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AMTD 尚乘

Global FinTech Survey Report

An era of borderless innovation

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Introduction

Global FinTech industry is entering an era of globalization, driven by FinTech players' ambition of going global through overseas investments and partnership. Chinese FinTech companies are particularly active on this front to export their technology and expand their customer base oversea. Asian investors are also increasingly interested in investment opportunities in FinTech sector in overseas markets. In this report, we try to identify important trends investors should pay attention to through conversations with global FinTech leaders and surveys with Asian FinTech investors.

We start off by comparing the two largest FinTech markets in the world – China and the US. We highlight that Chinese FinTech giants offer a vision of a one-stop shop model of FinTech for global FinTech industry.

In the second section, we collect insights from global Fintech entrepreneurs and pioneers and try to identify unique trends in the global Fintech industry that investors need to understand. We engaged in-depth conversations with global FinTech entrepreneurs including Ron Suber (former President of Prosper), Renaud Laplanche (Founder and CEO of Upgrade) and Soul Htite (Co-founder and CEO of China based Dianrong) at FINTalks co-organized by FinEx Asia, AMTD Group and Dianrong in Hong Kong, Singapore and Tawian.

In the last part, we collected responses from Asian investors at the AMTD-LendIt Global FinTech Investment Summit where 34 executives from top FinTech firms met 200 Asian investors in Hong Kong.

8 trends expected by global FinTech CEOs and Asian investors that may surprise you:

#1 US unsecured consumer loan assets could be an attractive asset class for Asian fixed income investors. US marketplace lenders expressed interest in attracting Asian investors on the funding side.

#2 Global FinTech CEOs see Singapore as the "FinTech Dark Horse" after the FINTalks tour in Hong Kong, Singapore and Taiwan. This would be mostly attributable to Singapore's innovation friendly regulatory stance. Regulators in Hong Kong and Taiwan are trying to catch up with Singapore. Local regulations have played a vital role in driving FinTech sector's growth. China's FinTech sector was in part attributable to regulators' pro-growth attitude at the beginning.

#3 Data analytics, personal finance and capital market solutions are the hottest sub segments among Asian investors, as the two largest sub segments payments and P2P are reaching a more matured stage**.** However, Chinese tech giants are still actively acquiring payment companies in emerging market which are deemed as the gateway to attract customers.

#4 Top criteria when select FinTech companies: Technology is selected as the top one criterion, followed by product innovation and accumulation of data. Sub-segment and existing customer size are given less weighting.

#5 Asian investors seek for technology innovation and better financial infrastructure when they invest in overseas FinTech startups.

#6 Asian investors has great expectation on AI's application in Credit Scoring, Quantitative Trading, Financial Analysis and Prediction.

#7 Asian investors expect small business loans to have the best growth potential in marketplace lending as consumer loans reached a more matured stage**.**

#8 Asian investors find valuation at Series C stage the most expensive for FinTech sector.

China vs. US FinTech sector

1. China vs US FinTech market size

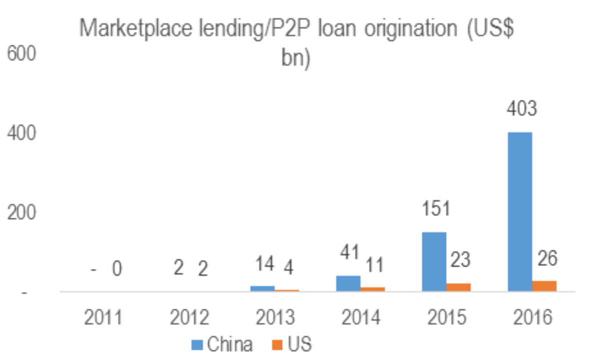
China and the US are the two largest FinTech markets in the world. The two countries represents two very different paths how FinTech innovation disrupt the existing system.

China shows a good example to other developing markets that technology can help leapfrog to a new era of banking. FinTech firms fill the vacuum left by inefficient traditional financial system – serving the underserved consumers and SMEs. They started from payments and later disrupts financial sector in wealth management, lending and lending. In the US and other developed countries, the FinTech startups use technology to offer faster, cheaper financial products on top of a well developed financial system. FinTech firms also collaborate with traditional financial institutions to enable traditional financial institutions to tap into new revenue opportunities, streamline process, save operating cost and offer better customer experience.

If comparing the sheer transaction size of the two largest FinTech sub-segment, China overshadowed the US. In 2016, Chinese marketplace lending (P2P) platforms originated Rmb 2.8trn loans (US$ 403bn), vs US$ 26bn in the US and US$ 4.5bn in UK and US$ 1bn in continental Europe. In 2016, China's third-party payments recorded a total transaction of Rmb 79trn (US$ 11.3trn), dominated by AliPay of Alibaba and TenPay of Tencent. This compares to around US$ 620bn remote payments made in the US in 2016.

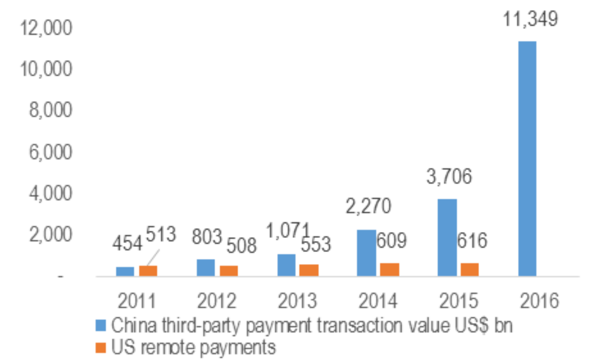
The third-party payments in China are not just simply replacing bank card transactions, they also contribute to the cashless society in China. The third-party transaction volume took off in 2016 as offline QR payment gained popularity in small amount payments.

Figure 1: P2P market size comparison



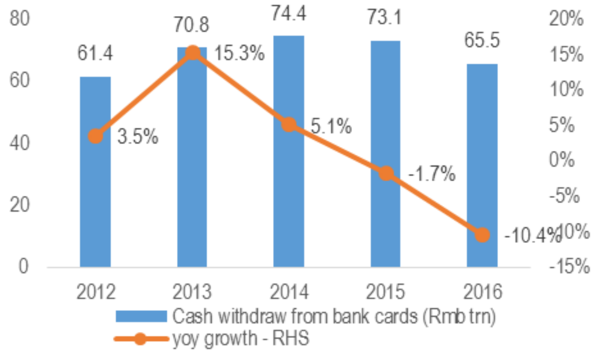
Source: Wangdaizhijia, S&P Global, Altfi data, company data

Figure 2: Electronic payments – China vs US



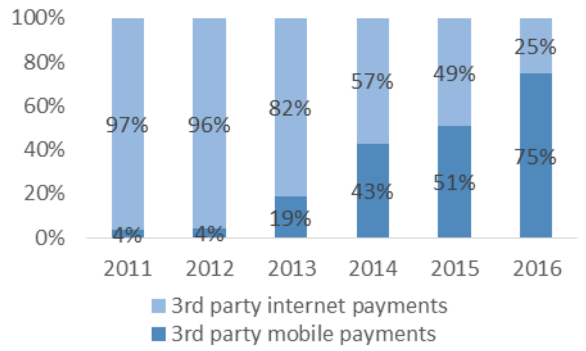
Source: iResearch, Nilson Report; Note: US remote payments are made using a computer or telephone, and include payments made during online banking sessions, person-to-person money transfers, check conversions at the point of sale, as well as bill payments made at ATMs, self-service kiosks, and clerk-assisted machines at supermarkets.

Figure 3: Third-party payment channels are replacing cash and small amount transactions



Source: PBOC

Figure 4: Third-party mobile payment overtaking desktop payment in China



Source: iResearch

2. China FinTech ecosystem – could this be the future model of FinTech?

China offers a vision of a one-stop shop model of FinTech for the developed countries. Most important, the Chinese FinTech firms have created a closed-loop ecosystem that provide one-stop solution that meets all the financial needs by consumers and suppliers, including payments, wealth management products, personal loans, small business loans, funds and insurance products.

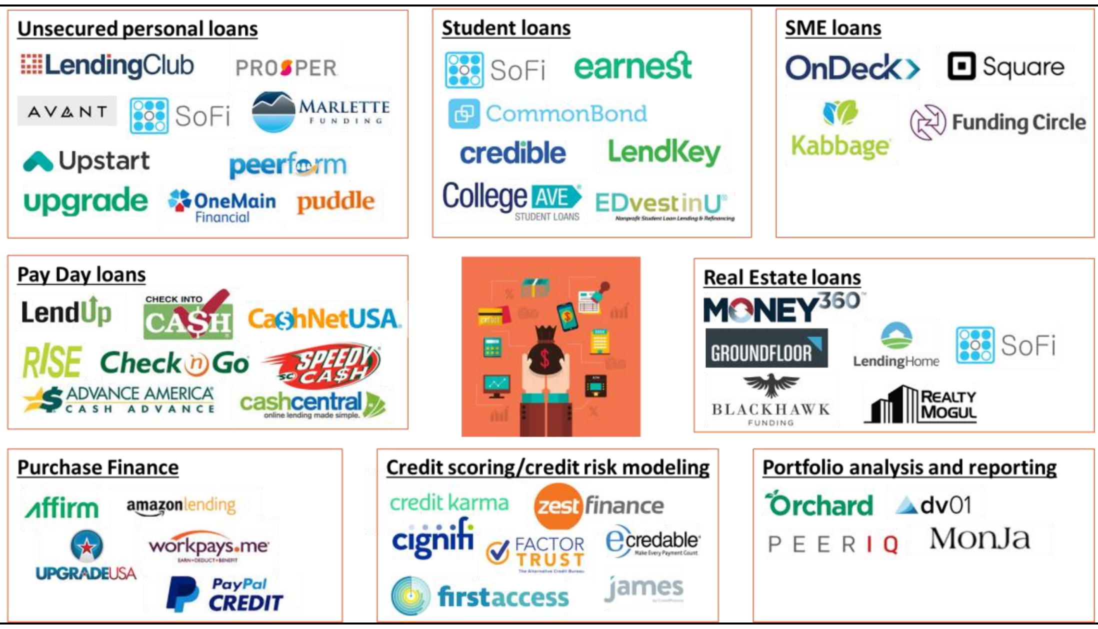
While digital payment services itself may not be profitable due to the low transaction fee rate, the Chinese FinTech giants are using payment service as the gateway to attract customers and obtain customer data. Based on the transaction data and consumer behavior in the ecosystem, they are able to provide big data credit scoring, targeted marketing and other value-add services which would further strengthen customer engagement on the platform.

Take Ant Financial's ecosystem as an example. Leveraging on the large user base of Alibaba's ecommerce platform, Alipay becomes one of the most popular third-party payment tools in China from online to offline payment. Alipay later extended its service into providing money market funds – Yu E Bao which proves to be very successful due to limited investment channel for small sum of funds by then. Based on ecommerce transaction data, Ant Financial was able to generate its own credit scoring system (Zhima Credit) which enables it to lend loans to consumers and small businesses. Ant Financial now offers a consolidated wealth management platform – Ant Fortune that offers a variety of financial products including funds, insurance, gold etc.. The enlarged product offering further enhances Alibaba's database and enables it to better conduct targeted marketing and credit scoring, strengthening its ability in financial product offering and risk management and eventually increase customers' switching cost out of its ecosystem.

Figure 5: Leading FinTech players in China tend to provide one-stop shop solution for all financial products

Source: AMTD Research

Figure 6: US marketplace lending competitive landscape – leading players tend to focus on a core area



Source: AMTD Research

3. Tech giants dominate FinTech market in China

Unlike the western peers such as Facebook, Apple, Google that tend to focus on a few core areas, tech companies in China try to do everything and provide services from instant messager, mobile games, ecommerce, and payments to consumer loans. Majority of leading Chinese FinTech companies are affiliates of a technology company or a financial institution. Almost all tech companies have their own FinTech arms. When we ask global FinTech CEOs why the US tech giants are not actively in expanding their product offerings in FinTech, they commented that the tech giants in the western countries are aware of that FinTech requires the know-how in both technology and finance and the tech giants are cautious towards expansion in financial field where they don't have expertise. Also due to the well-developed financial infrastructure and readily available finance services may also represent high entry barrier in the financial sector. Therefore, most western FinTech startups remain independent of tech giants or banks and they tend to focus on one area such as consumer lending, payments, credit scoring and etc..

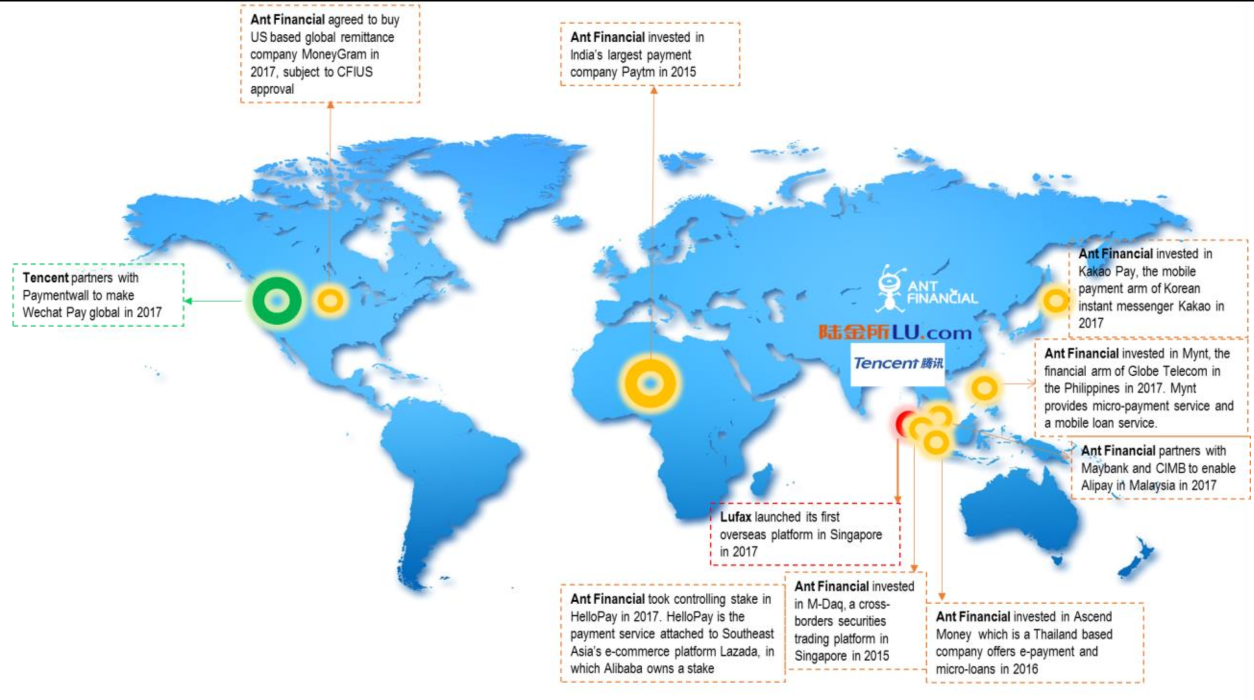
4. The era of borderless innovation for FinTech firms

Chinese FinTech firms have started to expand overseas to export their technology and to expand their customer base. Chinese FinTech players are particularly active in overseas expansion and overseas acquisition. Ant Financial – the financial arm of Alibaba has been particularly active in acquiring overseas FinTech startups, especially in Southeast Asia. Southeast Asia markets share many similarities as China such as a young population, inefficient financial system and untapped financial demand.

Alibaba, Tencent and Lufax all have different focus in their overseas expansions. Alibaba through Ant Financial, has been focusing on ecommerce and payments startups. Tencent, on the other hand, is bent on messaging and gaming presence in new markets. Lufax, set up its first overseas platform in Singapore. Both Alibaba and Tencent have been actively seeking overseas partnership to promote their payment, Alipay of Alibaba and Wechat Pay of Tencent, a**s payment channel is deemed as the gateway to collect consumer data and offer other value-add services.**

We observe FinTech firms from developed countries have been conservative in overseas expansion, likely due to limited knowledge in local regulations, local financial markets and data accumulations. On the funding size, it is easier to diversify funding to overseas institutional investors. However, the majority of them have expressed interests in expansion in China through seeking local partners with data accumulations.

Figure 7: Overseas expansion/investments of leading Chinese FinTech companies



Source: Bloomberg, AMTD Research

Insights from the global FinTech CEOs

We recently met entrepreneurs and pioneers from leading global FinTech startups during AMTD-LendIt Global FinTech Investment Summit in Hong Kong, and the FINTalks in Hong Kong, Singapore & Taiwan. We discussed key trends in global FinTech industry, cross-border cooperation opportunities with industry "Godfathers" such as Ron Suber (former President of Prosper), Renaud Laplanche (Founder and CEO of Upgrade, former founder and CEO of Lending Club) and Soul Htite (Co-founder and CEO of China based Dianrong). Here are a few trends highlighted by the FinTech leaders.

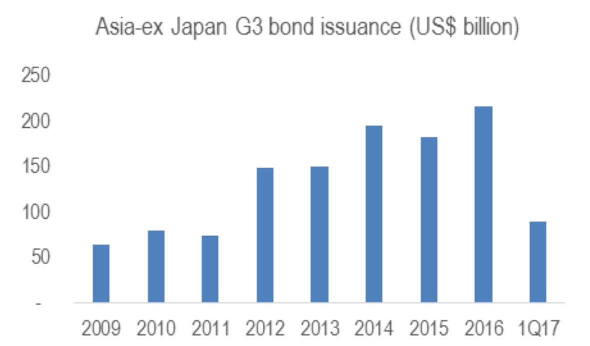
1. **US unsecured consumer loan assets as a new asset class for Asian fixed income investors**

While US marketplace lending industry has evolved from funded by personal investors to institutional funding, Asian investors have not been active buyers of US unsecured consumer loans underwritten by US marketplace lenders (MPLs). However, as global corporate bond yield compressed to a historical low level, we see US unsecured consumer loans offered by MPLs as an attractive asset class for Asian investors.

- **Global corporate bond yield compressed to a historical low level**

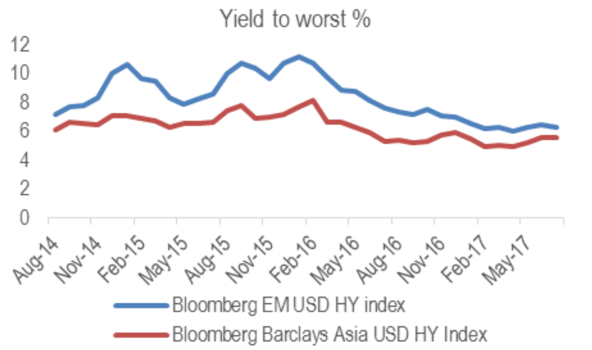
Since 2015, Asian corporate bond market has recorded strong growth driven by the continued quantitative easing by global central banks, Asian investors especially Chinese investors' demand for hard currency, fixed income assets. This leads to a higher risk appetite therefore a collapsing yield especially for the high yield bonds. For example, the Bloomberg Barclays Asia USD HY Index shows the average YTW is now hovering around 5.54% vs 3.12% for investment grade bonds. While it may not be directly comparable, the LendingClub's loans have on average delivered a net annualized return of 5.98% from lending to good credit prime/near-prime borrowers since 2011.

Figure 8: Asian G3 corporate bond issuance



Source: Thomas Reuters

Figure 9: Global bond market yield collapsed

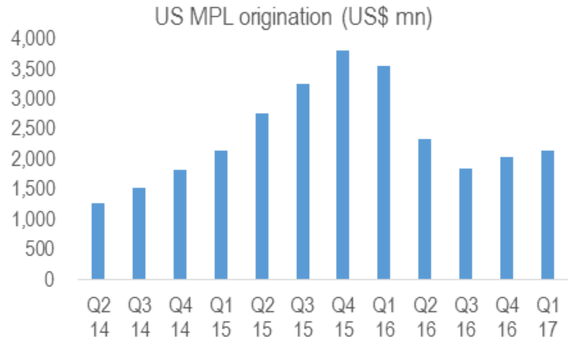


Source: Bloomberg

- **The US marketplace lenders have been focusing on consumer loans.**

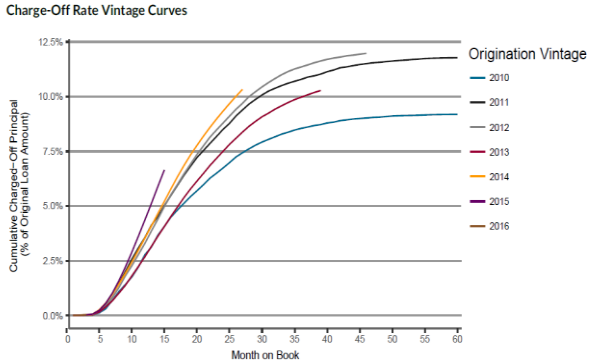
US MPLs are currently serving mostly prime and near-prime borrowers consolidating debt from credit cards or student loans. The top marketplace lenders are lending on average $35,000 to individuals with FICO scores around 700.

Figure 10: US marketplace lending loan originations



Source: Orchard Platform

Figure 11: US MPL charge-off by vintange



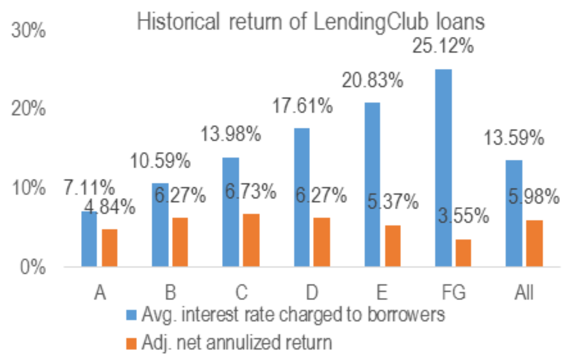
Source: Orchard Platform. Note: The vintage curves in the above graph show cumulative charge-offs as a proportion of original loan balance and broken out by year.

- **Near-prime loans have been the sweet spot**

According to LendingClub's historical performance data, loans issued to C Grade borrowers historically have delivered the highest risk-adjusted returns. C Grade borrowers are defined as the "near prime" borrowers with a FICO score generally ranging from 600-700. According to LendingClub's data, C Grade loans issued since 2011 has on average charged a 13.98% annualized interest rates while returned a net 6.73% to investors, vs all LendingClub loans'13.59% annulized interest rates and 5.98% net adjusted annualized return.

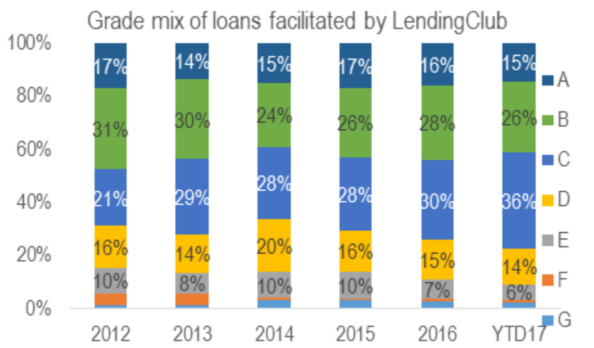
Most FinTech executives believe the US C Grade unsecured consumer loans so far have delivered the best risk-adjusted return and expect it to remain so in future. The near-prime borrowers are starving for lines of credit and are able to pay, yet are being denied due to financial institutions' post-recession tendency to be risk-averse. The near-prime borrowers are being denied by banks for reasons that are out of their control – a missing payment, a job is lost could stay on their credit report for a few years. Yet they are able to pay their debts, making them a less risky client base and potentially a highly profitable segment.

Figure 12: LendingClub loans historical returns – loans facilitated since 1Q2011



Source: LendingClub; Note: Adjusted net annualized return is calculated based on monthly borrower payments actually received net of service and collections fees, actual charge offs, recoveries, and estimated future losses.

Figure 13: Grade mix of loans facilitated by LendingClub – C Grade has been increasing and became the largest group



Source: LendingClub

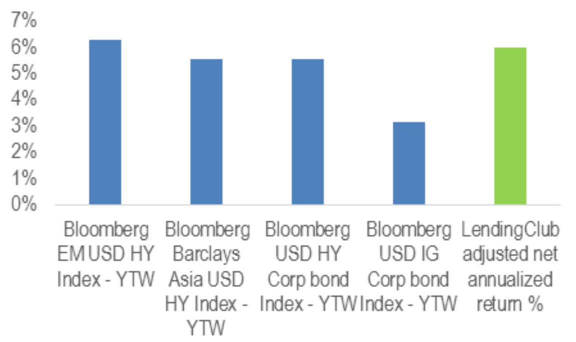
- **Institutional funding supports the growth of US lenders**

Technology doesn't change the nature of finance – competitive advantages lie in cheap and stable funding, credit risk management and risk pricing. When US marketplace lenders first started as P2P platforms, they needed to attract individual lenders because institutions weren't interested in these platforms until they scale up and proved themselves being able to constantly deliver a stable risk-adjusted return. The MPL loans are appealing to institutional investors also due to the type of diversification they offer. Hedge funds, insurance companies and even banks are the key institutional investors in MPL loans now.

The institutional funding although may be more expensive, it comes with a few benefits: 1) provide readily available funding for MPLs to quickly scale up; 2) subject to less regulatory scrutiny as regulations tend to focus on the protection of retail investors.

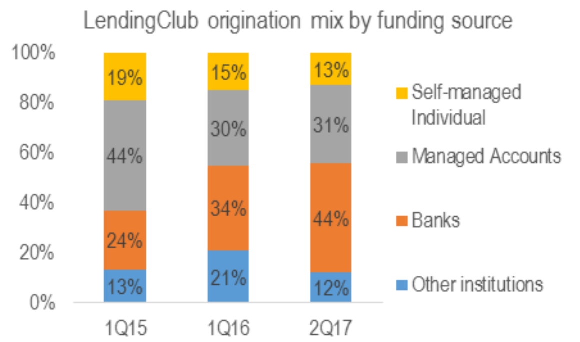
Take LendingClub funding mix as an example, institutional funding including managed accounts accounted for 87% of total originations in 2Q17, compared to 16% in 1Q14. Platforms that started later such as Marlette Funding, rely mostly on institutional funding from day one have reported very fast growth. By Mar-17, Marlette Funding extended more than $3 billion of loans under its Best Egg brand in its first three years, a milestone that took LendingClub around twice as long to reach.

Figure 14: Yield comparison of bonds vs MPL unsecured consumer loans



Source: Bloomberg, LendingClub; Note: LendingClub's adjusted net annualized return may not be directly comparable to bond yield.

Figure 15: LendingClub institutional funding significantly increased



Source: LendingClub

- **Securitization as a new funding source for marketplace lenders in the US**

Since the first MPL ABS were issued by LendingClub in 2013, Marketplace lenders have been increasing their securitization issuance with majority of the deal being rated by the three agencies. In 1H17, US$ 5.95bn of MPL ABS were issued by US marketplace lenders, up by 88% yoy. According to PeerIQ, the new issuance spreads tightened to a historical low level and the credit curve flattened, suggesting an increasing market confidence in the asset class. For example, LendingClub's recent ABS program was priced at Libor +110bp and Marlette Funding's A Trench at Libor + 100bp.

However, access to securitization is only open to a selective few sophisticated lenders and are highly concentrated in the top players such as SoFi, Prosper, LendingClub, and Avant.

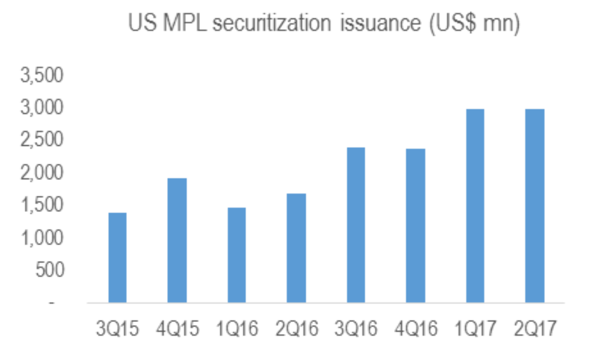
Figure 16: US marketplace lender securitization league table -1H17

Originator League Table (All Issuance to Date)

Rank	Originator	Quarterly Issuance ($ Mn)	% Top 10	% QtoQ Change
1	SoFi	1,091	49%	12%
2	Prosper	495	11%	23%
3	Lending Club	279	8%	16%
4	Avant	219	7%	16%
5	Kabbage	-	5%	0%
6	Marlette	322	4%	51%
7	Earnest	175	3%	25%
8	OnDeck	-	3%	0%
9	CommonBond	232	3%	45%
10	LoanDepot	-	1%	0%

Source: PeerIQ, Bloomberg

Figure 17: US marketplace lending securitization issuance



Source: Bloomberg

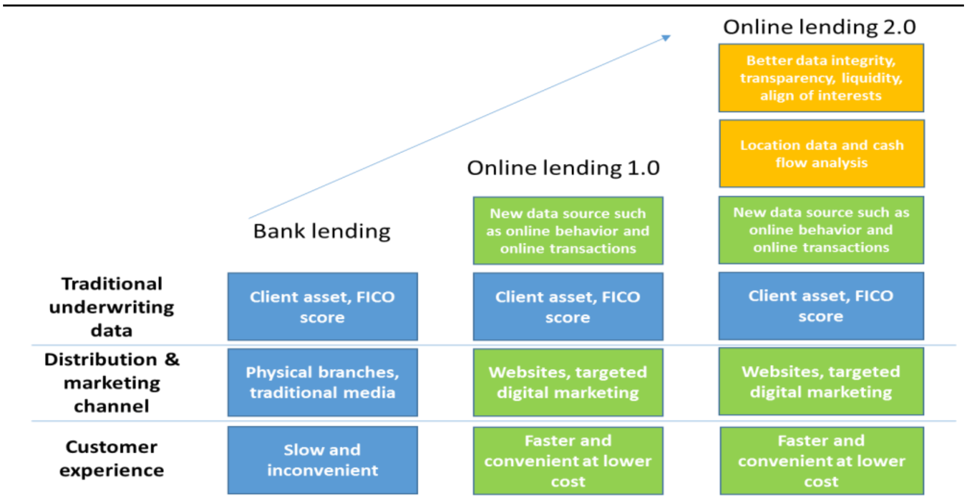
- **Transparency will be a key theme in 2017**

After a tough year in 2016 in terms of transaction volume and fund raising activities, the marketplace lending industry in the US gradually recovered in 2017. The industry has arrived at a tipping point where its growth potential falls onto if it is able to provide better transparency and risk management for investors to gain confidence to this new asset class and support the industry's growth. Just as Renaud Laplanche emphasized in his Online Lending 2.0, the marketplace lending will provide liquidity, transparency and alignment of interests with investors.

Data platforms that offer tools and infrastructures (such as Orchard Platform and DV02) to allow institutional investors to filter and search by asset class, track record of loan originators, standardized reporting, portfolio analysis, market data, and market insights. This makes it easier for investors to find and fund opportunities that are the best match for their specific goals. However, more is needed. Renaud Laplanche's new company Upgrade will be fully transparent on credit policy and data verification by creating an immutable record of loan data by storing it on the blockchain. In addition, Upgrade introduced cash flow analysis and location data in its credit model.

Data integrity continues to be on the mind of all participants in the marketplace lending ecosystem. Credit score at origination is increasingly a new variable that ABS investors and regulators are requesting during the securitization process.

Figure 18: What is Online lending 2.0?

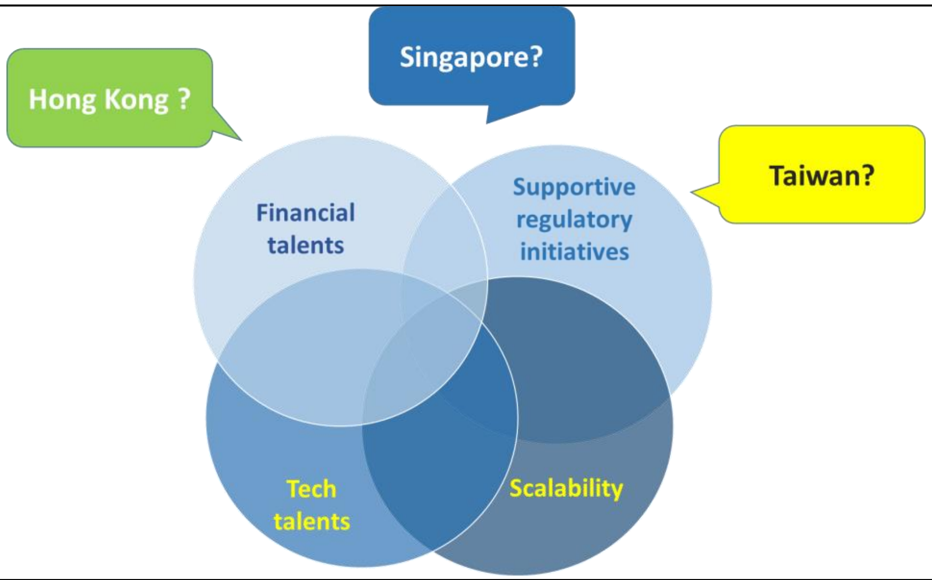


Source: Upgrade

2. Regulatory initiatives in Singapore, Hong Kong and Taiwan for FinTech industry: Singapore stands out

The first FINTalks tour in July 2017 jointly organized by FinEX Asia, AMTD Group, and Dianrong in three Asian cities Hong Kong, Singapore and Taiwan concluded on a successful note. FINTalks invited local regulators, bank executives, FinTech investors and global FinTech entrepreneurs to share their visions and identify opportunities in local markets.

Figure 19: Hong Kong, Singapore, Taiwan, which city takes the lead in FinTech innovation?



Source: AMTD Research

Singapore – the FinTech dark horse

The global FinTech leaders in general feel are that Singapore regulators offer the best flexibility among the three cities thus give the city a strong lead in becoming a leading FinTech hub in the world. This is largely attributable to MAS's proactive approach in supporting innovations in the financial sector and the city's existing role as an offshore wealth management hub. The city's connectivity to other Southeast Asia markets also gives its FinTech startups' opportunities to scale in other markets. The city's quality tech talent pool is also a very important factor. A few of FinTech leaders identify invoice financing, wealth management platforms and cross-border payments as the biggest opportunities in Singapore. In 2016 alone, MAS announced a number of FinTech initiatives in line with its vision for a "Smart Financial Centre". It has since begun working closely with the financial industry, FinTech start-ups toward achieving this vision.

Hong Kong – Asian's financial center plays catch-up

For Hong Kong, the global FinTech leaders acknowledge Hong Kong's close proximity to mainland China, the largest FinTech market in the world and its role as an offshore financial center in Asia as its key advantage. In comparison, Hong Kong regulators' less flexibility may impede FinTech sector's development there. A lack of quality tech talent is another hurdle for the city. The city will need more supportive measures in pilot regulatory programs and in attracting tech talents to catch up with Singapore.

The newly introduced 'Great Bay Area" plan involving 13 cities in the Pearl-River-Delta may also give Hong Kong the tech know-how and talents needed. Open platforms that connect Asian capital and assets in the developed country may have strong potential in Hong Kong.

Taiwan – slow awakening

For Taipei, there was a slow awaking in local financial industry and regulators. However, Taiwan's regulators seem to have focused on managing the risks that FinTech may pose to the economy rather than on maximizing the benefits it could bring. The city's abundance of tech talents will be Taiwan's key advantage in developing its FinTech sector.

Figure 20: Comparison of Singapore, Hong Kong & Taiwan's positioning in FinTech innovation

	Singapore	Hong Kong	Taiwan
Regulatory initiatives	· MAS annouced Smart Financial Centre vision · MAS introduced FinTech Regulatory Sandbox · MAS has committed S$225 million to support the development of Fintech industry · MAS set up a new FinTech & Innovation Group, likely first FinTech unit in a regulatory body globally · MAS has committed S$225 million to support the development of Fintech industry · MAS introduced digital currency for cross-border interbank payments powered by blockchain technology · MAS has enterred into FinTech cooperation agreement with Danish Financial Supervisory Authority · MAS rolled out KYC Utility (know-your-customer) to provide trusted, government-collected personal data · MAS released a consultation paper on proposals to facilite robo-advisory services	· HKMA and the UK Financial Conduct Authority entered into a cooperation agreement to foster collaboration in promoting financial innovation. · The HKMA has established a Fintech Facilitation Office (FFO) to facilitate the healthy development of the fintech ecosystem in Hong Kong · The HKMA has launched a Fintech Supervisory Sandbox · The HKMA launched the SVF supervisory regime and granted licenses to 13 payment companies · A new HK$2 billion Innovation and Technology Venture Fund will be launched by Hong Kong government	· The Financial Supervisory Commission (FSC) commented in Jan 2017 that it is prioritizing the implementation of a "regulatory sandbox" that would enable both financial institutions and fintech developers to test new products and services for a trial period of up to nine months.
Supporting factors for FinTech sector to stride	· Supportive regulations · Existing role as Asia's offshore wealth management centre · Connectivity to the huge markets in Southeast Asia · Accumulation of quality tech talents	· Close proximity to mainland China, the largest FinTech market · Its role as the super connector between the west and China · Existing role as Asia's financial hub · "Great Bay Area" plan may give Hong Kong the tech talents needed	· Abundance of tech talents · Good financial infrastructure
Key hurdles	· Difficult for FinTech startups to scale up · Slow progress on open APIs of banks	· Difficult for FinTech startups to scale up · Less regulatory flexibility · A lack of quality tech talents · High operating costs for startups · Slow progress on open APIs of banks	· A lack of emphasis by bank executives on financial innovation · A lack of regulatory flexibility · Slow progress on open APIs of banks
FinTech opportunities	· Invoice lending · Cross-border payment · Wealth management platforms · Robo-advisor	· Open platforms that connect Asian capital and alternative assets in developed countries · InsurTech · Capital markets solutions · RegTech · Robo-advisor	· Supply chain finance · Robo-advisor

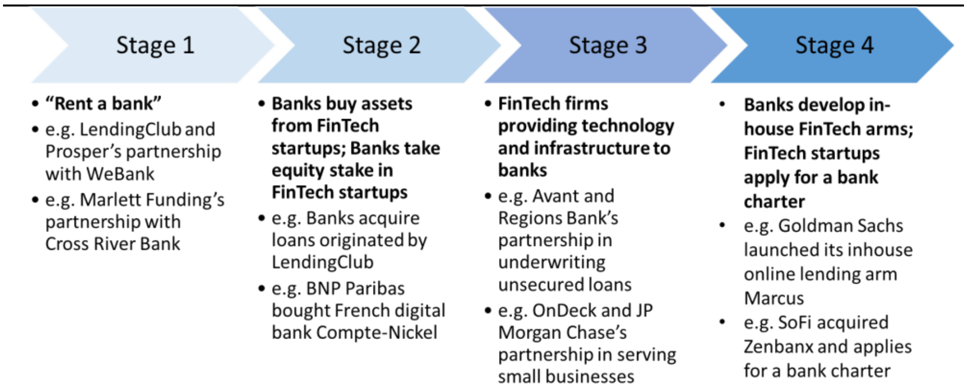
Source: Government websites, Bloomberg, AMTD Research

3. Evolution of FinTech-bank partnership

Most FinTech CEOs expect increasing FinTech-bank partnership going forward. In the US, the FinTech-bank partnership has evolved from the simple "rent a bank" model such as LendingClub and Prosper's partnership with WeBank to FinTech companies providing the technology and infrastructure for banks to better serve their customers. This include OnDeck and JP Morgan Chase's partnership in serving small business borrowers and Avant and Regions Bank's partnership which involves Regions paying a fee to Avant for using Avant's technology platform to underwrite unsecured loans. While some still believe that FinTech companies are in direct competition with banks, these partnership all proves that FinTech companies and banks can have mutual beneficiary partnership in which the FinTech companies can leverage on a bank's reputation and the bank can leverage on FinTech company's technology infrastructure to better service their customers.

In 2017, two FinTech firms SoFi and Varo Money filed application for a special bank charter which would allow them to provide products similar to financial institutions, beyond student loans, mortgages and auto loans.

Figure 21: An evolving relationship between FinTech startup and banks



Source: AMTD Research

4. Institutional funding may not come so soon to Chinese P2P platforms

Institutional funding for Chinese P2P will increase in the long run

As we mentioned earlier, while the earliest marketplace lending platforms such as LendingClub and Prosper began with the "peer-to-peer" models, the majority of funding of US marketplace lenders is now provided by institutional investors. In 2Q17, 87% of LendingClub's originations was funded by institutional investors including managed accounts, of which, 44% was from banks.

Regional banks in China are ideal investors for P2P loans

We found regional banks constrained by their physical presence in a particular region are particularly interested in cooperation with marketplace lenders. The FinTech CEOs agree with such observation. This is happening in the US. Marketplace lenders provide regional banks the nationwide assets and customers they were not able to attract based on their physical presence. Examples include Marlette Funding's partnership with Cross River Bank where Marlette Funding sources and services loans for Cross River Bank. Regions Bank makes the loan to the borrower and pays Avant a fee for using their technology platform. This could well be the long term trend in China.

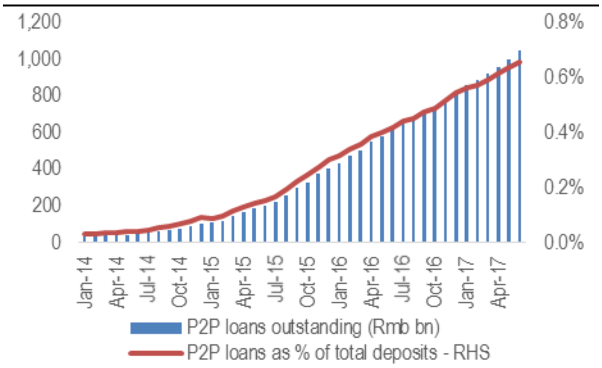
Regional banks such as city commercial banks and rural commercial banks in China are also restricted from expansion outside their local markets which limits their opportunities outside a particular region. Compared to large national banks, they are also particularly weak in their individual customer base. This makes them ideal whole loan investors for P2P loans which offers diversifications across regions and gives smaller banks the customers they need. However, the regional banks' legacy system, lengthy due diligence process and current regulatory environment could make it difficult for this type partnership to roll out in a fast pace.

Current regulatory environment may not encourage such partnership in the near term

The exponential growth of Chinese P2P industry was in part driven by financial institution's need to move assets off balance sheet, and the implicit/explicit guarantees provided by same platforms. Therefore on the asset side, large ticket size loans were dominating the originations until Aug 2016 when the Interim Measures on Administration of the Business Activities of Peer-to-Peer Lending Information Intermediaries (the "Interim Measures") was jointly published by the China Banking Regulatory Commission ("CBRC"), the Ministry of Industry and Information Technology ("MIIT"), the Ministry of Public Security and the Cyber Administration of China ("CAC") jointly released). In this Interim Measures, the true "peer-to-peer" function was emphasized with per borrower loan size capped at Rmb 200k for individuals and Rmb 1m for small businesses.

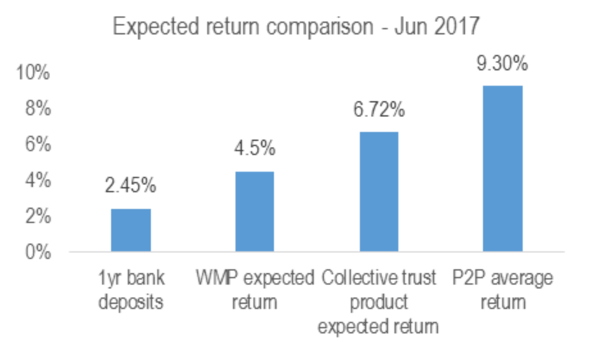
Starting in 2017, the banking regulation in China has been very much focused on reducing the shadow banking activities and contain systemic risks in the financial system. Shadow banking activities involves banks' off-balance sheet credit exposures in the form of wealth management products, asset management scheme issued by brokers, trust loans and some portion of P2P lending. This could make institutions to shy away from P2P loans in the near term.

Figure 22: China P2P loans outstanding



Source: Wangdaizhijia, AMTD Research

Figure 23: P2P investment returns vs banks' wealth management products and trust products



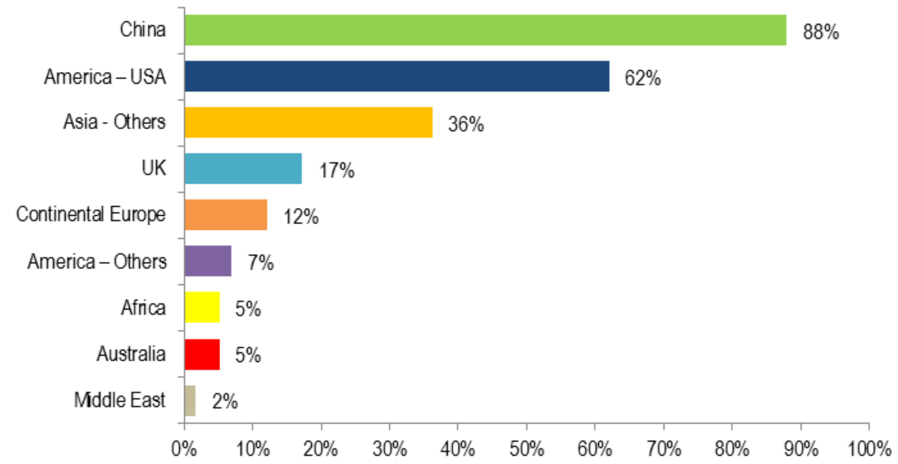
Source: Wangdaizhijia, WIND, AMTD Research

Asian investor survey results

Investors' interests still focused in China and the US

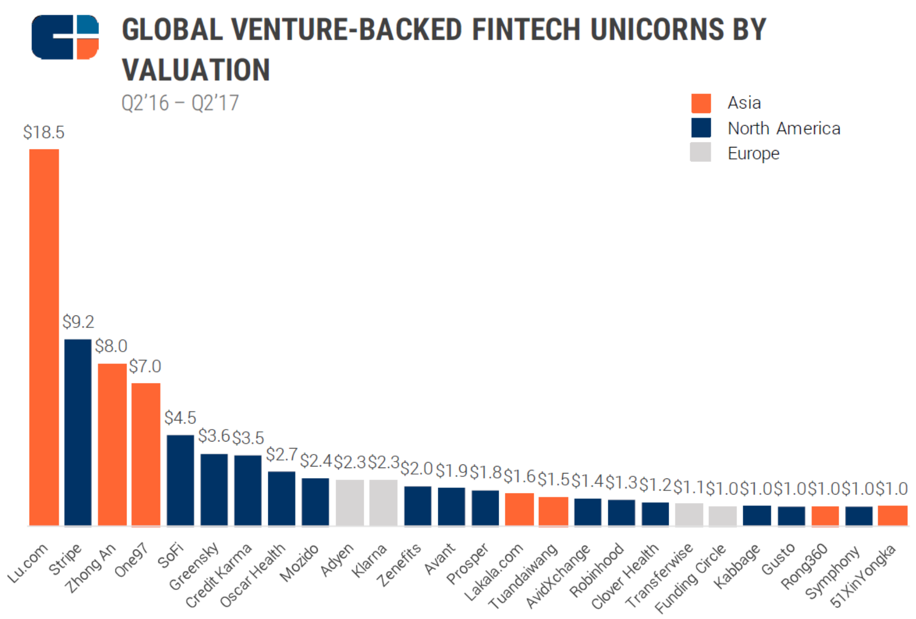
China and US, the two largest FinTech markets remain the most popular investment destination for FinTech investors. Other Asian countries are the third most popular destination likely due to the favorable demographics and huge market potential for underbanked population.

Figure 24: Countries/Regions you think will have the greatest growth potential for FinTech companies?



Source: AMTD Research

Figure 25: Global FinTech unicorns



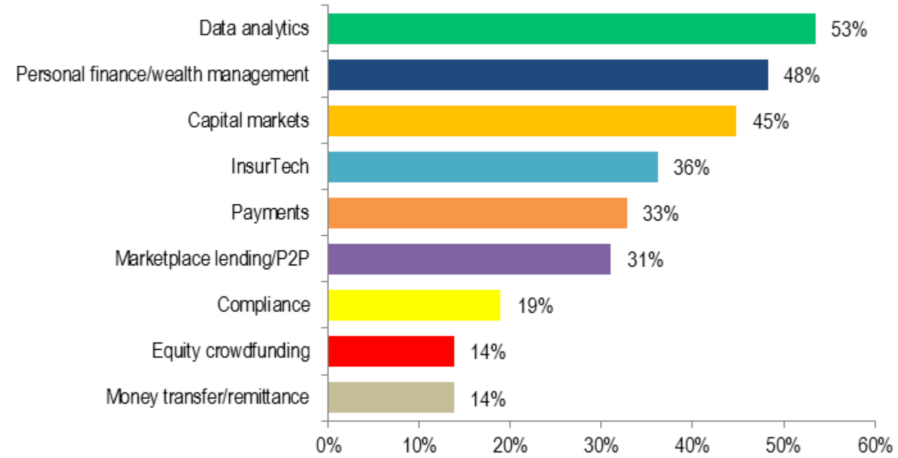
Source: CB Insights; Note: This chart only includes FinTech firms that had fund raising activities during 2Q16-2Q17

Asian investors look for advanced technology and innovation

Data analytics, personal finance and capital market solutions are the hottest sub segments

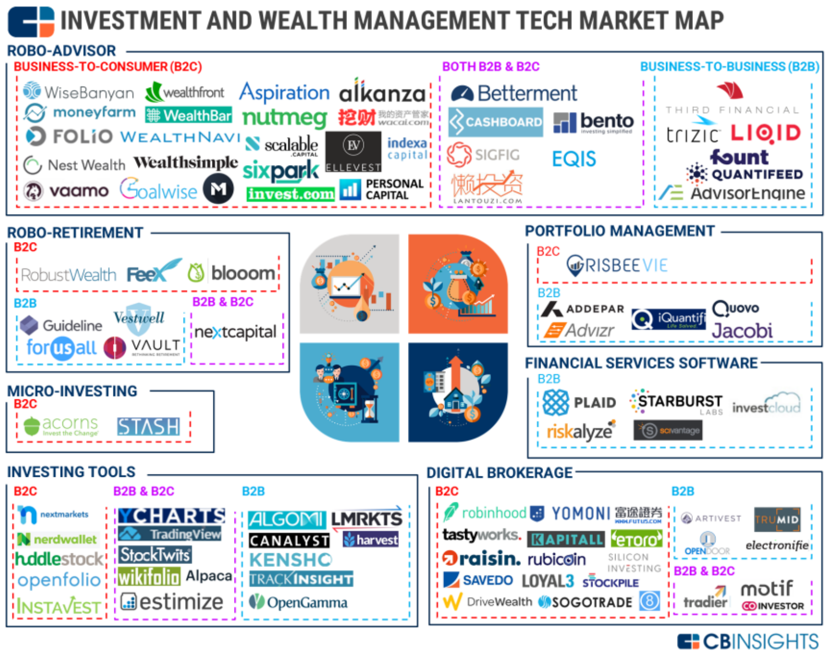
As the two largest sub segments payments and P2P are reaching a more matured stage, they are falling out of favor by investors. **Data analytics**, **personal finance/wealth management** and **capital markets** are the most popular sub segment now. However, we observe Chinese tech giants are still actively looking for payment companies in other emerging markets.

Figure 26: You are looking for investment opportunities in which FinTech segments?



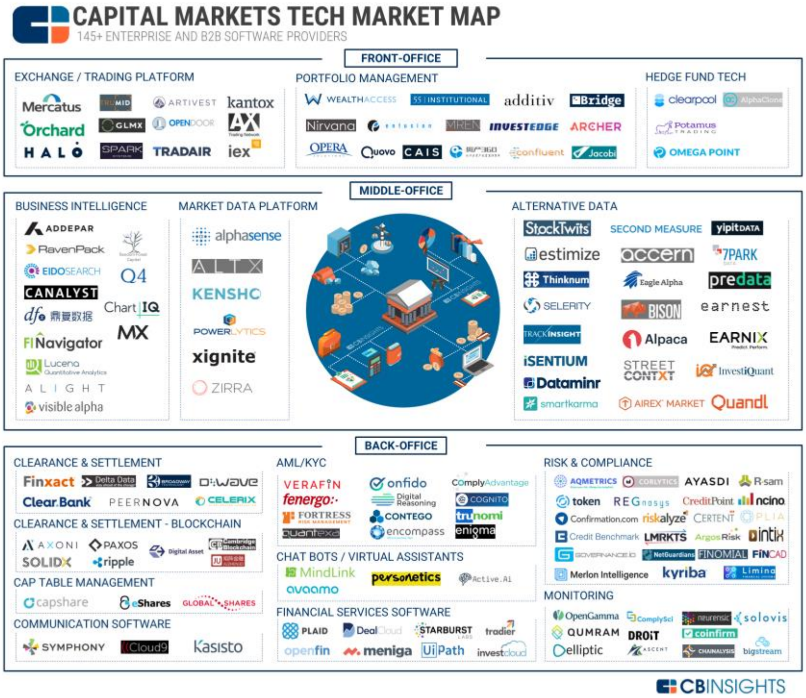
Source: AMTD Research

Figure 27: Investment and wealth management tech market map



Source: CB Insights

Figure 28: Capital markets tech market map



Source: CB Insights

Figure 29: InsurTech market map

Source: CB Insights

Why Asian investors are looking at overseas FinTech startups?

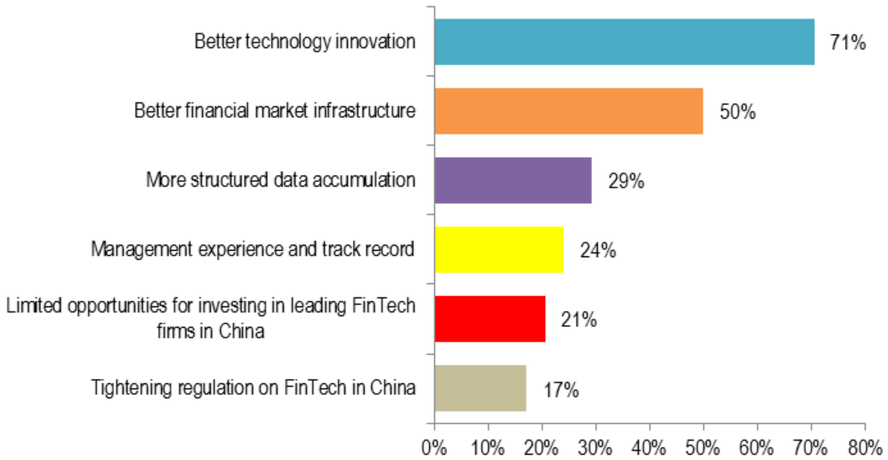
When we ask what are the main reasons that the investor is looking for FinTech companies overseas, 1) Better technology innovation and 2) Better financial market infrastructure and are selected as the top two reasons. We believe this reflects the different path of FinTech industry in Asia (mostly China) and in the developed countries. The China and US FinTech markets represent two different value propositions.

China enjoys the late-mover advantage and its lead in P2P and payments is the results of a weaker financial infrastructure compared to developed countries. Credit card penetration in China is low compared to the developed country and online banking services are usually inconvenient. P2P prospered on the back of a lack of options for small amount fixed income investment and lack of access to unsecured personal loans. With the absence of a credit bureau, banks still much focused on secured loans to larger corporates and mortgages and are unable to expand fast into the under-served unsecured consumer loan market due to higher operating cost they could incur. Payments grew along with the proliferation of online shopping.

In comparison, FinTech in the US and other developed world is more about using technology to offer faster, cheaper financial service with better experience than the traditional financial institutions.

The two FinTech markets also have very different market structure. In China, the FinTech markets are dominated by affiliates of tech/internet giants such as Alibaba and Tencent, as they enjoy massive data accumulated in their ecosystems. In the US, with better financial infrastructures, the FinTech markets are dominated by start-ups.

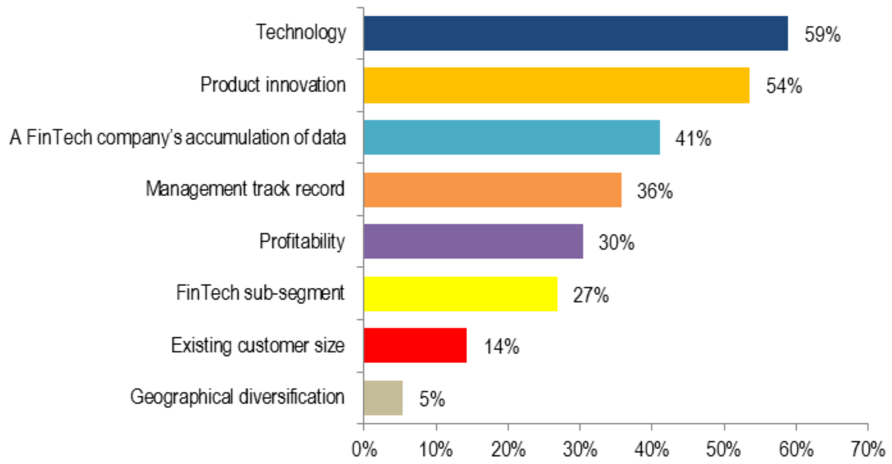
Figure 30: Key reasons why you are looking for investment in overseas FinTech companies?



Source: AMTD Research

Top criteria when select FinTech investment reveal similar picture: **Technology** is selected as the top one criterion, followed by **product innovation** and **accumulation of data**. Sub-segment and existing customer size are given less weighting.

Figure 31: The most important things you look at when investing in a FinTech company?

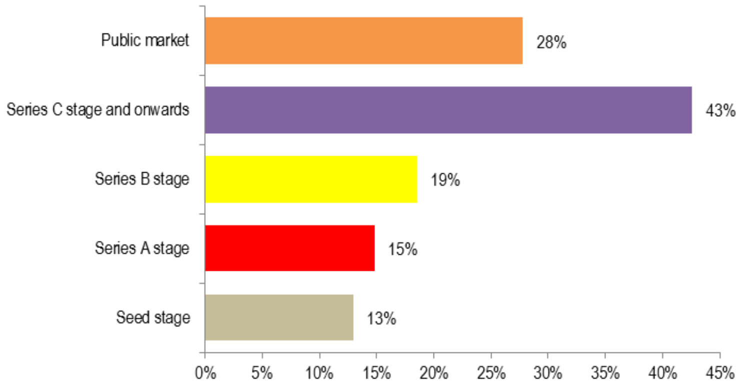


Source: AMTD Research

Valuation at Series C stage are most expensive

FinTech startups that reached Series C stage should have delivered a few years of strong growth, with a reasonable scale. However, investors may still find it hard to digest the valuation expressed as a multiple of sales or profitability (which is rare), as further high growth is priced in. When reaching public market, a specific plan of how to be profitable may be required by public investors which may make valuation more reasonable.

Figure 32: Where do you find FinTech deal valuation most expensive?



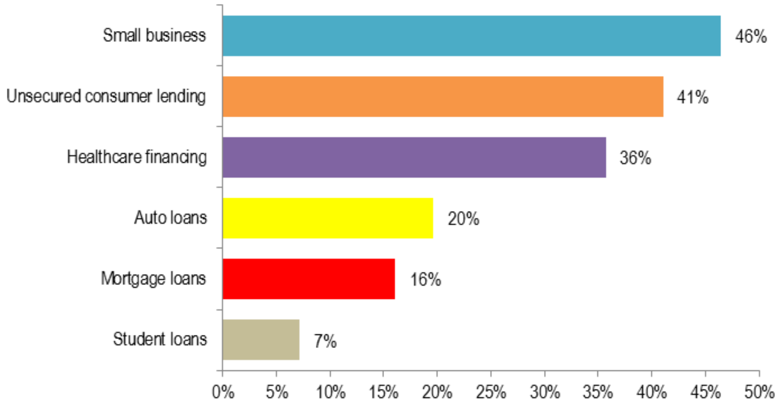
Source: AMTD Research

Small business loans deemed to have the best growth potential for online lending

Most online lenders in the world focus on unsecured consumer loans. With this segment arriving at a more mature stage with fierce competition, players in other asset class have emerged in small business loans, mortgage, auto loans etc. Leading small business loan lenders in the US include OnDeck, Kabbage, Square Capital and Credible.

In China, as the new regulation on P2P industry caps loan outstanding for single borrower at Rmb 1 million, it could make it difficult for P2P lenders to grow small business loans.

Figure 33: Which of the following lending provided by online lending marketplace you expect to experience the fastest growth in 2017?



Source: AMTD Research

Collaboration and competition with traditional financial institutions

Collaboration with traditional financial institutions

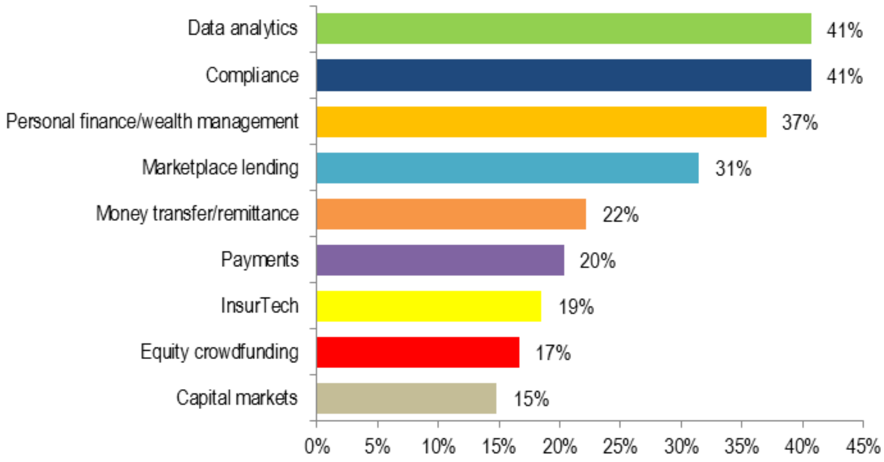
Data analytics, **Compliance**, and **Personal Finance/Wealth Management** are selected as the top three FinTech sub segments that are in urgent need of collaboration with traditional financial institutions. While the disruption in financial industry brought about by FinTech players is real, traditional financial institutions react to them differently. Some support in-house incubation / outright acquisition of FinTech startups in hope to cultivate their own FinTech disruptors; some have partnered up with FinTech players to improve their process and products; some are still in slow awakening of the disruption FinTech bring in. The idea/fear that the FinTech Startups will take away a lion share of traditional financial institutions' business is in the past. On the other hand, FinTech firms may struggle with scale, access to data, reputation which makes collaboration with traditional financial institutions a win-win strategy.

There is plenty opportunities for FinTech players to partner with traditional financial institutions. Easy access to financial data is essential for FinTech startups to grow. The upcoming PSD2 (revised payment services directive) and the move to open banking APIs in Europe, North America and Asia are likely to be drivers for FinTech players to gain momentum.

RegTech startups are emerging since 2016 to automate complex regulatory reporting requirements faced by traditional financial institutions.

Wealth management firms are increasing collaboration with FinTech startups ranging from client acquisition, automated advising and open investment communities to meet the increasing client expectations of innovative solution and better digital experience. Collaboration with FinTech startups seems to be the most efficient way by leveraging up the traditional financial institutions' customer base and FinTech startups technical innovation.

Figure 34: Which FinTech subsector areas are in urgent need of collaboration with traditional financial institutions?



Source: AMTD Research

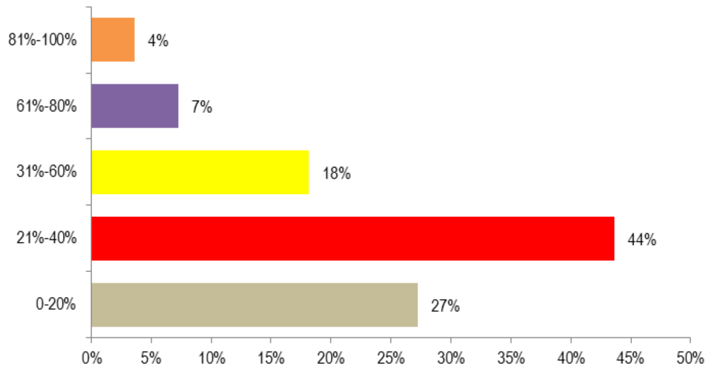
Investors expect bigger disruption than bank executives do?

44% of responses expect 21-40% of business of traditional financial institutions is at risk of being lost to FinTech startups in the next 5 years. While 27% expect 0-20% business being lost to FinTech startups.

Currently, majority of FinTech disruptions focus on retail segment and to a less extent on SMEs in lending, payment and wealth management. B2B FinTech represents huge potentials as their revenue remain untapped for FinTech startups.

This compares to the results of FwC 2016 FinTech survery results, where >80% bank executives expect 0-20% of their business to be lost to standalone FinTech startups.

Figure 35: What percentage of business of traditional financial institutions is at risk of being lost to standalone FinTech firms in the next five years?



Source: AMTD Research

Artificial intelligence and blockchain hype

Application of artificial intelligence in FinTech

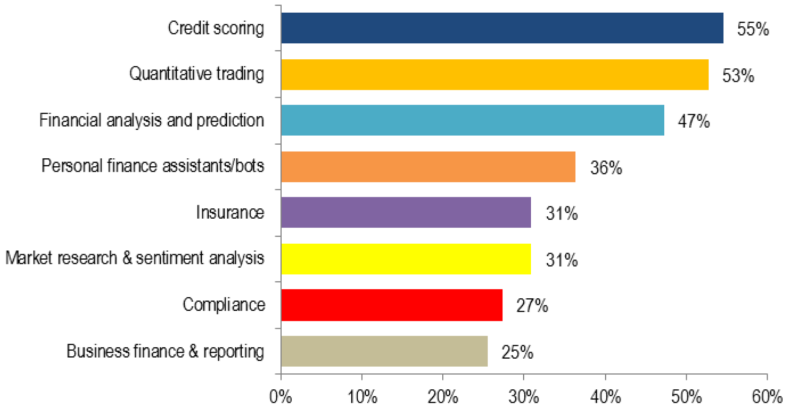
Artificial intelligence (AI) no doubt has received great attention after AlphaGo defeat Ke Jie on the Go game. Investors has assigned great expectation on AI's application in **Credit**

Scoring, **Quantitative Trading**, **Financial Analysis and Prediction**. CB Insights has summarized leading AI startups in FinTech sector.

Pioneers in AI in credit scoring include Avant, Affirm, ZestFinance and ADF focus on this area to evaluation loan applications and detect frauds. Increasing number of hedge funds are using AI-powered trading strategies. A report from Eurekahedge monitored 23 hedge funds utilizing AI and found they outperformed funds relying on people. Traditional quant models are static and back tested on historical data, while AI learning machines are able to digest up-to-the-instant data and continue improve the model. Notable companies include Sentient Technologies and Aidyia.

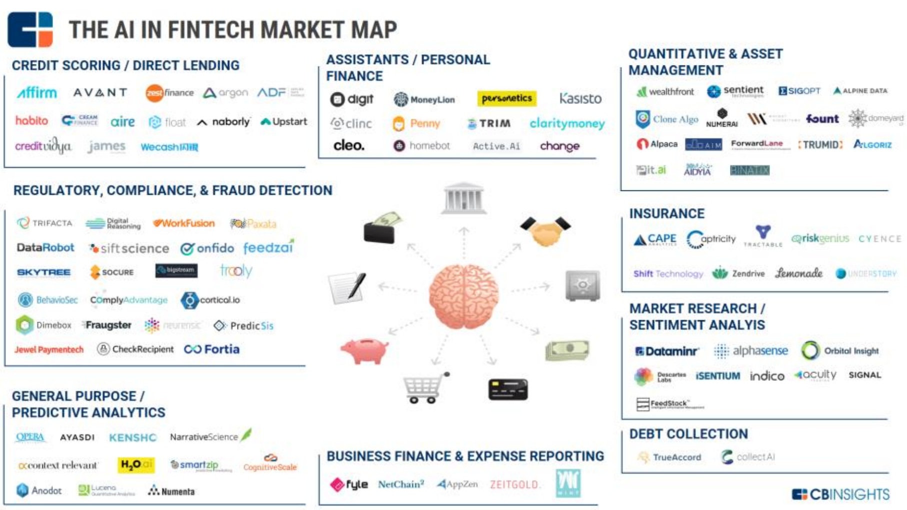
On the personal finance front, FinTech startups focus providing products from robo-advisors to mobile-based investment tools, portfolio management and analysis to retail investors. There are increasing examples of collaboration with banks: UBS Wealth Management America and SigFig announced a strategic alliance in 2016 to develop financial technologies that assist nearly 7,000 advisors and their clients.

Figure 36: Application of artificial intelligence/machine learning has the best growth potential in which areas in the next 5 years?



Source: AMTD Research

Figure 37: The AI in FinTech market map



Source: CB Insights

Blockchain's application in FinTech

Blockchains are cryptographically secured, distributed ledgers, first developed as the underlying technology of bitcoin. According to CB Insights, blockchain startups have shifted toward funding themselves through "initial coin offerings" or ICOs. Some later-stage companies have even held ICOs after receiving earlier traditional VC financing.

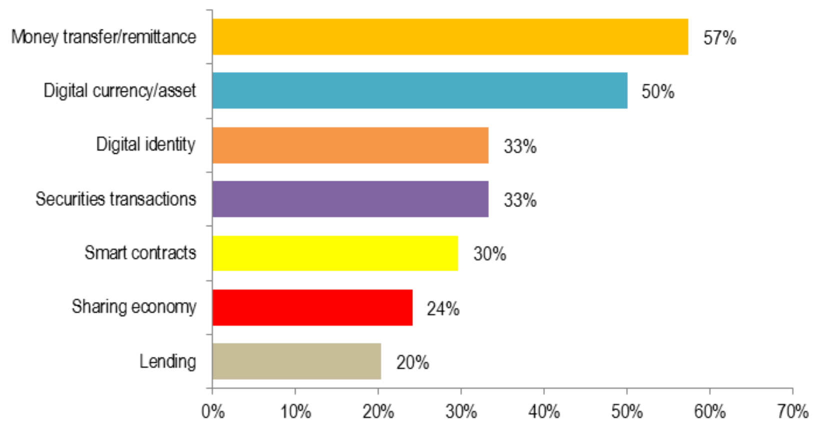
Unsurprisingly, investors' enthusiasm over blockchain's application centers on **Money Transfer/remittance** and **Digital Currency/assets**. The application in Digital Identity, Securities Transactions and Smart Contracts are also attracting interests.

On the money transfer front, the leading player **Ripple** has been actively seeking partnership with banks to apply blockchain technology in cross-border payments, disrupting the SWIFT system. SBI Ripple Asia, a consortium of Japanese banks using Ripple's DLT-based cross-border payments solution, has been gaining members rapidly since launching less than a year ago. In July 2017, Ripple announced that membership is now at 61.

Banks are exploring blockchain technology in a number of ways, including through partnerships with FinTech firms, membership in global consortia, and via the building of their own in-house solutions.

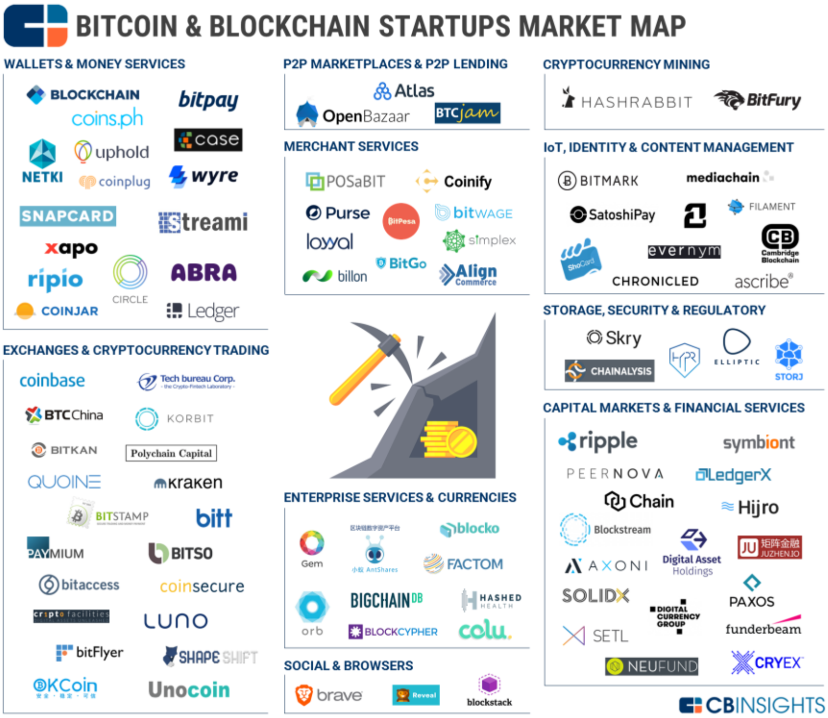
Central banks around the world are embracing digital currencies powered by blockchain. For example, The Monetary Authority of Singapore has announced in Mar-2017 that it is ready to use distributed ledge technology to facilitate domestic interbank settlements.

Figure 38: Mainstream adoption of blockchain is likely to occur first in which areas?



Source: AMTD Research

Figure 39: Global bitcoin & blockchain companies



Source: CB Insights

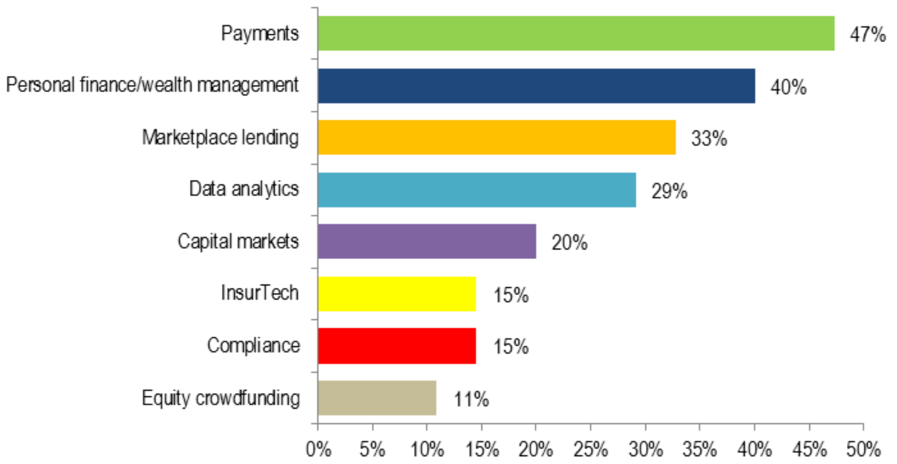
Investors expect profitable FinTech starups in Payments, Personal Finance/Wealth Management, Marketplace Lending and Data Analytics

Profitability in the tech startup space is rarely discussed as the general assumption is that startups will take time to be profitable. Most FinTech startups, even the unicorns are not profitable. In a sense, FinTech firms are sacrificing near term profit to growth that cultivate the market and cumulate customer data. A report published by Novitas FTCL in Mar-17 studying the global FinTech firms' financial performance found that private FinTech companies are growing faster than their public peers, at the cost of significant profitability.

A selective few players have provided a more encouraging picture: TransferWise, the London-based international money transfer startup, which was recently valued at US$1.1 billion, has announced that it has finally reached profitability in 2017 and is "cash-generating", after 6 years into its launch.

Investors pick **Payments, Personal Finance/Wealth Management, Marketplace Lending** and **Data Analytics** as the sub segments to see profitable FinTech startups, likely due to their proved business model and ability to scale up.

Figure 40: Which areas are likely to see profitable FinTech startups first?



Source: AMTD Research

Risk Management and Tightening Regulations are named as the top challenges for FinTech startups

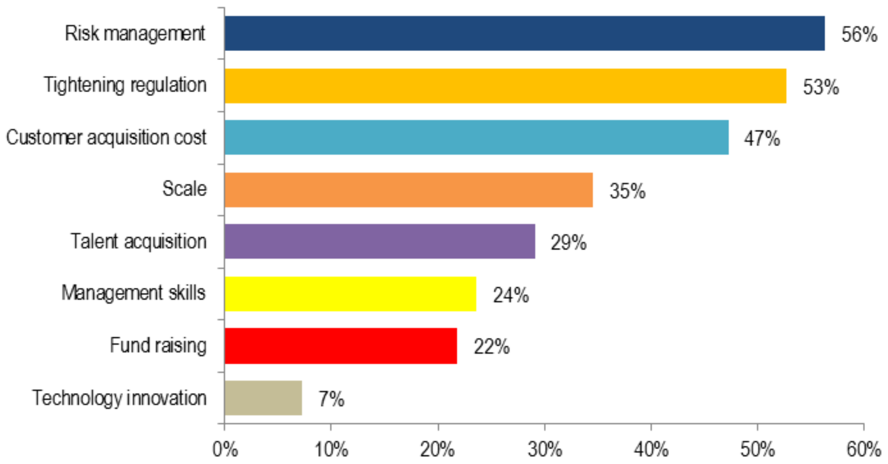
FinTech startups globally share some similar challenges. Investors believe the top challenges lie in **Risk Management**, **Tightening Regulation**, **High Customer Acquisition Cost** and **Scale**. All of these challenges represent huge funding requirements for FinTech startups.

Credit risk, reputational risk and operational risk are the key risks faced by FinTech startups, which require fraud detection technology, credit score model, strong governance and inflexible process to mitigate such risks.

Stringent regulation is a key barrier for FinTech firms in the local market, as well as for them to expand globally. There have been notable tightening on FinTech regulations in China after a few years of fast growth in the industry. In comparison, a few countries/regions such as UK, Singapore and Hong Kong have rolled out regulatory sandbox programs to encourage innovation in the space. In the US, PwC warned of tightening regulations in the U.S. in a 2016 report, in which it found 86 percent of FinTech CEOs were worried about what that might mean. In 2017, two US FinTech firms (SoFi and Varo Money) have applied for a bank charter, through Office of the Comptroller of the Currency (OCC). If this bank charter is approved in 2017, it could be beneficial for fintech platforms burdened by varied, state-by-state licenses rules. Tight regulations may on one hand prevent systemic risks FinTech startups could pose to the financial system, on the other hand, could hinder technology innovation. Regulators need to strike the right balance between containing risks and encouraging innovation.

High customer acquisition cost is the key challenges faced by all startups. It requires continued market education, precise marketing strategy, partnerships with companies that have large volume of customers, and consistent products and experience delivered to improve customer loyalty.

Figure 41: The biggest challenges for FinTech startups?



Source: AMTD Research

A few other trends

76% investors agree that there will be **increasing industry consolidation**.

89% investors agree that the **tightening regulation will continue**.

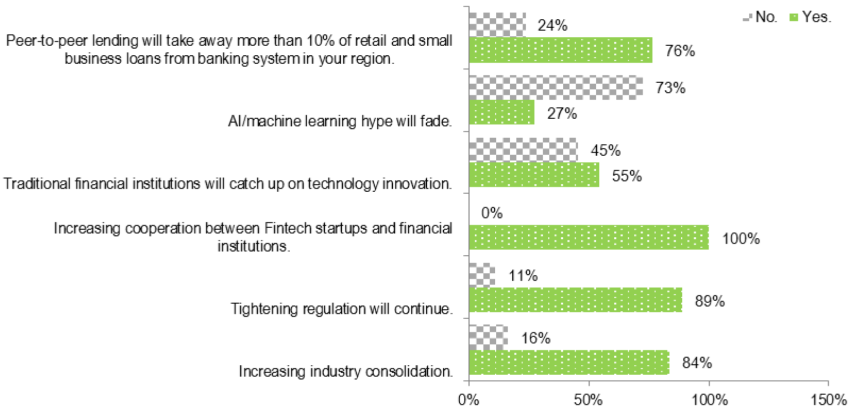
100% investors expect **increasing cooperation between Fintech startups and financial institutions**.

Investors are divided on if **traditional financial institutions will catch up on technology innovation**.

Investors are still very **enthusiastic about AI/machine learning** and only 27% of them expect the hype will fade.

76% investors expect **Peer-to-peer lending will take away more than 10% of retail and small business loans from banking system in local markets**.

Figure 42: Key trends you expect in the next 5 years?



Source: AMTD Research

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