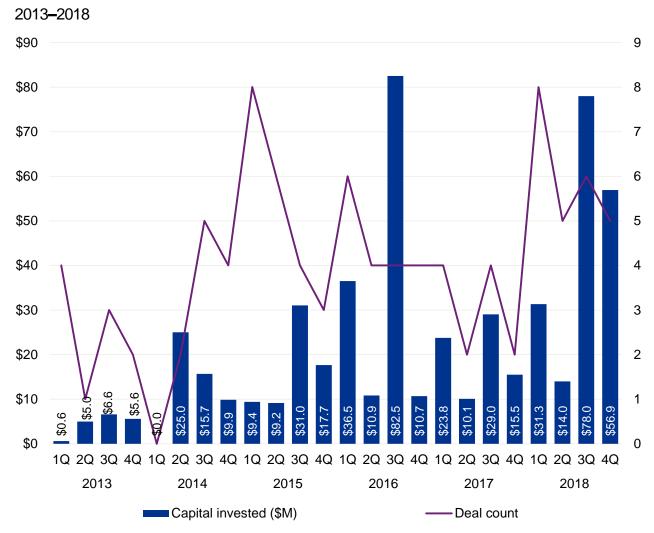


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



Fintech investing is still volatile yet trending up

Total investment activity (VC, PE and M&A) in fintech in Israel



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

"Collaborative opportunities are driving a lot of interest in areas like insurtech right now. We're seeing very different companies working together to create new business models and value propositions — such as insurance companies and automobile companies sharing data on their customers and then developing insurance programs based on that data. This trend is only going to continue moving forward."



Meital Raviv
Director, Head of Fintech & Innovation, Financial Services,
KPMG in Israel



Top 10 European fintech deals in 2018



- WorldPay \$12.9B, London, UK Payments/transactions *M&A*
- Nets \$5.5B, Ballerup, Denmark
 Payments/transactions
 Buyout
- 3 iZettle \$2.2B, Stockholm, Sweden Payments/transactions *M&A*
- Fidessa Group \$2.1B, Woking, UK
 Institutional/B2B
 Buyout
- IRIS Software Group \$1.8B, Datchet, UK
 Institutional/B2B
 Buyout

6 BGL Group (UK) — \$910.1M, Peterborough, UK

Institutional/B2B *PE growth*

7 Trustly Group — \$862.9M, Stockholm, Sweden

Payments/transactions Buyout

- Nordax Group \$518.4M, Stockholm, Sweden
 Institutional/B2B
 Buyout
- 9 ETF Securities \$611M, London, UK
 Wealth management
 M&A
- Yandex.Market \$495M, Moscow, Russia Payments/transactions *M&A*

Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



In 2018, investment in fintech companies in Asia hit

\$22.7B

across

372 deals





Fintech investment reaches new high due to H1'18 Ant Financial deal

In 2018, Asia achieved a new high for fintech funding, with almost \$22.7 billion raised across 372 deals. More than half of this investment, however, came from one global-record shattering megadeal in H1'18: a \$14 billion Series C round by Ant Financial. Outside of the Ant Financial deal, Asia only saw only one additional deal over \$1 billion: a \$1.3 billion raise by online lending platform Lu.com in December.

While China continued to account for the largest fintech deals in Asia, there was an upswell of activity in other jurisdictions in the region over the course of 2018. Among the top ten deals during the year, three were based in India (Paytm: \$356 million; PolicyBazaar: 200 million; CentrumDirect: 175 million), one in Australia (Avoka: \$245 million); and one in the Philippines (Voyager Innovations: \$215 million).

Fintech investors in China shift away from payments space

Fintech investment in China softened slightly this year, not including the massive Ant Financial investment. In part, this likely was a result of the maturation of key fintech subsectors in China. For example, investors were less focused on the payments space as China has seen the rapid maturation of several dominant market leaders, leaving little interest for smaller players.

Meanwhile, other subsectors started to climb onto the radar of fintech investors, including biometrics security, facial recognition and voice recognition. Investors were also interested in data and analytics related fintech solutions given the massive customer data held by the big banks and tech companies in China.

Global expansion and investment a top priority for Chinese fintechs and big techs

In 2018, China's big tech giants primarily looked outward for growth. Ant Financial raised \$14 billion in the world's largest VC round ever in order to fund its global expansion. Tencent also undertook a number of expansion activities, including the launch of a local digital wallet application in Malaysia, the expansion of retailers on its WeChat Play platform — particularly in the US and direct investment in fintechs in other geographies — such as Germany-based challenger Bank N26.

Smaller-scale fintech companies in China also focused on expansion — particularly in Southeast Asia. Singapore, for example, saw an influx of Chinese companies applying for licenses to operate in the country or looking to form partnerships or joint ventures. The increase in Chinese companies looking to expand in the region has put some pressure on fintechs in other countries in the region, such as Japan and Australia, to do the same.

Financial inclusion a strong focus for investment in Southeast Asia

Financial inclusion continued to be a strong focus for investment in Southeast Asia, as demonstrated by the \$215 million raise by Voyager Innovations in the Philippines — a company developing digital payment solutions for activities like mobile remittances, digital payments and digital. China-based Tencent was one of the main funders for the deal, along with BBK, International Finance Corporation and the IFC Emerging Asia Fund.

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Fintech investment reaches new high due to H1'18 Ant Financial deal (cont'd)

South Korea sees first fintech unicorn

In December 2018, Korea saw the birth of its first fintech unicorn, following an \$80 million raise by Toss — a financial services platform that facilitates peer-to-peer payments. In 2018, the South Korea financial regulator announced more support for developing its fintech ecosystem, including the creation of a regulatory sandbox to help fintechs test their products.

Australia's open banking regime gaining interest globally

Australia gained a significant amount of interest from investors in 2018 with respect to its open banking and open data regime. This is because the country is developing its open banking policies as an umbrella regime focused on customer data as a right. The flexibility of this approach suggests that Australia will eventually apply the policy to other sectors — such as energy, telecommunications and others. While this approach could mean more competition from outside of the banking space over time, it could also present a unique opportunity for banks to expand into other areas by using open data approaches to create and deliver different types of value.

In tandem with the development of its open banking regime, Australia has also seen increasing interest from fintech investors in areas that enable open banking, including solutions focused on data sharing, consent management and digital identity verification.

Challenger bank model expanding inside of Asia, but outside of China

The challenger bank model continued to expand in Asia during 2018, with increasing activity from a number of fintechs across the region, including DigiBank in India, Timo in Vietnam, Jibun Bank in Japan and Kakao Bank and K Bank in Korea. Many investors see digital banking as a critical way to lower the cost of service in underbanked and unbanked areas and, therefore, promote greater levels of financial inclusion.

In China, however, the banking regulator has been very cautious compared to other jurisdictions in the region. As a result, the government has only issued a small number of banking licenses to fintech companies — primarily the Chinese megagiants (i.e. Alibaba, Baidu, Tencent).

Blockchain continues to be a priority for MAS

Singapore continued to support blockchain development as part of its play to become one of the world's leading blockchain development hubs. The Monetary Authority of Singapore has been highly supportive of these efforts, supporting use cases in a number of areas — from cross border payments and trade finance to using blockchain for smart contracts and KYC onboarding. It has also worked very collaboratively with countries like Canada on blockchain initiatives. While blockchain might be a critical priority, the MAS has also been working to facilitate and support fintech development in other areas, such as insurtech and asset management.

Trends to watch for in 2019

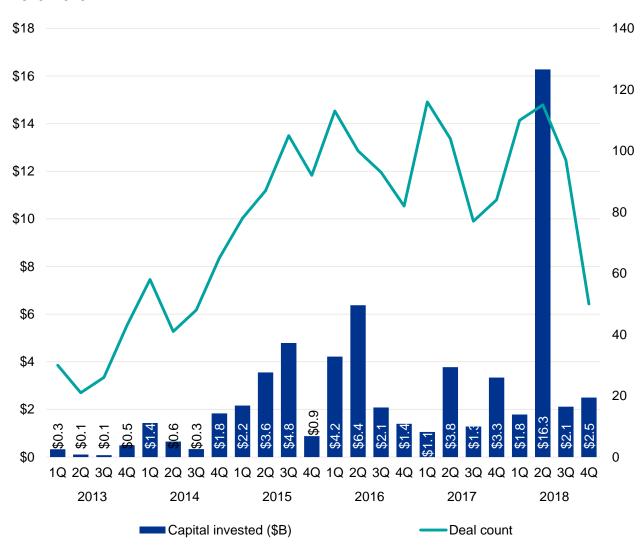
Looking forward, collaboration between fintechs and banks in Asia is expected to continue to grow, particularly in areas like KYC, AML and digital identity management — including facial recognition and voice recognition.

Blockchain investment is also expected to continue in Asia, with a growing focus on execution over experimentation.



Quarterly volatility underlies overall health

Total investment activity (VC, PE and M&A) in fintech in Asia-Pacific 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

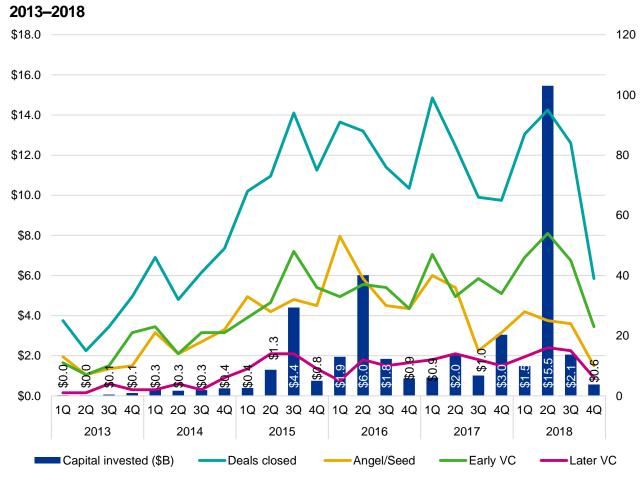
Note: Please refer to the methodology page at the end of the report for any changes between this edition of the Pulse of Fintech and prior editions

Especially given the dip in volume, it is important to stress private investment data tends to lag, so the Q4 volume figure in particular may tick up; what's equally important to point out is that even given the decline, figures remain relatively within the median of the past decade and overall capital invested is still robust.



Ant Financial bolstered 2018 value, but the first half stayed strong

Venture investment in fintech in Asia-Pacific



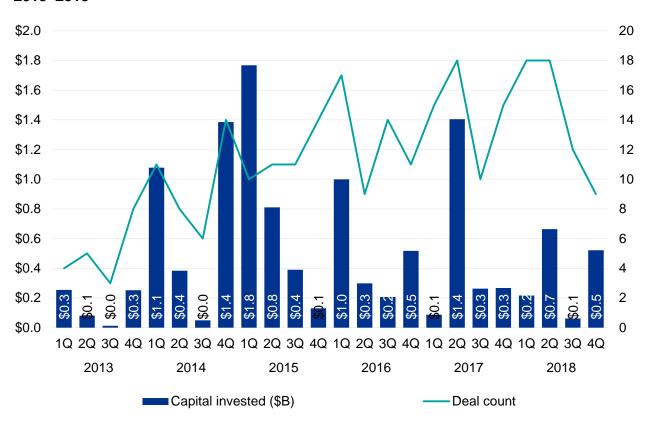
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

The Asia-Pacific fintech ecosystem may have endured what seemed like a precipitous decline in volume in the back half of 2018, but that was primarily due to lagging transactional tallies, as private markets remain more opaque in that region than elsewhere; that said, volume diminishing in light of the crescendo reached in the first half is more in the realm of mean reversion than anything else.



The M&A cycle sustains a high, then returns to historical levels

M&A activity in fintech in Asia-Pacific 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Once again, it is clear that the Asian fintech scene is still maturing overall and still isn't quite as developed as other regions, as consolidation is still kicking in. The fact giant corporations dominate many aspects of fintech already also contributes to more inconsistency in aggregate deal values, as timing of large transactions skews trends more than in other regions. That said, volume still stayed resilient in at least the first half of 2018 and didn't slump over much in the back half, boding well for the future.



A steady trickle of PE investment bolsters key niches

PE growth investment activity in fintech in Asia-Pacific 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

There is not that much PE growth investing, overall, within the region; looking at the annual tallies of volume, it is clear that there simply aren't that many cross-border investors yet nor local fund managers pursuing fintech opportunities. That said, the deals that do occur definitely help skew overall investment totals as they tend to be massive, with consequent significant support of key fintech players within the ecosystem.



CVCs play a more critical role, particularly at the later stages

Venture capital activity in fintech in Asia-Pacific with corporate participation 2013–2018



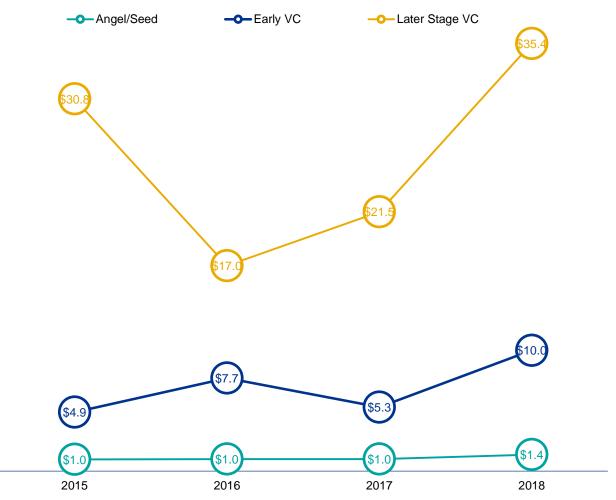
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

As mentioned earlier, the unique attributes of the Asian venture ecosystem help it stand out in certain metrics, especially when it comes to corporate venture participation and corporate investment in general. The trend itself helps reinforce that finding; prior to 2015, there was hardly any corporate or CVC investment until the emergence of unicorns and potential for scaling, plus helpful government initiatives, demonstrated to corporates that it was well worth backing younger companies, especially within fintech. Since then, market leaders in segments like Ant Financial have enjoyed robust support throughout the lifecycle, skewing overall VC invested tallies higher.



New highs across every stage

Median venture financing size (\$M) by stage in fintech in Asia-Pacific 2015-2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

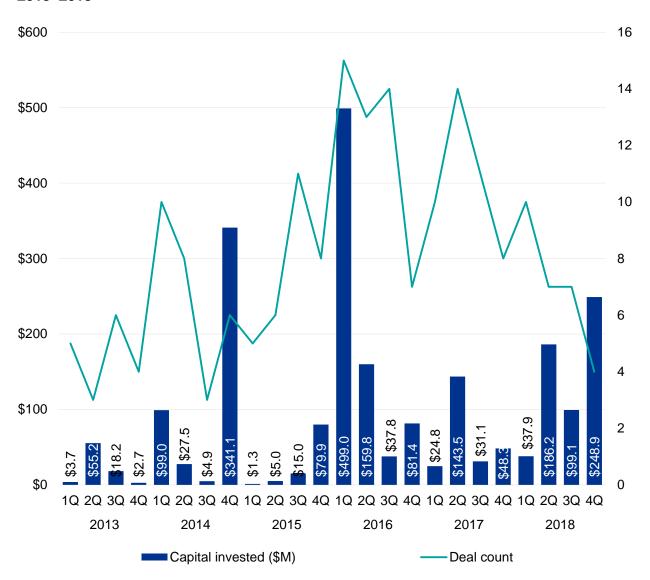
Gradual inflation for even median figures speaks to the surge of capital flowing into especially the Chinese venture ecosystem, particularly fintech, as the major regional economies seek to stay abreast of innovation and establish a virtuous cycle of development and further economic enablement.

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After a record year, volume takes a downturn

Total investment activity (VC, PE and M&A) in fintech in Australia 2013–2018

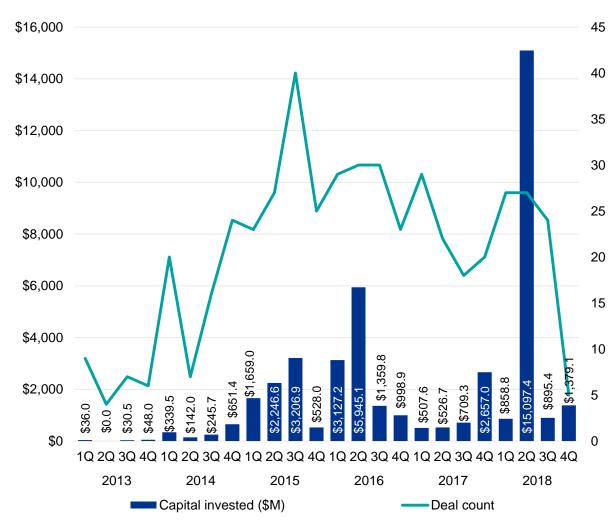


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.



One blockbuster Q2 sets up a record

Total investment activity (VC, PE and M&A) in fintech in China 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019

"There's no doubt that China's tech giants have global ambitions. For example, Alibaba is very keen to get its cloud services across Southeast Asia, Alipay is trying to penetrate international markets like Brazil and Tencent invested in challenger bank N26 in Europe. These tech giants are massive by any standard — and they'll likely continue to drive very large deals. But there are questions still around how they will do in markets that already have dominant payment systems and players. The next few years will be interesting."

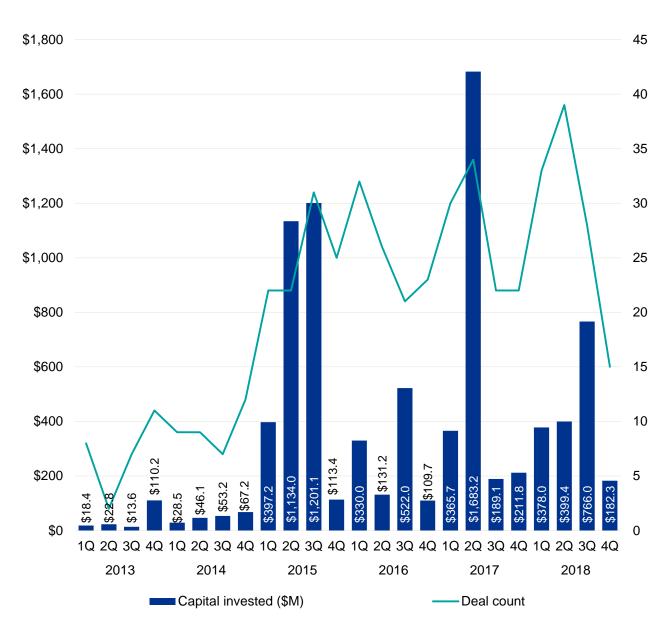


Simon Gleave Regional Head of Financial Services, Asia Pacific and Partner KPMG China



Volume holds steady

Total investment activity (VC, PE and M&A) in fintech in India 2013–2018

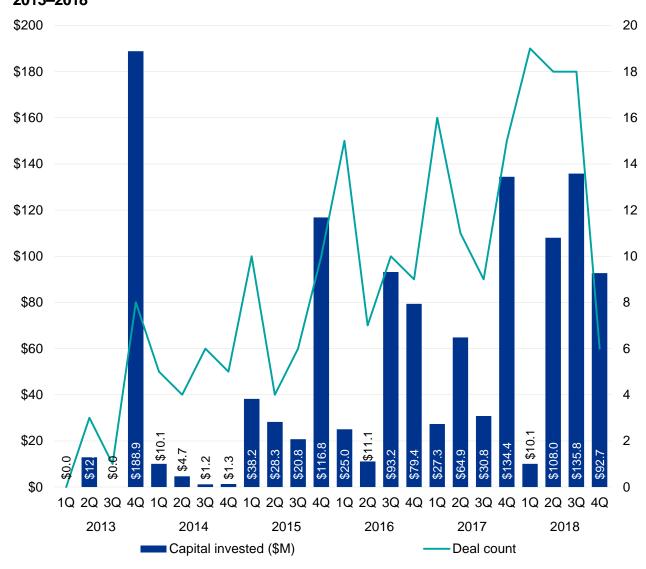


Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019



A robust set of quarters produces a strong year

Total investment activity (VC, PE and M&A) in fintech in Singapore 2013–2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

"One area we expect the Monetary Authority of Singapore to continue to prioritize is the use of blockchain for things like trade finance and cross-border payments, the stock exchange and smart contracts that could help with KYC utilities and onboarding. Real use cases driven by how blockchain can solve problems that already exist in the market, making them more efficient and cost effective."



Tek Yew ChiaHead of Financial Services Advisory
KPMG in Singapore



Top 10 fintech deals in Asia in 2018



- 1 Ant Financial \$14B, Hangzhou, China Institutional/B2B Series C
- 2 Lu.com \$1.3B, Shanghai, China Institutional/B2B PE growth
- CaoGenTouZi \$357.8M, Hangzhou, China Consumer finance Series D
- Paytm \$356M, Noida, India
 Payments/transactions
 Corporate
- 5 **Dianrong** \$290M, Shanghai, China Lending Series D

- 6 Avoka \$245M, Manly, Australia Payments/transactions M&A
- **Voyager Innovations** \$215M, Mandaluyong City, Philippines Payments/transactions *M&A*
 - PolicyBazaar \$200M, Gurugram, India Insurtech Series F
- Euromoney Institutional Investor (intelligence division) — \$180.5M, Hong Kong Institutional/B2B
- Buyout

 CentrumDirect \$175M, Mumbai, India
 Capital markets

 M&A

Note: The private placement by OneConnect, the subsidiary of Ping An Group, was not included in this ranking as it was a private placement by the subsidiary of a publicly traded company and is correspondingly publicly traded itself, which is beyond the scope of the Pulse of Fintech's methodology.

Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019 All currency amounts are in US\$ unless otherwise specified. Data provided by PitchBook unless otherwise specified.



KPMG Fintech global network (countries, regions and jurisdictions)



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About KPMG Fintech

The Financial Services industry is transforming with the emergence of innovative new products, channels and business models. This wave of change is primarily driven by evolving customer expectations, digitalization, as well as continued regulatory and cost pressures. KPMG firms are passionate about supporting clients to successfully navigate this transformation, mitigating the threats and capitalizing on the opportunities. KPMG Fintech professionals include partners and staff in over 45 fintech hubs around the world, working closely with financial institutions and fintech companies to help them understand the signals of change, identify the growth opportunities and to develop and execute on their strategic plans.



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Will Pritchett, Global Head of Regtech, KPMG International and Financial Services Technology Partner, KPMG in the UK

Anna Scally, Partner, Fintech Lead, KPMG in Ireland



Methodology

Within this publication, only completed transactions regardless of type are tracked by PitchBook, with all deal values for general M&A transactions as well as venture rounds remaining un-estimated. Unless the notice of the financing specifically states the round is in progress, the transaction is considered completed. As of January 2019, overall private investment within fintech is the primary focus of the Pulse of Fintech and includes an expanded scope to include private equity growth financings. This edition of the Pulse of Fintech includes data for transactions closed between July 1 and December 31, 2018.

Venture deals

PitchBook includes equity investments into startup companies from an outside source. Investment does not necessarily have to be taken from an institutional investor. This can include investment from individual angel investors, angel groups, seed funds, venture capital firms, corporate venture firms and corporate investors. Investments received as part of an accelerator program are not included, however, if the accelerator continues to invest in follow-on rounds, those further financings are included.

Angel/seed: PitchBook defines financings as angel rounds if there are no PE or VC firms involved in the company to date and it cannot determine if any PE or VC firms are participating. In addition, if there is a press release that states the round is an angel round, it is classified as such. Finally, if a news story or press release only mentions individuals making investments in a financing, it is also classified as angel. As for seed, when the investors and/or press release state that a round is a seed financing, or it is for less than \$500,000 and is the first round as reported by a government filling, it is classified as such. If angels are the only investors, then a round is only marked as seed if it is explicitly stated.

Early-stage: Rounds are generally classified as Series A or B (which PitchBook typically aggregates together as early stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors and more.

Late-stage: Rounds are generally classified as Series C or D or later (which PitchBook typically aggregates together as late stage) either by the series of stock issued in the financing or, if that information is unavailable, by a series of factors including: the age of the company, prior financing history, company status, participating investors and more.

Growth equity: Rounds must include at least one investor tagged as growth/expansion, while deal size must either be \$15 million or more (although rounds of undisclosed size that meet all other criteria are included). In addition, the deal must be classified as growth/expansion or later-stage VC in the PitchBook Platform. If the financing is tagged as late-stage VC it is included regardless of industry. Also, if a company is tagged with any PitchBook vertical, excepting manufacturing and infrastructure, it is kept. Otherwise, the following industries are excluded from growth equity financing calculations: buildings and property, thrifts and mortgage finance, real estate investment trusts and oil & gas equipment, utilities, exploration, production and refining. Lastly, the company in question must not have had an M&A event, buyout, or IPO completed prior to the round in question.

Corporate venture capital: Financings classified as corporate venture capital include rounds that saw both firms investing via established CVC arms or corporations making equity investments off balance sheets or whatever other non-CVC method actually employed.

Corporate: Corporate rounds of funding for currently venture-backed startups that meet the criteria for other PitchBook venture financings are included in the Pulse of Fintech as of March 2018.



Methodology (cont'd)

M&A

PitchBook defines M&A as a transaction in which one company purchases a controlling stake in another company. Eligible transaction types include control acquisitions, leveraged buyouts (LBOs), corporate divestitures, reverse mergers, mergers of equals, spin-offs, asset divestitures and asset acquisitions. Debt restructurings or any other liquidity, self-tender or internal reorganizations are not included. More than 50 percent of the company must be acquired in the transaction. Minority stake transactions (less than a 50 percent stake) are not included. Small business transactions are not included in this report.

Fintech

A combination of finance and technology, the term refers to businesses who are using technology to operate outside of traditional financial services business models to change how financial services are offered. All companies' transactions included within the Pulse of Fintech have a fintech tag within the PitchBook Platform; if a company has an additional vertical tag, it is also included as long as it has a fintech vertical tag. Fintech also includes firms that use technology to improve the competitive advantage of traditional financial services firms and the financial functions and behaviors of consumers and enterprises alike.

- Payments/Transactions Companies whose business model revolves around using technology to provide the transfer
 of value as a service and/or ANY company whose core business is predicated on distributed ledger (blockchain)
 technology AND/OR relating to any use case of cryptocurrency (e.g. Bitcoin) for payments.
- 2. Lending Any non-bank who uses a technology platform to lend money often implementing alternative data and analytics OR any company whose primary business involves providing data and analytics to online lenders or investors in online loans.
- 3. Investment Banking/Capital Markets Companies whose primary business involves the types of financial intermediation historically performed by investment banks.
- 4. Wealth/Investment Management Platforms whose primary business involves the offering of wealth management or investment management services using technology to increase efficiency, lower fees or provide differentiated offerings compared to the traditional business model. Also includes technology platforms for retail investors to share ideas and insights both via quantitative and qualitative research.
- 5. Personal Finance Companies that provide a technology-driven service to improve retail customers' finances by allowing them to monitor spending, savings, credit score or tax liability OR leveraging technology to offer basic retail banking services such as checking or savings accounts outside of a traditional brick and mortar bank.
- Institutional/B2B Fintech Companies that offer technology-driven solutions and services to enterprises or financial
 institutions. These include software to automate financial processes, well financial security (excluding blockchain),
 authentication as well as traditional and alternative data utilized by financial or other institutions and enterprises to make
 strategic decisions.
- 7. Insurtech Companies utilizing technology to increase the speed, efficiency, accuracy and convenience of processes across the insurance value chain. This includes quote comparison websites, insurance telematics, insurance domotics (home automation), peer-to-peer insurance, corporate platforms, online brokers, cyber insurance, underwriting software, claims software and digital sales enabling.
- 8. Regtech Companies who provide a technology-driven service to facilitate and streamline compliance with regulations and reporting as well as protect from employee and customer fraud.
- 9. Blockchain/cryptocurrency Companies involved in blockchain/cryptocurrency space are also included in the Pulse of Fintech. Cryptocurrency refers to a virtual medium of exchange, created and stored electronically in the blockchain, distinguishable from other currencies in that it uses cryptographic technology to decentralize the creation of monetary units and securely verify transactions. This space includes companies providing services or developing technology related to the exchange of cryptocurrency, the storage of cryptocurrency, the facilitation of payments using cryptocurrency and securing cryptocurrency ledgers via mining activities. Blockchain refers to a distributed public database which keeps a permanent and incorruptible record of digital transactions. Blockchains are unique in that they cannot be controlled by a single entity and have no single point of failure. Furthermore, blockchains can be programmed to store more than just financial information. This space includes companies involved in developing blockchain applications related to smart contracts, crowd funding, supply chain auditing, cryptocurrency, identity management, intellectual property and file storage.

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