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THE STATE OF FINTECH IN ASIA PACIFIC 2019

A look at the 10 trends and technologies that are reshaping the way that more than 3 billion people bank

Featuring interviews with experts from:

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Methodology

The State of Fintech in Asia Pacific 2019 white paper from Kapronasia is based on both primary and secondary research. Secondary research sources include both internal and external public and private databases. Primary research includes interviews with bankers, financial institutions, technology providers and industry experts involved in the financial industry.

Important Disclaimer

Although we interviewed industry experts and practitioners to elicit opinions and thoughts and subsequently received individual approvals from each of the individuals and companies for what we wrote, all content was written by Kapronasia and no quotes or comments in this report should be construed as official company positioning from interviewees unless otherwise stated. Should you be interested in official company positioning, we would encourage you to reach out to the individuals or companies directly.

Introduction

If you have followed Kapronasia for awhile, you are likely familiar with our annual T*op-10 Trends* report that analyzes the key market developments in payments, banking, and capital markets. This year we decided to change things up a bit. Instead of writing the trends ourselves, we "crowd-sourced" the ideas.

When it was first suggested to us early this year, we were immediately drawn to the idea as a perfect "companion guide" for our readers as they go through 2019. The idea was to reach out to 10 experts across the region to understand their thinking for the future of fintech in Asia across 10 different topics.

In preparation for the report, we interviewed some of the leading experts in each of the fields and peppered them with questions about the past, present, and future of Asia-Pacific fintech, especially in regards to their corner of the fintech universe. Due to the level of people that we were engaging and the opinions we were eliciting, we needed to engage corporate PR and communications teams for approval, which took time. Finally, after a few months of hard work, everything is approved and in the report that is in your hands / on your screen now.

We would like to thank all of the participants and interviewees for their time:

- Michael Moon, SWIFT
- Ramneek Gupta, Citi Ventures
- James Lloyd, EY
- Antony Lewis, R3
- Varun Mittal, Singapore Fintech Association
- Ravishankar, Active AI
- Chris Skinner, Chris Skinner
- Ned Philips, Bambu
- Brad Jones, Wave Money
- Sopnendu Mohanty, Monetary Authority of Singapore.

We hope you find this report as interesting to read as it was for us to research.

Zennon Kapron
Director

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Fintech becomes a Team Sport

When "fintech" first rose to prominence a few years ago, incumbent banks feared that upstarts would eat their lunch, leaving banks with the scraps. There was talk of banks becoming utilities, and the newcomers handling core products and services. Today, the picture looks different indeed as banks and fintechs find more reason to cooperate than compete. We spoke with Ramneek Gupta, Managing Director and Co-head of Global Venture Investing at Citi Ventures, who explained the steady evolution of bank-fintech cooperation that he has seen over his time at Citi.

Ramneek describes fintech as having three distinct eras of development. The first era, pre-2012, was "bundled" in that most products and services came from 200-year-old incumbent financial institutions that met nearly all the banking needs of retail and corporate customers. Customers saw the banks as trusted providers and whatever banks offered, customers took.

At the onset of the fintech revolution in 2010, the excitement was palpable. The iPhone ushered in a paradigm shift, becoming a "structured" device used by wide swaths of the population, not just loyal Apple fans. Thanks to the iPhone's popularity, more customers began using their smartphones for banking, and financial institutions had a new way to engage with customers.

A November 2015 graphic from CB Insights shows the Wells Fargo website "unbundled," indicating the many ways that fintech companies could take business from the banking giant.

An unbundling of services ensued as apps offering specific services supplanted banks providing one-size-fits-all solutions. Hundreds of thousands of fintechs sprang up globally. Banks felt they needed to fight off the challengers to ensure their own survival.

By 2016, “sanity, experience, and reality prevailed," Ramneek says. He points out that many fintech startups recognized that they needed a sustainable business model as funding was getting tighter and existing investors more demanding. Many fintechs also realized that they might have bitten off more than they could chew.

As Ramneek aptly puts it, “Financial services is very different than photo sharing or social media. There’s no winner take all in FSI for good reasons. It’s difficult to get scale if you don’t focus on regulations and handle the basics.”

“Financial services is very different than photo sharing or social media. There’s no winner take all in FSI for good reasons. It’s difficult to get scale if you don’t focus on regulations and handle the basics.”

Banks also realized they were in fact equipped to handle the "great unbundling," thanks to their large balance sheets, depth of experience, and trust of customers.

Finally, customers grew tired of needing dozens of apps to handle their banking needs. It might be convenient to instantly split a bill with your friends, but who wants to switch to another app to invest money or check your credit?

Us vs. Them or Us with Them - The Great Re-bundling

The confluence of these factors led to the current era of fintech, or the “re-bundling” era. It's no longer a zero-sum game: Banks and fintechs have their respective strengths and weaknesses. Working together is a win-win for all parties: banks, fintechs and customers. For Citi, this "re-bundling" involves driving existing business, staying abreast of what lies ahead, and finding the right partners.

In fintech's fledgling stage, banks raced to outdo each other, setting up innovation labs, venture funds and hackathons. But, as Ramneek puts it, “it is a fine balance and if you overuse one of these tools, you can find yourself in a position where the organization isn’t happy with where it is. Some people have gone all in on a particular investing framework or method of innovation. Many banks didn’t create all of the tools.”

Citi has established what could be considered a ‘multi-tool’ set that includes:

- An emerging technology team
- Innovation labs
- Venture investment
- Internal incubation
- and Product development teams

To illustrate how this approach works, consider that opportunities in capital markets are distinct from those in other parts of the financial industry. Capital markets requires a certain level of domain experience that develops over years of servicing and working in the industry. Startups can try to innovate in the market, but the average college grad may not have the appropriate level of experience to effect real change.

Thus in capital markets, venture investing is probably not the best tool to help drive innovation. Rather, by looking internally and “activating and incubating” ideas, a company can bring together highly skilled people to create the next level of disruption.

Citi also relies on its stability and longevity to drive change. The bank is one of the oldest in the world, is able to take a long-term approach to innovation, and sees change as “a marathon not a sprint.” Meanwhile, coordination is always evolving. Citi is “a lot better at it today than last year...But there's no point in time where I've been able to say, 'Wow. We’ve just done it and now we can rest on our laurels,' " Ramneek says.

Driving innovation and sustainability

In a bank, the innovation mindset must be part of the basic business. Scaling, adoption, and execution happen through the BAU business of the bank. If the business doesn’t buy in, then “it’s a nice little POC, but nothing else happens” as they are the ones that take the value proposition to the consumer.

Driving an innovation agenda also requires “the maturity to say that there are things that we can do and things that we can’t," he explains. Determining which areas of the banks and which businesses to focus on, especially in a bank as large as Citi, can be challenging. Although Citi is often seen as a leader in fintech, coordination in such a large organization can be challenging and often there is something to be said for “being at the right place and right time” as it takes a portfolio of different efforts to drive an innovation agenda.

For Citi, this means prioritizing efforts that have the highest impact and leveraging a solution to provide a differentiated product. Every financial institution has access to cloud, AI, and blockchain technology. The bank able to leverage those most effectively for its own businesses will be successful.

“Investment both internally and externally is very thematic. We build thesis areas and focus areas where we think the world is headed and then we work backwards from there to figure out where we need to go,” says Ramneek.

Beyond measuring the financial return of an investment, sustainability is also a paramount consideration both for Citi and Citi Ventures. The bank looks for projects that can quickly fund themselves and aren't going to require substantial additional resources on a year-by-year basis.

Citi, like many banks, takes a pragmatic approach to engaging fintechs and Citi Ventures often finds small, highly active teams and then funds them in a milestone driven manner. Responding to the customer is also important. Being able to respond to customer feedback in an agile manner is key: having a bit of a startup mentality in the context of a large organization.

The Real World of Virtual Banks

One of the biggest stories in digital finance today is the rise of challenger banks. Unencumbered by traditional banking infrastructure and digitally adroit, challenger banks have swiftly moved to capture the business of underbanked SMEs and consumers. We talked to James Lloyd, who leads EY's dedicated fintech team across Asia-Pacific and serves as Asia-Pacific leader of the firm's payments practice.

As *Tech World* notes in a November 2018 report, "challenger banks promise to offer digital products that live on your phone." Among the potential features: real-time balance information, detailed spending data, no foreign exchange charges, AI-enabled predictive banking and biometric security. Challenger banks are particularly active in the UK, an early adopter of digital finance. Investors in the UK are bullish on the prospects of challenger banks. OakNorth became the first British challenger bank to reach unicorn status in 2017. In 2018, Revolut and Monzo achieved valuations above US$1 billion.

In addition to the UK, heavyweight challenger banks have emerged in Brazil (Nubank is a unicorn) and Germany, whose Tencent-backed N26 mobile bank reached a valuation of US$2.7 billion in January. Challenger banks are present across Asia too, including China (both the mainland and Hong Kong), Japan, Korea, the Philippines, Thailand, Indonesia, Vietnam, Singapore and India.

Naturally, some market analysts and banking incumbents believe that challenger banks can cross over into the mass market, ultimately taking business away from traditional banks.

That's far from a sure thing, says Lloyd. Of challenger banks in the UK, he says that they have been successful at a market level in terms of improving customer experience.

"The question is whether they [challenger banks] can reach a scale, whether they can reach critical mass before the incumbents can replicate their value propositions and offer them to their established customer base," he says. "Having a somewhat better customer experience, a somewhat better digital proposition, is unlikely to convert mass market."

Even so, plenty of business opportunities exist amongst the underbanked, which includes many consumers and small businesses.

In the UK, we have seen challenger banks emerge as startups, building a digital banking platform from the ground up. Startups like Monzo and Atom Bank have been successful in no small part because they have banking licenses. But not all challenger banks are able to obtain a bank charter or license. Those that cannot are only able to offer limited services. In some cases, they

may need to rely on the license of an incumbent financial institution, which can be costly.

Another obstacle for startups is that they often prioritize fast growth, which means providing lower-income customers with complimentary accounts and services. The revenue streams from such customers can be limited.

In Asia, however, challenger banks are evolving differently than in the UK, and Hong Kong will be the key market to watch in 2019. In Hong Kong, a number of new entities - including JVs involving bank, technology, and distribution partners - have been granted full retail banking licenses in 2019. The licenses will not only be vital for doing business in Hong Kong but also open doors to cross-border business in mainland China and the wider region.

"The question is whether they can reach a scale, whether they can reach critical mass before the incumbents can replicate their value propositions and offer them to their established customer base."

It's important to note that these new players on the scene are not typically startups as in the UK. "We're talking about very well-capitalized, global or regional financial and non-financial services [firms]," Lloyd says. "If 2019 is the year of the greenfield bank it's also going to see a lateral movement of high-engagement technology platforms pushing into fully-regulated licensed financial services." Indeed many of the entities that have received licenses in Hong Kong are the Chinese tech giants and platforms.

Hong Kong is moving to enable such hybrid challenger banks in support of its financial innovation ambitions. To be sure, the former British crown colony remains a top global financial center alongside New York, London, Tokyo and Singapore. Yet Singapore has, so far, more proactively positioned itself as a regional digital finance hub.

So is it just a matter of branding? Not entirely. In 2017, Singapore fintechs raised US$984 million, well above the US$597 million raised by their Hong Kong counterparts. Singapore banks are also more somewhat digitalized than those in Hong Kong. Still, Hong Kong has an edge in virtual banking, which remains very limited in Singapore.

Indeed, the Hong Kong market is now ripe for competition, and both individual consumers and businesses will benefit from the availability of new financial services platforms. In particular, facilitating loans to parties with promising business ventures but who lack the credit history to receive a bank loan would boost financial inclusion and even spur incumbents to improve their own digital offerings. This could ultimately boost the competitiveness of Hong Kong's entire financial sector.

Blockchain: Rise of the Securitized Token

In 2019, the financial sector must gird itself for a watershed moment: the tokenization of securities. Security tokens will represent one of the first viable blockchain applications for financial services; that is, a legitimate application that serves market needs while satisfying regulatory requirements. There's a big difference between anonymous cryptocurrency transactions and putting a recognized security - an equity or a bond, for instance - on a blockchain. We spoke with Antony Lewis, blockchain expert and Director of Research at R3, to get a clearer picture of how tokenized securities will evolve.

"Tokenized securities are coming to an exchange near you," says Lewis. Banks are using R3's Corda platform to launch cryptographic tokens that will digitally represent assets previously held and traded by highly regulated institutions.

For large corporates, blockchain's utility will surge as they will now be able to track both sides of a transaction on the same ledger instead of having them recorded across multiple ledgers.

There's a strong rationale for the tokenization of securities: It frees up individual and institutional investors to be the masters of their own assets. At present, custodians have a temporary monopoly on one's assets in terms of the services offered for those assets.

This even holds true for large firms with accounts at various financial institutions. For instance, a company with a large corporate account at a bank can't easily transfer its assets to another custodian to take advantage of a temporary pricing advantage offered by a rival. The process can be long, drawn out and bureaucratic: And it's designed to be that way. Banks don't want customers coming and going at the drop of a hat. To be sure, there are valid security reasons for that, but the system is ultimately beneficial for incumbents.

In contrast, with tokenized securities, "I could then go to multiple service providers and say, I've got a share of Apple on my hard drive, which one of you guys is going to do this? Who is going to pay me the dividend? Who is going to process the stock split?" Lewis says. At last, there will be real competition.

Plenty of other benefits will come with tokenized securities. It will be possible to issue equity with one click online. Over time, the securities tokens will be able to pay dividends, handle convertible debt and eventually do credit default swaps in a much more automated way than today. In the case of the latter, the contract terms may be hard coded into the token for autonomous execution.

Further, tokenized securities will allow an easier movement of assets compared to traditional securities restricted by third parties. Currently, moving assets can take days because of the related red tape and inefficient systems and processes. An entire administrative system has been built up around the control of asset flow. Tokenized securities could ultimately cut out some middlemen.

To be sure, one of the challenges with this business model is that users must be responsible for the custody of their assets. Not everyone is ready for that responsibility, particularly given the security risks that come with handling private keys. Indeed, if you lose your key, you lose your stocks, bonds and whatever else you have on it unless you have a robust backup plan.

While the New York Stock Exchange won't shift to blockchain just yet, an exchange in a fintech hub just might, like Singapore. In November 2018, the Monetary Authority of Singapore (MAS) and Singapore Exchange (SGX) announced that they had successfully developed Delivery versus Payment (DvP) capabilities for the settlement of tokenized assets across different blockchain platforms.

"This will help simplify post-trade processes and further shorten settlement cycles," the MAS and SGX said in a press release.

Tokenization of assets could have wide applications in the Singapore economy, "creating a whole new world of opportunities," Sopnendu Mohanty, Chief FinTech Officer of MAS, said in the press release.

"We are already aware of traditional exchanges who are interested in providing a platform that allows tokens to be recorded and made more liquid," Lewis says. If the first exchange who allows securities tokens "makes money from it, there will be a domino effect."

The speed of the process will depend largely on whether it's regulator or industry driven. If regulators are keen to push tokenized securities forward, and provide clear guidelines for the industry, "then that'll be the starting gun and everyone has the green light to go, right?" Lewis says. In contrast, if industry participants are the driving force, the process could be slower.

Upstarts are a wildcard: If they gain traction quickly - aided by early adopters who take advantage of the ease of listing on a crypto exchange - traditional exchanges will feel pressure to relax their rules in order to compete. In January, crypto firms Zilliqa and MaiCoin announced that they planned to launch a centralized security token exchange in Singapore for startup shares called Hg Exchange. The exchange, which is pending approval by the MAS, aims to facilitate better access to shares in private, high-growth startups (such as Airbnb, Didi Chuxing and Grab) for accredited investors in Singapore.

The Future of Fintech

Fintech has boomed over the past five years. In 2018 alone, venture capitalists invested $40 billion in fintech startups. And more high growth lies ahead: Frost & Sullivan estimates that the sector in APAC will grow at a compound annual rate of 72.5% between 2015 and 2020, reaching US$72 billion in value. For deeper insight into how fintechs are evolving and what they will need to do in the future to mitigate risk and maintain sustainable growth we spoke to Varun Mittal from the Singapore Fintech Association.

Every few years there is a hype cycle. First it was cloud, then big data, and right now hype around blockchain and AI is feverish. But at some point investors are no longer willing to throw money at a startup just because it claims to be "blockchain" or "AI" focused. At that point, investors will want to see where the value in the product or service lies.

Indeed, many companies are looking to list or complete a trade sale, but execution is not always simple. When interest rates are low, investors are ok to not have liquidity, but as interest rates rise, many will be looking for that liquidity. Many of the fintech companies have investors with 5-7 year terms.

Differing types of investors can also complicate the situation. As an example, if a robo-advisor receives an investment from a large asset or fund manager, it's unlikely that the fund company will buy them completely as it's not their business to run a tech company.

But then it also makes it unlikely that a tech company, which may want access to the underlying tech, would invest in the robo-advisor or buy them out. The tech company may want a pure tech play rather than co-owning with a fund manager. The fund manager is in because he wants to use it as a distribution channel – he's not actually in it for the return, it's a rounding error.

Some analysts think funding across the board, and specifically in the fintech space, may dry up soon and are urging investors to raise the biggest possible rounds of funding now as capital that hasn't already been deployed could end up flowing to secondary markets. The firms that will be successful will be the ones who have been planning for an exit. Companies should be thinking if they need to trigger a consolidation play, and get a solid investor behind them. They should be asking themselves "which are the three companies they should buy, and how will they integrate them and unlock value?"

For bank CIOs, this should be a larger consideration as well as they start to work with fintechs more. They must think about the "bad day and the good day."

"The bad day, everyone knows – the fintech company fails, so the bank tries to have covenants in the contract, code in escrow, etc.. What people don't think about is the good day. Maybe a bank buys an AI solution from a provider because they are impressed with the agility, flexibility, modularity," Mittal says.

"If you tell me your exit plan is 70 million – there's only one player that could absorb that kind of size of deal and it might be my competitor."

What if that company is actually bought out by a big guy? The key question is who is the backer?

"If you tell me your exit plan is 70 million – there's only one player that could absorb that kind of size of deal and it might be my competitor," Mittal says.

He advises startups to be able to show banks how they can be the banks' long-term partners instead of touting the speed or their technology or that they're cheaper than their competitors. That means emphasizing scalability, sustainability and security.

"As a bank with an $100 million IT spend, I'm not trying to save $100,000," he says.

Meanwhile, as we move through the different eras of fintech discussed previously in this report, we may hit some choppy waters. Research by the U.S.'s Federal Financial Analytics has found that unregulated fintechs could be the catalyst for the next financial crisis. "As finance moves outside banks and the infrastructure heads into the cloud, risk is quickly circumventing banking and threatening critical infrastructure, the ability of central banks to stabilize markets, and even the economic equality on which financial security depends," Federal Financial Analytics said in a September 2018 research paper.

"There's going to be a crisis at some point in the near future, and the financial industry will be one of the first areas to be hit," Mittal says. "Fintechs need to have an exit plan. If you have a path to list, what's your exit path, and who are your buyers?"

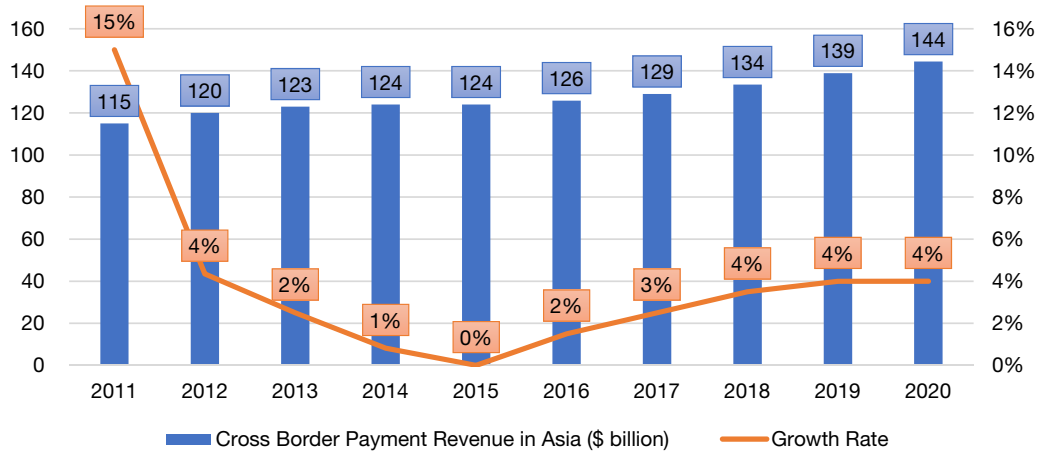
Optimizing Asia Pacific's Cross-border Payments

Cross-border payments are a key part of the Asia Pacific financial industry story, especially in 2019. We sat down with Michael Moon, SWIFT's Asia Pacific Managing Director of Payments, Trade, and Communication to get some of his thoughts on the subject.

Global payment revenue is projected to exceed US$3 trillion in 2019 as banks, corporates, and individuals send trillions of cross-border payments around the world every day. SWIFT's GPI now carries more than US$300 billion daily payments across 1100 country corridors.

Third-party competitors including Ripple, Alipay, TNG, and WeChat Pay are making their own impact on the market by setting up new solutions for an increasingly demanding set of customers who are looking for safer, faster and cheaper transactions, pressuring payment providers to boost the quality of their services to win market share.

Asia Cross-border Payment Revenue Picks Up



Source: Kapronasia, McKinsey

This competition is forcing traditional service providers including banks and remittance firms, to re-think their businesses. Banks are already lowering fees for retail and commercial payments that are often a result of the high management costs of processing business transactions as well as the costs of compliance (including AML) and foreign-exchange.

"You have all of that friction on the payment...financial institutions need to strip that friction out of their environment," Moon says.

At the same time that payment costs will come down, cross-border transaction speeds will go up. Transaction speed is a critical part of any cross-border payment transaction and increasingly a point of competitive differentiation.

For example, SWIFT found that slow settlement was often caused by transactions occurring during non-operational hours, across different time zones. SWIFT is working to speed up settlement time with GPI, which in certain geographies, connects directly into a 24x7 domestic real-time payment system. A trial in late 2018 successfully sent a payment from China to Australia across the SWIFT GPI platform in 18 seconds. It wasn't instantaneous, but fast enough for many customers, and certainly an improvement on previous settlement times.

In addition to speed, transparency is becoming another important consideration in cross-border payments. In the past, it was difficult to track cross-border payments. Now, SWIFT GPI allows customers and banks to trace funds in any process, which is forcing banks to re-look at how their payment business runs.

"Some banks say they're renovating their internal processes such that a business manager says, 'Why is that compliance process taking four hours? Tell me why. What's going on there?' Change that. Re-engineer that. Turn it into a two-minute process for 99% of the payments," Moon says.

This is especially important for corporate customers. Their treasury teams can plan how to manage their cash flow ahead of time when they have an idea of when they will send or receive each payment. Further, with GPI, "if you're a corporate and you operate in different markets using various banks, you can have a standardized view of what's happening with all of your payments," which can reduce pressure on a company's liquidity, Moon adds.

It is in this context that, despite the regional disparity across Asia-Pacific countries, we are starting to see some payment integration happening across the region. Organizations like SWIFT and Ripple are enabling this both domestically and cross-border, while certain geographies, such as Thailand and Singapore, are in discussions to create their own integrated platforms.

What all of this innovation and change means is that both retail and corporate customers will benefit with faster, cheaper, and better cross-border payments. Fintechs will not upset the applecart so much as press traditional players to up their game. Overall, banks, money transfer firms, and fintech companies can all benefit from growing market demand for cross-border payment services in 2019.

Banks Smarten up with Artificial Intelligence

Amidst the current artificial intelligence boom, eye-popping forecasts about AI's potential are the norm. So we didn't blink when we read that by 2030 AI will save banks $1 trillion, reducing operating expenses by 22%. Accenture expects AI will add $1.2 trillion in value to the financial industry by 2035. Anything less would be a letdown. We spoke to Ravi Shankar, co-founder and CEO of Singapore-based Active Intelligence to find out more about this growing space.

Naturally, banks hope to cash in on some of that value and savings. AI has a wide range of potential uses in banking, from data analysis and fraud prevention to enhancing risk management and customer service. AI could even help banks create new products. Yet before 2018 AI had not been widely deployed in banks. Banks' legacy technologies were not optimized to work with AI platforms.

A key change came in mid-2018 as banks began to build AI departments in house. Banks "were very clear that they could use some of these technologies to actually give themselves a competitive edge in the market," says Shankar. "And to do that they just needed a core platform, and after that they could have their programmers, their scientists and everything else IT."

Now banks are ready to integrate AI into their everyday operations. "In 2019, I think one in two financial institutions will definitely deploy AI on the front end for customer engagement. It will be out of the box," Shankar says.

Meanwhile, customers will be accepting of AI in banking - "because they know that it's going to come...customer adoption will become huge before the end of 2019," he says.

Some larger banks that got an early start on AI adoption could roll out a suite of related services soon. JPMorgan Chase, America's largest bank, has been investing heavily in AI. From early 2018, JPMorgan's investment banking clients have been able to use Amazon's voice assistant Alexa to help them access research. In August 2018, JPMorgan hired former Google cloud AI chief Apoorv Saxena in August 2018 to head its AI and machine-learning services. Analysts saw JPMorgan's move as a big bet that AI would play a paramount role in its business in the future.

"The opportunity is that AI will let banks provide services in much more personalized, highly scalable and customized ways," Saxena told the Wharton School in a February interview.

But many big banks have moved slower to adopt AI than JPMorgan. Indeed, big banks have to consider how AI will affect each part of their business, and how to meet regulatory requirements in each jurisdiction where they operate.

"For smaller banks, actually, it's much easier to go ahead and do what they have to do," Shankar says. "Their bases are smaller. You just go to the service provider; you provide them the specifications for the infrastructure. Probably they'll be able to take the service from the cloud and move quickly."

Integrating AI into a bank's operations typically requires the addition of an AI layer on top of its mobile layer or alongside its mobile enterprise platform layer (i.e. above the enterprise service layer and core banking layer). Experiments with these tools typically start with the front office and eventually core systems. Yet, it still may take a few years for some of the technologies to go mainstream.

Some banks have tried and failed to develop AI capabilities themselves. One financial institution in North America spent US$15 million trying to develop AI capabilities in-house but ultimately failed, Shankar says. With that in mind, tie-ups between technology service providers and banks will become more common. Banks will look to acquire AI startups or enter into partnerships.

As *Forbes* notes in a September 2018 report, the Royal Bank of Canada and Israel Discount Bank now offer AI virtual assistants in their mobile banking apps thanks to a partnership with fintech startup Personetics. The virtual assistants provide investment advisory services, respond to customer inquiries and requests, as well as alert customers to any suspicious account activity.

According to *Forbes*, in the first eight months after the launch of Royal Bank of Canada's virtual assistant, it provided "200 million insights" to the bank's customers, boosted mobile app use from an average of 3 to 5 times a week, and helped drive a 20% increase in the opening of savings accounts.

Looking ahead, AI will become increasingly important in the battle against money laundering. In a January report, the World Economic Forum notes that the U.S. spends $23.5 billion annually on AML compliance, while Europe spends $20 billion. Yet money laundering remains rampant: 90% of Europe's banks have been fined for AML violations in the past decade.

Given the trillions of transactions across global networks, AI can play a critical role in AML with its ability to speedily scan enormous data sets. To that end, HSBC has invested in technology that allows its core banking system to take actions recommended by its AI program when suspicious activity is detected - like the human body's immune system acts when it detects an intruder.

"It's a big area where money's going right now. And we've seen some very interesting companies come up in that as well," says Shankar.

Fintech Adoption: Asia Leads, the West lags

In recent years, the advent of fintech has transformed banking in Asia, rapidly bringing financial services to historically underbanked markets such as China, India, the Philippines and Indonesia. Fintech applications common in Asia include mobile payments, instant online loans and retail investment products. At the same time, traditional banks in Asia are steadily increasing their suite of digital services. We talked to Chris Skinner, one of the world's leading authorities on fintech and a regular visitor to Asia, about how Asia is leading the fintech revolution.

Across the Asia Pacific region, governments are strongly backing the digitization of financial services. Taking the lead in Southeast Asia is Singapore. "The government of Singapore has a unique enthusiasm for innovation which it has been able to implement effectively," says Skinner. Compared to other financial regulators, the Monetary Authority of Singapore (MAS) "is far more focused" on financial technology innovation than most others except for the UK and Dubai, he says.

In Europe and North America, fintech adoption is slower. While the United States has 13 fintech unicorns (startups valued at US$1 billion or more), these companies do not yet have an outsize impact on the daily lives of American citizens. One of the reasons for fintech's slower penetration in the West is traditional banking's strong foothold in those markets. In the U.S. and Europe, about 90% of people have access to basic financial services, such as a bank account.

Since traditional banking is well established in the West, incumbents are less inclined to immediately embrace fintech. Indeed, Western banks have yet to adopt QR code payment technology, which has been available since 2004. Nor are they moving to set up financial cloud platforms in most cases.

"I still find a lot of banks, particularly in Europe and America, are quite nervous about the idea of cloud infrastructure because they feel it's giving something away to an external third party rather than looking at it as some tool they can leverage," Skinner says.

It is important to note that it is not only industry that is hesitant about digitization in the West: regulators also are less trusting of new financial technology than in Asia. That suspicion increases when Chinese companies are the ones attempting to bring the technology to Western markets.

Under this scenario, Chinese fintech providers have found it difficult to break into Western markets. Alibaba's Ant Financial ultimately gave up on trying to acquire U.S. currency transfer company MoneyGram because it could not get the green light from American regulators. Washington cited national-security concerns as the reason for blocking the deal.

Determined to acquire a Western currency transfer firm, Ant Financial ultimately acquired the UK's WorldFirst for an estimated $700 million. However, the deal only was able to proceed after WorldFirst shut down its U.S. operations. Once again, the U.S. had national-security concerns. WorldFirst's U.S. business was rebranded as Omega and now operates as an independent entity.

Amidst the Sino-U.S. trade conflict and rising technology competition between the world's two largest economies, Chinese tech firms will find the going tougher in Western markets in 2019 than in the recent past. While Ant Financial's bid for WorldFirst was a success, the U.S.'s campaign to shut Huawei out of 5G networks is intensifying and increasingly involving its allies. Canada, which has detained Huawei CFO Meng Wanzhou at the U.S.'s request (Meng is accused of facilitating sanction-busting sales of telecoms equipment to Iran), is now caught in the proverbial crossfire.

While Huawei is not involved in financial services, it is China's most global company. With Huawei under siege, Chinese tech firms will need to think carefully about how to position themselves to avoid a serious setback to their growth, Skinner says. "If Huawei isn't trusted and is pushed out of 5G deals, that's going to reflect negatively on broader Chinese ambitions to have global companies," he says.

Still, some Western markets remain relatively open to Chinese fintechs, which could offer better access to funding for SMEs as well as digital customer relationship management, invoicing and payments collections payments systems. Lithuania, as an example, is positioning itself as the gateway to Europe for Chinese fintech firms.

"We have already established close ties with Asian authorities regarding maintaining regulatory flexibility and are building bridges for fintech businesses in the region," Bank of Lithuania board member Marius Jurgilas said at an investment forum in Prague last October.

The Bank of Lithuania has already issued an electronic money institution license to four Chinese companies and a payment institution license to one. Further, 10 Chinese businesses are interested in joining the central bank’s payment system CENTROlink.

Overall, the West could benefit from adopting more fintech solutions. In Europe, fintech could contribute to the development of a genuine single European market. A user base for a larger fintech market exists; this can be seen with payment companies like Stripe, or loan platforms such as Sofi or GreenSky. But since incumbents are entrenched in the West, governments must help facilitate an environment where fintechs can grow. Regulatory changes will be necessary; Western governments could look to Southeast Asia as an example.

Meanwhile, Asian fintechs will see competition intensify in Southeast Asia and other underbanked parts of the world. Investment in advanced financial technology will accelerate. In China, banking is undergoing a full-fledged transformation. Fintech will remain red-hot in Southeast Asia as firms race to provide financial solutions to some of the world's fastest growing - yet underbanked - economies. And unlike in the West, those countries are quite open to foreign technology.

"If China's growth continues to stall or contract then that has a serious knock-on effect on all Asian economies."

There are two factors in 2019 that could slow fintech's growth in Asia markedly in Asia. One would be a steep slowdown in China - a possibility if the Sino-U.S. trade war further intensifies.

"If China's growth continues to stall or contract then that has a serious knock-on effect on all Asian economies," Skinner says.

There is also the risk of a regional financial crisis, which could be triggered by China or one of the Asean countries. In an October 2017 paper, the Brookings Institution notes that Asia "faces the ever-present risk associated with volatile capital flows and the inherent risks associated with financial intermediation. And there is little by way of macroeconomic policy space in the region's largest economies or trading partners to buffer a demand shock."

Not since the 1997-98 Asian financial crisis has the region as a whole experienced prolonged negative growth. And it's not clear governments or the financial industry is prepared to deal with the potential threat.

"We have very short memories," Skinner says.

Robotic Wealth - The Future of Roboadvisors

The wealth-management industry is growing speedily on the back of robust demand in Asia, especially China. Research by HSBC has found that mainland Chinese have invested US$2 trillion outside of the country. Analysts expect China will become the No. 2 wealth-management market after the U.S. by 2025 as its AuM triples. Research by PwC shows that AuM in the overall Asia-Pacific region will grow annually at a clip of 8.7% to reach $16.9 trillion in 2020 from $15.1 trillion in 2017. We spoke to Ned Philips, co-founder and CEO of Singapore-based B2B robo advisor Bambu about the fast-growing wealth-management sector.

The question many wealth-management firms are pondering: How can they use digital technology to tap into this surging market? The answer: Send in the robots - robo advisors, that is. From their humble beginnings in the wake of the Global Financial Crisis, robo advisors are now poised to drive the wealth-management industry. After all, it's hard - well, technically impossible - to argue with low-cost algorithm-driven financial planning services that require minimal human supervision. Who wouldn't want passive portfolio management at 1/3 the cost of a flesh-and-blood financial planner, assuming the two were equally adept?

Inefficiencies in the wealth-management market - pricing, asset and transaction methods - provide an opening for fintechs to launch enhanced robo-advisory services in 2019, says Philips. "Three days to settle a fund, there's no logical reason that's correct. Layers of different fees...whether it's passive or active, it's still a very expensive industry," he says.

"You can go to Spotify and stream music. Why can't we stream funds, right? My view is that Ant and Grab and Go-Jek and Kakao and all these great Asian e-wallets and e-commerce brands are the people that will truly change how we interact with wealth," Philips says.

That would involve a fundamental change in the wealth-management business: Wealth managers would become product providers, while fintech platforms would serve as their distributors. Fintechs would offer the asset management firms distribution, while not taking on the risk of having their own investment division. For instance, in a manner similar to Ant Financial's Yu'ebao, platforms backed by e-commerce companies could sell micro funds to the general public, something a bank wouldn't normally do, and pass it off to the bank as one big account. That type of partnership would benefit investors as well as the e-commerce firms and banks.

Meanwhile, robo advisors can offer financial-management services to a broader swath of consumers, not just the elites traditionally serviced by wealth managers. Demand is growing for affordable financial advisory services as

Ernst & Young has found. In a Dec. 2017 report, the company found that investors are increasingly sensitive to the cost of financial advisory services given low interest rates and high volatility. They also are keen for more digital investment services that allow them to access products besides equities and bonds. There is enormous potential for technology to boost the efficacy of wealth-management (it already can assess an investor's risk profile using data analysis), Ernst & Young found.

Under this scenario, robo advisors, which can build portfolios almost instantaneously after being given a client's risk profile and goals, are an efficient way to sell financial products in a digital environment. Providing services that are easy to understand and available to people from virtually all income levels could grow and restructure the market rapidly.

After assessing an investor's exact goals, robo advisors can provide multi-goal methodology, re-balance investments according to progress towards those goals, and focus on reaching them. This could point to the overall direction for the asset management industry, as few banks focus on goal-based re-balancing today.

"If you have one goal, just save your money for that one goal. What if you have three?... Should you put $100 towards each goal?

"If you have one goal, just save your money for that one goal," says Philips. "What if you have three? Say, you have three goals and you have $300 a month to save. Should you put $100 towards each goal? No. You should move the amount you save towards each goal based on the performance of the investment, and the price of your goal, and whether you've achieved other goals."

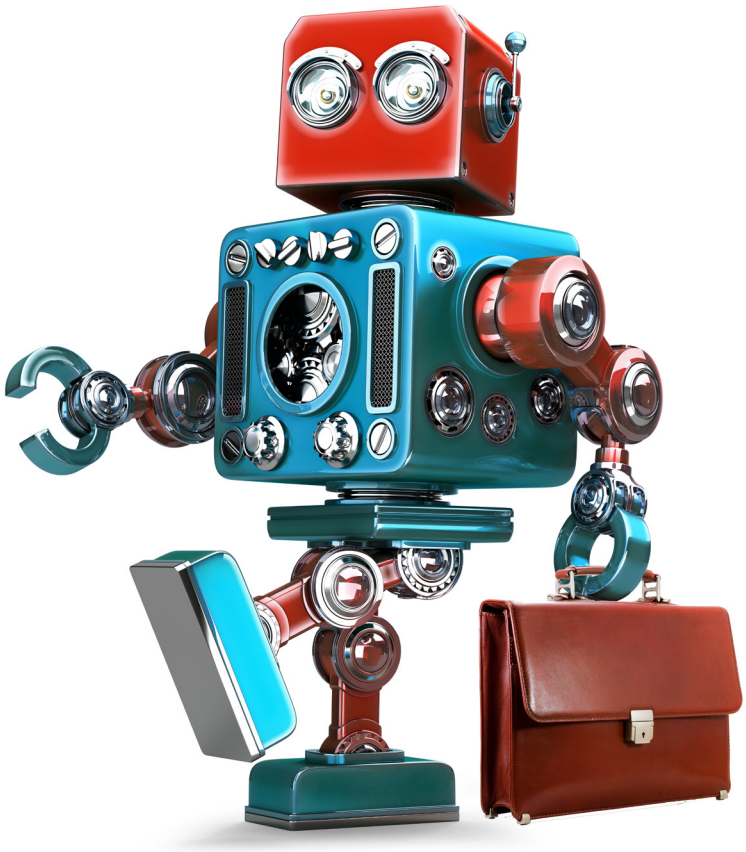
Amidst strong demand for tech-driven financial services, wealth-management firms will gradually build up their digital infrastructure. The work of traditional financial advisors will change as they become more reliant on digital technology. They will serve as a channel between the client and the tech, defining and maintaining requirement in clients' portfolios, and interacting with them through digital platforms. After all, about 2/3 of wealth-management clients say that they prefer to contact an advisor through a digital channel. A recent survey by MyPrivateBanking found wealthy millennials are willing to use robo-advisory services as long as the services include some type of human interaction.

As more fintech firms enter the wealth-management market, banks could end up on the defensive. But they could also partner with the fintechs. Banks could leverage the high functionality and relative low cost of robo advisors to provide their customers with enhanced traditional banking services: loans, payment advice and mortgage investments, to name a few.

In October 2018, Citizens Bank, based on the U.S.'s east coast, announced a partnership with wealth-management tech provider SigFig that will offer digital advisory solutions to the bank's customers. SigFig's CoPilot platform automates administrative tasks in the front, mid and back office, freeing up advisors to focus on relationship building with their clients, the companies said in a press release. Citizens Bank and SigFig say that CoPilot boosts the client experience, advisor productivity and firm profitability.

In February, California-based Personal Capital, which brands itself as a "wealthtech company," announced a partnership with Alight Solutions and AllianceBernstein to create WealthSpark, which the companies say will "provide American workers with insights to their finances through Personal Capital's technology."

Meanwhile, Philips has some advice for banks in Asia: "Purely in Asia, I think Grab or Go-Jek will successfully launch an investment tool. I think the banks will be pretty blown away by it," he says.



Myanmar is one of Southeast Asia's fastest growing economies, with annual GDP growth in recent years topping 6.5%. Yet it also remains the poorest ASEAN country, according to data compiled by the Asian Development Bank. In 2015, more than 32% of the country's population lived below the poverty line. That's well above the 23% who live below the poverty line in Laos, 21.5% in the Philippines and 14% in Cambodia. We spoke to Myanmar-based Wave Money's CEO Brad Jones for his thoughts about how financial inclusion will evolve in Myanmar.

Integral to improving Myanmar's fortunes will be a robust financial inclusion policy. In an August 2018 report, *The Myanmar Times* noted that adult access to formal financial services had risen from 30% to 48% over the previous five years. That exceeded the government's target of 40% financial inclusion.

According to the report, that means more than 6 million additional Myanmar citizens have access to formal financial services than in 2013. Further, sole reliance on informal financial services fell 30% from 10 million in 2013 to 7 million in 2018.

Looking ahead, the nation's financial sector is expected to focus on helping low-income individuals access affordable financial services to reduce poverty. To date, banks have focused more the middle class and wealthier clients as they have struggled to find a cost-effective business model for low-income customers.

The financial sector should “redouble its efforts to expand and deepen financial services," *The Myanmar Times* quoted the Central Bank of Myanmar’s director general Daw Than Than Swe as saying.

Typically, a person who is financially excluded in Myanmar gets most of his or her money from family members in other part of the country which is moved around through informal channels. At a minimum, to be 'financially included,' a person must have a basic bank savings account and access to credit.

Wave Money, a joint venture between Telenor, FMI and Yoma Bank, is working to boost financial inclusion in Myanmar. With more than 43,000 shops across the country, the JV provides offers simple and reliable mobile money financial services to the people of Myanmar, says Jones.

A strong distribution network is integral for mobile financial services: Both a sender and recipient must be covered. Wave Money's typical customers are domestic migrants working in Myanmar's cities and sending money to their home villages.

By partnering with banks, mobile operators will be well positioned to broaden the reach of financial services in Myanmar by leveraging existing distribution networks.

At the same time, microfinance institutions will be integral to the success of Myanmar's financial inclusion initiative. By partnering with mobile money businesses, they will be poised to develop innovative credit and savings products. Transaction costs will be lowered and for the first time the large financially exclusive swath of the population will have access to a suite of different financial products, Jones says.

"The confluence of high smartphone penetration with limited access to financial services presents an ideal proving ground for microfinance institutions and mobile money providers to offer digital financial services to Myanmar's poor and underserved," said Jason Loughnane, Special Projects Manager of DAWN Microfinance, in an August 2017 post on the Center for Financial Inclusion's official website.

There is a big push in Myanmar to leverage digital for remittances, but not yet for digital payments. This scenario differs noticeably from China - which has been remarkably successful boosting financial inclusion, to the extent that bank account ownership is now comparable to G20 countries - where the main use case has been e-commerce POS payments. When digital payments do arrive in Myanmar, it may similarly be interoperable QR codes that drive adoption.

Myanmar also differs from China in that it has no clear platform driving the digitalization of payments. Alipay had e-commerce while WeChat had social, chat and gaming. India had PayTM, which first focused on mobile top-up.

Jones expects that the next few years will see multiple new players enter Myanmar's digital finance market. Competition will intensify. One area to watch carefully will be digital wallets.

In the future, analysts say that financial inclusion driven by mobile services could boost GDP by up to 5% in emerging markets by 2023. The rise in GDP is expected to come from new employment opportunities and better access to credit, which can spur new business ventures, as well as the benefits that come from higher savings and formal remittances.

As Myanmar accelerates digitalization of financial services, it is essential that financial inclusion remains a top priority for the nation, Jones says. "Industry-wide collaboration is needed to foster sustainable business models that will benefit those who are still financially excluded," he says.

The Next Chapter for Regulators

Cities like London, New York, Hong Kong, and Sydney have established themselves as global fintech centers: experimenting with sandboxes, marketing and setting progressive regulations. These moves complement already strong domestic financial industries. Singapore, too, has sought to move in that direction. Singapore's financial industry now accounts for nearly 13% of the country's economy and the nation's fintech sector is consistently ranked among the top-10 fintech centers globally. In many ways, the Monetary Authority of Singapore's (MAS) primary task is complete. Singapore occupies a spot on the map as a fintech hub. Regulations have progressed rapidly and addressed many of the key industry challenges. What's next for the MAS? Is their work done? We sat down with Sopnendu Mohanty, MAS' Chief FinTech Officer to hear his thoughts.

Building an ecosystem

Monetary Authority of Singapore

Regulators and governments have been working tirelessly to embrace fintech in financial centers around the world. For many economies, fintech holds the promise of competitive advantages, new economic activity, and jobs – important elements as countries increasingly shift from traditional to value-added products and services.

This progress is due to a multitude of factors, but the most significant enabler has been the support of the MAS. Thanks to a supportive government and an outspoken CEO and advocate, the MAS has arguably been one of the most prominent and progressive regulators globally when it comes to fintech and innovation.

Mohanty points out that regulations in Singapore are now fairly streamlined, with the regulator moving to help both the traditional banking industry and fintech grow in tandem with each other. Still, he believes there is unfinished work for fintech's development in the country.

"Despite the extensive investment in Singapore fintech, a lot of the capital has followed big and established players," Mohanty says. "For an innovation head, you have to wonder if that is the correct approach. You want to help the industry grow, but at the same time you find that the availability of risk capital for very early-stage companies is challenging. Yet, it is these early- stage companies where you get new innovative technology or ideas from."

Data from KPMG shows that Asia was one of the largest regions for fintech investment in 2018, capturing $22.7 billion, or 20% of the global total. Even so, as much as 85% of that investment went into large firms and deals such as those involving Ant Financial and Lufax.

With a significant amount of this investment going into larger companies instead of smaller, nimbler startups, innovation could be constrained, Mohanty says.

“A lot of the investment went into late-stage firms where investors believed the companies would be acquired and they can gain from the investment. This is akin to digging many smaller rivers, putting in money, and expecting them to become one larger river eventually.”

The consequence of larger firms attracting the bulk of the investments is that important IP then becomes tied up in the more prominent firms, leaving very little to SMEs, which often form the bedrock of economic and fintech development. Closing the investment chasm between the two will be a vital part of the MAS' strategy going forward.

“We need to have a singular focus to continue to build an ecosystem where it is possible,” Mohanty explains.

By creating an ecosystem approach, the MAS will be able to shift from its role as a champion of Singapore fintech to an actual enabler of Singapore fintech, by working closer with the ecosystem itself.

In addition, the MAS executive said the focus should not just revolve around fintechs, as technology can have multiple uses across industries. For example, a health care data analysis platform could also be used to develop risk models in the financial industry. The MAS can play a crucial role to help bridge those industries and solutions, he said.

Mapping the future

Going forward, the key question for the MAS will be identifying which areas to focus on. In 2016, during the run up to the first Singapore Fintech Festival, the MAS published a list of 100 FinTech Problem Statements that it was keen to find solutions for. Over the following months, numerous fintechs globally took up the challenge and worked to come up with solutions.

Three years later, many of those 100 problems have been addressed. As 2020 rolls around, the challenge is to determine what the next 100 issues will be.

"We have gotten the mindshare in place. Now we need to define our focuses for the next 5-10 years by looking at where things are, to understand where we have come from, and map out which areas of the industry are fixed and what still needs work," says Mohanty.

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The banks will also need to figure out their role. Many fintech observers around the globe see smaller non-financial players giving the traditional financial institutions a significant challenge and potentially taking the higher margin business away, leaving the banks as nothing more than utilities.

To avoid this, banks need to up their game, Mohanty observes. "The financial institutions have not really been pushed yet in many parts of their businesses, but they are coming to a crossroads where they are asking, 'Do we want to keep on giving the same, or change that thinking and bring something relevant?'"

Indeed, we as an industry continue to hold the belief that financial institutions need to "own the infrastructure," taking control of payment networks and basic banking services. However, this will change in a digitally driven economy; The state will own or co-own key pieces of public infrastructure. It's already happening. For instance, in the past, telecom companies owned all of the telecommunications equipment. Now, in many places including Singapore, the government owns the infrastructure, and these telecom firms are focused on higher-end services.

Will we see the same in the financial industry?

Conclusions

Fintech is a global discussion, but an Asian reality. The impact of fintech in the Asia Pacific region has been substantial, and by any measure, whether valuations, number of transactions, or assets under management, dwarfs other markets.

As the fintech sector evolves, incumbents and fintechs will deepen their cooperation, spurring a virtuous cycle. This positive development will occur in large part due to the work of experts including those we interviewed for this paper, who are leading the way by defining new regulations, driving the thought agenda, and ensuring that new technologies are more than just buzzwords.

The term "fintech" itself was a buzzword for many years as well, and largely still is. Or maybe it should be "techfin," as some have suggested with "technology" up front (literally). Regardless of what we call it, the possibilities of leveraging technology to better serve the needs of clients around the world are limitless and technology will continue to play a pivotal role in the development of the financial industry.

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