

# FINTECH – DISRUPTOR OR SAVIOUR?

## Summary

The excitement (or fear) over financial technology (fintech) innovation has escaped few in the investment community of late. Fintech venture capital (VC) investment reached approximately US\$ 19 billion (bn) in 2015, up from US\$12bn in 2014 according to Citi and CB Insights, with China and the US receiving the majority. Some of the hype would suggest that we are witnessing the death of banking, but we believe banks will be much more resilient and actually benefit from development of the industry both in terms of cost efficiency gains and revenue generating capabilities. A less well publicised statistic is that financial services IT spending in 2015 hit US\$455bn with US\$114bn on mobility, cloud and big data analytics (IDC Financial Insights).

The World Economic Forum has categorized Fintech into the following industries:

- **Deposits & Lending**
- Capital Raising
- Investment Management & Capital Markets
- Insurance
- **Financial Market Provisioning – Data Processing & Analytics**
- **Payments**

In this piece, we discuss three elements on the above list: Deposits & Lending, Financial Market Provisioning and Payments. Fintech development in these areas seeks to address some of the key weaknesses in the current banking model, namely legacy IT infrastructures, payments, pooling & managing risks, capital constraints and regulatory costs.

One year on from our report ("[Fintech Evolution in China](#)") into developments in China, we take the opportunity to review a couple of major developments globally and what impact these could have on banks and financial companies across Asia, namely Peer-to-Peer lenders (P2P) under pressure and the emergence of Blockchain. We compare attitudes of governments and regulators around the region toward digital financial innovation as we believe this will be key in assessing the balance between disruption and benefits to banks. We also look at ways fintech is helping underpenetrated banking systems improve financial inclusion and build up efficient payments channels to help tax collections and ensure subsidies get to their intended recipients. We are also starting to see new potential revenue streams for banks as a result of digital innovation.

## Background

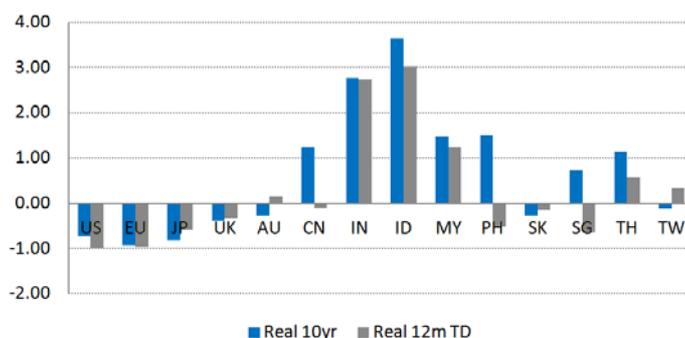
Why is the financial technology revolution happening now? A combination of all-time low interest rates and intense regulatory pressure resulting in significant cost and capital burdens has led to significant development in competing business models and financial technology. A change in consumer preferences is also playing a part as millennials become a greater share of the working-age population while data processing power and internet data acquisition are finally allowing new entrants to compete with incumbents. These developments have attracted a wave of venture capital funding and significant resources are now focused on addressing these issues.

## Rates

Persistently low and even negative interest rates are forcing investors to take on excessive duration risk and move up the risk curve by investing in new alternative investments, and P2P lending is one such alternative investment. Institutional investors, particularly those with guaranteed liabilities and investment return targets such as insurers, pension funds, asset managers and hedge funds are under pressure from increasingly low returns in traditional asset markets and this has resulted in a boom in alternative investments such as P2P lenders, P2P trusts and Wealth Management Products.

While households are also sensitive to the low and even negative real rate environment we would note that historically, it has been inflationary shocks that greatly drive asset rotation amongst consumers and with the ongoing threat of deflation, we see greater likelihood that they stick to cash and deposit investments going forward.

## Real Rates based on Core CPI



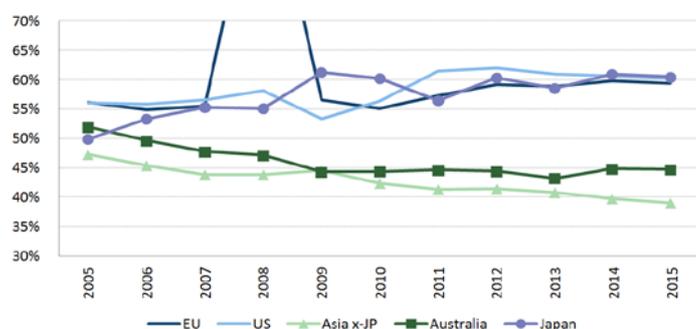
Source: Bloomberg, Central Banks

**Costs**

Since the global financial crisis, banks have been subject to one of the largest regulatory overhauls in perhaps a century, resulting in significant new requirements on capital, compliance and risk management. Estimates for the amount of additional costs range from anywhere between 1-3 percentage points off return on equity at major global banks.

Tighter requirements on capital positions have also restricted banks from originating riskier loans in many countries. This has led to a proliferation of fintech business models that seek to take advantage of regulatory arbitrage. It has also forced banks to look more aggressively at potential cost savings from fintech innovation – one of them being the blockchain.

**Cost/Income - Major Banks**



Source: Citibank

**Millennials and changing consumer preferences**

Fintech is also responding to consumer trends – millennials are becoming a much larger proportion of the work force and they are much more likely to use mobile and online applications versus their seniors. Internet companies carry strong brand names amongst this demographic and technology has allowed more open platforms for financial products than ever before.

**Data Processing Capabilities, Internet data availability and usage**

Significant advances in data processing capabilities have allowed fintechs to compete in the electronic payments space, which has significantly improved efficiencies but at the expense of much lower fees. Banks have little advantage over new entrants in this space. Data processing, internet availability and internet data are also some of the key resources being exploited in the unsecured consumer and Small-to-Mid sized Enterprise (SME) lending space, called the P2P/Marketplace

**Recent Developments – P2Ps under pressure, Blockchain, Financial Inclusion, Unlocking New Revenue Streams**

**P2P or Marketplace lender business models being tested**

Through much lower operating costs and commoditized credit risk analysis, it is possible for P2P lenders to offer investors direct access to borrowers at a rate that is lower than competing banks. Target segments are unsecured consumer and SME – and unlike banks, no maturity transformation takes place between lender and borrower, as they are all matched.

Recently, one of the most famous P2P/marketplace lending platforms in the US has suffered from very weak equity sentiment despite consistently increasing loan issuance. A combination of rising defaults, internal compliance lapses, fickle funding sources and conflicts of interest among management led to selling pressure amongst shareholders. Indeed, confidence is waning in the entire sector in the US.

In China, the world’s largest P2P market where US\$ 149bn loans were originated by P2P companies in 2015, authorities uncovered a huge (US\$7.6bn) Ponzi scheme at P2P lender Ezubao in January of this year which impacted almost one million investors. This was part of an ongoing clean-up in a sector which has seen over 200 of its previously registered 2600 P2P platforms shut down since 2015. This clean-up has benefited some market leaders that are seen to be more legitimate longer term operators.

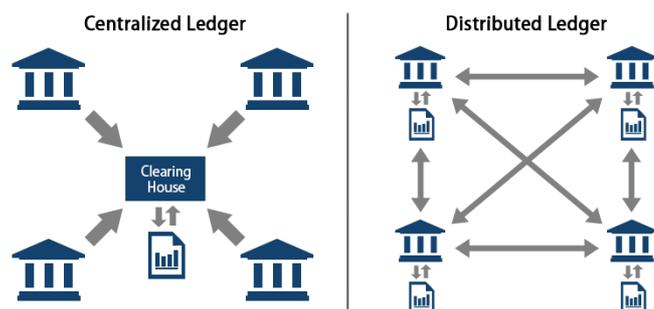
These issues highlight some of the vulnerabilities in the space, namely funding sources, untested credit risk management and transparency. The current dependence on fast-money funding (hedge funds, investment banks and other institutional investors) makes these businesses very cyclical. Securing “sticky” retail deposits is something very few P2P companies have managed to achieve so far and is one of the main reasons we see them remaining as niche financial market players. While these businesses bear no credit risk directly, their ability to manage it will directly influence the availability of funding as we are seeing now.

**Blockchain emerges as a potential saviour**

While blockchain technology is not new (its first major use being the software behind Bitcoin) it has shot to prominence over the last year following several major announcements by leading financial companies and regulators exploring its potential uses within their respective financial systems.

Blockchain is an encrypted, distributed ledger software that can be used by multiple participants at any one time on either an open (such as with Bitcoin) or permissioned/closed system. The term blockchain describes computers transferring blocks of records in a chronological chain through a shared software infrastructure. Data entries are captured at each individual node and recorded on the ledger which is immediately available to all parties on the blockchain. This can theoretically avoid a lot of duplication at each participant, speed up the flow of information and create greater transparency. There are multiple user cases being discussed with trade finance,

settlement and clearing and Know Your Customer (KYC) requirements amongst those garnering most attention currently.



It is not difficult to see why governments and regulators would want to push this, as it can aid regulatory oversight, clean up tax collections and potentially reduce risk within a banking system. For banks this technology can help reduce a lot of duplication and costs while potentially unlocking new revenue streams.

In theory the broader the application and the more financial entities that use it, the greater the potential cost savings can be. The technology may be utilised between teams operating in one office, it could be used by multi-national banks across different geographic regions, it could be used by all banks operating within a specific country or it could even be used on a global solution – so the cost savings could rise exponentially.

Issues with adopting blockchain solutions more broadly centre around, co-ordination, co-operation and trust between institutions. Regulators also need to balance innovation with risk and stability, and must play an active role in development. It is for these reasons that we think a nationwide application is still some way off.

Companies like R3 CEV, a blockchain solutions provider that leads a consortium of financial firms to explore potential applications of the software could help foster co-operation and development.

The Linux foundation created the “Hyperledger Project” in December 2015 as a cross-industry collaborative effort to, amongst other things; help develop some generic industry standards with the intention that future blockchain solutions can be inter-operable.

It is much easier and more likely that financial companies will focus on blockchain applications internally before committing to multi-participant/nationwide applications. In January, the Australia Stock Exchange (ASX) announced it had taken a 5% (since increased to 8.5%) stake in Digital Asset Holdings, a developer of distributed, encrypted straight through processing tools. It also entered into a commercial agreement with the company to investigate the potential for using blockchain application to replace its current Clearing House Electronic Sub-register System.

Meanwhile, the Singapore Exchange is exploring several proof-of-concept solutions in areas of syndicated loans and fixed income trading. In a recent global survey of two hundred and

ten banks, UBS found that 8% have already adopted some internal blockchain solution while 19% are at a testing and pilot stage and this is led by banks in developed markets (33%).

For any nationwide solutions to succeed, we believe it is essential to have both government and regulatory support. ***We believe regulators and central banks will play a key role in the development of such solutions.***

In Singapore we are encouraged by the Monetary Authority of Singapore’s (MAS) willingness to explore blockchain solutions. Given Singapore’s desire to bolster its position as a financial hub, not just in ASEAN but also in Asia, and with a central bank that is actively co-ordinating efforts, we would not be surprised if the country becomes one of the first to implement a nationwide blockchain solution, particularly in the area of trade finance thus giving it first-mover advantage over competing centres.

It is very difficult at this stage to estimate the potential cost savings available to banks as a direct result of blockchain. One large European bank recently estimated that distributed ledger technology could reduce costs attributable to cross-border payments, securities and regulatory compliance by between USD \$15-20bn per annum by 2022\*.

Given the network effect and potential solutions being discussed, we think the potential is much greater – for the first time in a long time people have begun to really question the infrastructure of financial intermediaries and the potential for huge cost savings in a sharing economy.

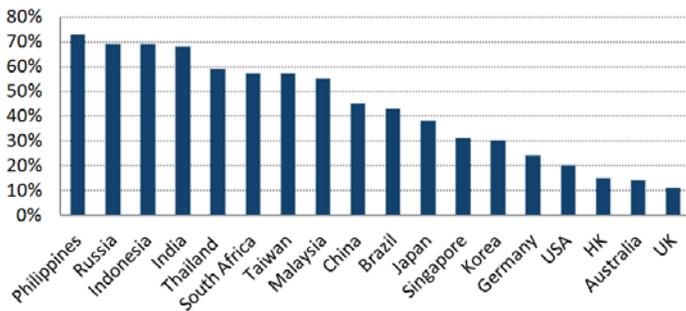
***The overwhelming cost burden for a bank remains labor costs and this technology could start carving out or re-allocating large portions of the non-revenue generating workforce. Some of the more optimistic heads of technology that we have spoken to at banks in Asia thought it could be possible to run their banks with 1/10<sup>th</sup> of the current workforce in the next 10-15 years.***

### Financial Inclusion in Underpenetrated Banking Systems

Another area fintech, and in particular payments, is having a big impact on is that of financial inclusion and digitizing cash based transactions. Kenya is perhaps one of the best known cases with the successful roll-out of M-Pesa, a mobile phone based quasi banking and payments service launched by Vodafone in conjunction with Safaricom which now boasts over 20 million users, almost half the population.

Across Asia we see a number of banking systems prioritizing financial inclusion and payments as a means to clean up grey market lending practices, improve tax collections and ensure subsidies get to their intended recipients. Reducing cash transactions in a system has the ability to reduce handling costs for both banks and government while bringing more people into the formal banking system is beneficial to both banks and the end customer.

### Consumer Cash Payments Penetration (%)



Source: Mastercard, Visa, Nikko Asset Management

In India, both the government and Reserve Bank of India (RBI) have made financial inclusion and reducing cash based payments a strategic priority. The roll-out of the Unique Identification (UID - Aadhaar) program and the Prime Minister’s People Money Scheme (PMJDY) were designed to bring more people into the formal banking system and ensure more efficient distribution of state subsidies. This drive has resulted in over 280 million new bank accounts. In April the second stage began with the launch of a Unified Payments Interface (UPI), a payment solution that is offered through a smartphone app and linked to individual bank accounts.

While mobile banking currently represents only 1% of total retail transactions (\*RBI), it is set to grow rapidly given these recent developments. The top four private banks and the State Bank of India dominate the online and mobile channels with over 90% market share.

Elsewhere in Asia we have recently seen Thailand launch an e-payments master plan to lower fees, encourage greater cashless payments and improve tax collection efficiency. China’s third-party payments is well documented and it is the only country in the world where internet companies stole a lead on banks in terms of offering online payments through gaming credits and e-commerce. The question here is whether the loss of payments by banks implies the loss of the client relationship – this is an issue brought up by the World Economic Forum discussion on the future of financial services. Third party payments providers still represent only a small amount of total payments volumes, but it is a growing risk for banks in China.

One other advantage of financial inclusion is replacing grey market activities (Loan sharking) but regulators again need to be vigilant as there is potential for these activities to simply move online. We have seen numerous fintech business models focusing on unsecured consumer credit markets, an area banks are reluctant or restricted from growing themselves. Success is premised on shorter re-payment periods, superior proprietary credit scoring models and lower KYC requirements versus banks. We are sceptical of fintech business models that are built more on regulatory arbitrage.

In developed markets there is much potential for branch and ATM rationalisation while in developing countries, with the increase in smartphone penetration, we could bypass the need for further branch expansion, thus significantly lowering customer acquisition costs and servicing.

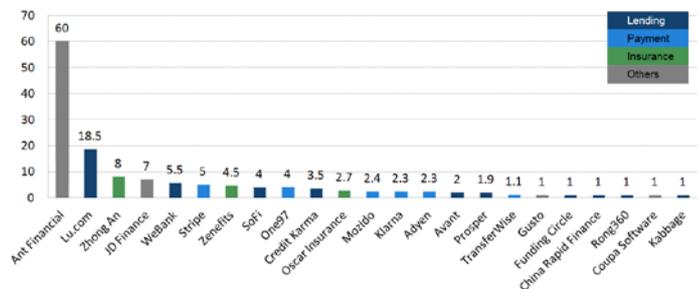
### Regulatory comparison

Whether fintech proves to be more a disruptor or saviour will depend heavily on the regulatory environment in each jurisdiction and we are starting to see contrasting attitudes towards fintech innovation both at a government and regulatory level. Central bankers and regulators need to weigh the potential benefits of digitalization with the oversight to mitigate risks and maintain financial stability.

Chinese authorities have been one of the strongest backers of fintech development globally and as a result, China is definitely a leader in the space with several large financial conglomerates and internet companies at the forefront of innovation. Premier Li Keqiang officially marked the launch of China’s first private online only bank, Tencent’s Webank at a ceremony in January 2015 and since then we have seen numerous fund raisings by major players, making them the highest valued non-listed fintech companies globally.

Regulators in China allow a certain amount of development and open competition before imposing regulations – this greatly concerns many western commentators. We have recently witnessed a clampdown in the P2P market in China, while regulators have also stepped into the internet banking and payments space by introducing KYC requirements as well as daily and yearly payment caps. It is also questionable just what scope internet and private banks will be allowed to achieve within China’s centrally managed credit system.

### Global Fintech Unicorns by Deal Valuation (US\$ bn)



Source: nomura

Singapore, like the UK and Canada has adopted a ‘sandbox’ approach to fintech development within existing banks. This keeps innovation under the direct purview of banks and allows them to benefit from successful innovation. In the MAS, Singapore also has a central bank that is actively assessing fintech for applications that can benefit the financial system as a whole (as we discussed in the blockchain section above).

Banks in India have greater potential to prosper from fintech innovation and digital roll-out given the lack of large internet company competition (unlike China where internet companies were first movers in payments and have sizable e-commerce networks and user base). Regulators have also been more reluctant to allow internet companies/fintechs to compete in the financial services space in India, instead the pattern has been for JVs between banks and tech companies.

Korea, despite being a very technologically advanced economy, has been slow to embrace fintech applications or internet banks. There are two current consortiums still waiting

for an official launch date with the scope of activities still undecided. We also see inflexible labor laws and powerful banking unions as obstacles to development here.

In other countries in Asia, we are encouraged by individual banks taking a lead on internal technology development. In Thailand, we have seen efforts to move parts of core banking systems onto the cloud, the evaluation of using machine learning tools and the establishment of internal innovation labs. We believe there is room for individual banks to become digital leaders within their own respective systems.

### Revenue generating initiatives

We have so far focused on the competitive threat and potential costs savings, but what about new revenue opportunities? Banks have amongst the largest customer bases within their domestic markets, second only to telecommunications and internet companies in many countries, and with mobile banking have the opportunity to grow their customer bases further.

Banks are also in the extremely advantageous position to see both the asset and liability side of a customer's balance sheet. Banks need to find better ways of monetizing this before data-hungry digital finance firms find ways to gather their own data. We see some evidence of this happening but again this is still early stage.

- In 2013, Danske Bank of Denmark rolled out MobilePay, a person to person payments app linked to an individual's credit card which now has over 3 million users. Danske Bank had around 1 million customers on its traditional banking platform before the launch of this app in 2013. While the service is free today the bank hopes to roll it out to SMEs and start adding a fee to payments.
- DBS of Singapore recently launched a mobile only "digibank" in an effort to expand its operations in India and if successful, will replicate this strategy in Indonesia.
- ICBC of China now offers an e-commerce platform of its own, similar to that of JD.com. With RMB 900bn of transactions last year, up from 80bn in 2014 the platform is growing fast.
- Exchanges are looking at using blockchain technology as a means of making several more illiquid/over-the-counter (OTC) asset classes trade-able, be it syndicated loans, corporate bonds and many others.

## Conclusions

- In this article, we have tried to balance some of the arguments favouring fintech as a major disruptor of incumbent banks, but we believe it is far too early to write banks off.
- Fintech is one of the unintended consequences of post GFC regulation and monetary policy. It is symptomatic of a well functioning capitalist economy responding to inefficiencies and new demand drivers brought about by the upheaval in regulatory conditions and operating environments. Banks have always found ways to adapt and "on-board" new technology, be it telephone banking, credit cards, capital markets and now internet and smartphone banking and we don't see why this shouldn't be the case with fintech, as well.

- Different regions have very different objectives when it comes to fintech development. In the West we believe there will be relatively greater emphasis on cost efficiencies and providing investment returns while in Asia we see more development in customer acquisition and financial inclusion. Improving customer experience and generating new revenue streams should be a priority for all.
- It is important to monitor the direction regulators take when assessing the potential for fintech disruption versus its benefits. We believe those banking systems with greater regulatory support for banks, flexible labor laws and high potential digital penetration are best placed. We continue to believe that fintech has more disruptive potential in markets faced with all-time low interest rates and less regulatory oversight or regimes that provide less protection for banks. In Asia, we see Singapore, India and Thailand as countries where banks stand to benefit while in China there is greater room for disruption.
- We are more sceptical of fintech business models that are built on pure regulatory arbitrage (capital or KYC requirements) as these have a lower probability of succeeding over the long term. An overwhelming amount of fintech business models target riskier unsecured consumer and small business lending, which is an area banks do not always service effectively or are restricted from servicing – we believe there is merit in this as a long term business proposition but see greater likelihood of co-operation between fintechs and banks in order for these to succeed.
- Blockchain and other technological advances have the potential to deliver huge cost savings to banks over the next five to ten years, the potential grows exponentially with broader usage. Large multi-national banks, financial centres such as Singapore and exchanges could be big beneficiaries.
- Going forward it will become increasingly important to evaluate individual bank's digital strategies, core IT systems and personnel capabilities, namely how easy is it for them to integrate with new technologies and which areas they are targeting, in order to assess who will be future digital leaders.
- We believe that digital banking leaders will start commanding premiums over those lagging behind. Although pure spending on IT is not a gauge of future success, proof will be in customer acquisition, cost efficiency and new revenue growth.

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