FSI*Review*

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Riding the new wave of change

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Deloitte.

In this issue

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The digital future is already here

In November 2017, the second Singapore FinTech Festival, organised by the Monetary Authority of Singapore and the Association of Banks in Singapore, welcomed more than 30,000 people, from 100 different countries in a week-long celebration of FinTech. It was the largest FinTech gathering anywhere in the world[1] and Deloitte was proud to have been a part of the event as a Grand Sponsor.

In this issue of FSI*Review*, we are pleased to feature the Deloitte's insights that were showcased at the Singapore FinTech Festival.

Starting things off, we bring you the highlights the Festival where Deloitte Global leaders presented their views on topics such as the global market for FinTech, data analytics and applications, and Open Application Programming Interface (API).

Next, we share our perspectives on the future of the financial services industry in two articles. The first article focuses on the future of risk and highlights six imperatives financial institutions should follow as they plan for a new era of risk management. The second article reveals the results of a survey on global executive's expectations for the future of financial services.

We also examine the new status quo in the financial services ecosystem in our latest FinTech report, developed in collaboration with the World Economic Forum, before rounding things off with a look at how financial institutions can craft a clear cyber regulation strategy in a diverse region such as the Asia Pacific.

These reports will reveal that the FinTech industry is thriving; even more so in Southeast Asia. Funding for FinTech firms in the region has increased significantly over the last two years and is set to remain steady for 2018. Recognising the need to balance experimentation with security, regulators have created regulatory sandboxes that enable financial institutions to experiment with financial technology. Through our interactions with key industry players, we've learned that collaboration between regulators, FinTechs and incumbents will benefit not only industry players but most importantly, consumers as well.

We hope that you will find this edition of the FSI*Review* an interesting and insightful read.

Ho Kok Yong
Financial Services Industry Leader
Deloitte Southeast Asia

[1] "US$2b of capital available for FinTech start-ups through Singapore FinTech Festival 2017's Investor Summit," Press Release,17 November 2017, http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/US2b-of-capital-available-for-FinTech-startups.aspx.

Highlights of Deloitte's involvement at the Singapore FinTech Festival 2017

From 13 to 17 November, Deloitte was the Grand Sponsor of the Singapore FinTech Festival. The event brought together a series of distinct, back-to-back events in a week-long celebration of FinTech. At the heart of the festival was a three-day conference, where Deloitte's global leaders were present to share their insights. In this article, we share summaries of the discussions of which Deloitte were a part of.

FinTech Conference Day 1 | 14 November 2017
At the opening day of the three-day FinTech Conference, **Bob Contri**, **Global Leader**, **Financial Services Industry**, **Deloitte**, participated in a Leaders Dialogue focusing on established markets.

Established markets

With their well-developed infrastructure and technology, it's tempting to look to established markets for FinTech leadership. However, such markets have mature relationships and regulations that are resistant to disruption. This is borne out in a recent Deloitte Global survey which asked senior executives whether the financial industry will fundamentally transform in the next five years.[2] Just 45 percent of executives in North America believed it would, versus 70 percent of executives in Asia. Likewise, in North America, mobile banking is only about 30 percent of banking transactions, while in Asia this proportion is closer to 70 percent.[3] That said, mature markets have demonstrated their ability to innovate: from ATMs and chip-equipped credit cards to the internalisation of market and mobile banking, established markets have a track record that's tough to ignore and this is due, in no small part, to competitive forces prompting firms to look for new sources of profit. Mature markets are accustomed to regulations and structure, which provide the stability for businesses to flourish. Consumer and data protection, risk control, and anti-money laundering are particular concerns among regulators dealing with FinTech activity. But regulations can also discourage new market entrants. In response, regulatory environments are changing in ways that may foster innovation. Some jurisdictions are adopting principles-based regulations, for example, while others are revisiting regulatory barriers that keep FinTech companies out.

Panel discussion moderated by Mark Worthington, Partner and Managing Director, Klareco communications, with panellists:

- Jorg Gasser, State Secretary for International Financial Matters, Federal Department of Finance, Switzerland
- Anne Le Lorier, BdF Deputy Governor
- Oki Matsumoto, Founder, Chairman and Chief Executive Officer, Monex Group
- Bob Contri, Global Financial Services Industry Leader, Deloitte Global *(pictured)*

[2] Financial Services Industry Snapshot, Deloitte Global, June 2017, https://www2.deloitte.com/global/en/pages/financial-services/articles/gfsi-survey-snapshot.html.
[3] "Digital Deposits: Mobile Banking Around the World," Nielsen, 18 October 2016, http://www.nielsen.com/us/en/insights/news/2016/digital-deposits-mobile-banking-around-the-world.html.

Another highlight of Day 1 was a panel discussion moderated by **Deloitte's Jojy Mathew**, **Global Co-Leader Analytics & Information Management**, **Financial Services Industry.**

Laying the bricks

Smart Nation is Singapore's national effort to support better living through technology. Big data analytics are an important part of this initiative and the opportunities it offers are an outcome of people, processes, skills, and strategic thinking. Although many data-rich companies use only a small fraction of their data, analytics could help turn this around. For example, they could identify new customer segments or new ways to serve existing segments. One important capability of big data analytics is visualisation, which lets users identify problems in the data and consider the remediation to be performed. Another is predictive analytics, which can anticipate future events such as when certain automatic teller machines will have mechanical problems, or which employee is likely to exhibit unusual behaviour.

However, big data does have its risks: data privacy compliance and cross-border data transmission run up against differing rules and regulations. For large financial institutions, this makes customer acquisition a delicate issue as the cost of non-compliance can exceed the incremental benefit of marginal customer acquisition. Regulators can help organisations working with big data understand their boundaries so they can move forward while staying compliant.

Panel discussion moderated by Jojy Mathew, Global Co-Leader Analytics & Information Management, Financial Services Industry, Deloitte *(pictured, far right)* with panellists:

- Vasant Dhar, Professor, Centre for Data Science, New York University
- Paul Cobban, Chief Data and Transformation Officer and Managing Director, Group Technology and Operations, DBS Bank
- Kevin McCarthy, Chief Customer Officer, DemystData
- Simon Kirby, Director, SI Industry Solutions, Financial Services, Qlik

FinTech Conference Day 2 | 15 November 2017

David Cruickshank, Chairman, Deloitte Global, kicked off Day 2 of the FinTech Conference at the Singapore EXPO with a keynote address on "The future of financial services".

The future by Deloitte

People are slow to change their habits: contactless cards were met with suspicion when introduced in 2007 and the cheque, introduced almost 300 years ago, is still widely used today. Eventually, change takes hold: in East Africa, more than six billion mobile transactions were processed during 2016 and in China,[4] some FinTech companies are valued at US$60 billion—about the same as UBS AG, Switzerland's largest bank.[5] How big an impact the financial services industry expects from these trends is an open question. A recent Deloitte Global survey of 200 financial services executives found that 47 percent do not expect significant change in the next five years.[6] At the same time, they expect to see talent shortages in the areas of innovation, risk and compliance, and IT. Other questions remain: the rise of digital identity, the monetisation of data flow, and the gap between technology and governance, among them. There's also the matter of transparency in the new systems along with the likelihood that financial services firms will use technology to solve long-running partnership and collaboration issues. With a future where collaboration is normal and agility is critical, perhaps the one thing we can expect is more questions than answers.

[4] "M-Pesa: Kenya's mobile money success story turns 10," by Kieron Monks, CNN, 24 February 2017, http://www.cnn.com/2017/02/21/africa/mpesa-10th-anniversary/index.html.

[5] "Alibaba's $60bn payments arm stalls planned IPO. Keenly anticipated listing of Ant Financial delayed until end-2018 at earliest," by Louise Lucas and Don Weinland, Financial Times, 15 May 2017, https://www.ft.com/content/25780a7c-3702-11e7-bce4-9023f8c0fd2

[6] Financial Services Industry Snapshot, Deloitte Global, June 2017, https://www2.deloitte.com/global/en/pages/financial-services/articles/gfsi-survey-snapshot.html.

In the afternoon of Day 2, **Michael Tang**, **Global Digital Transformation Leader**, **Financial Services Industry**, **Deloitte**, shared his views on the topic of Open Banking versus banking APIs, in a session entitled "Open architecture: From mindset to skillset".

Open architecture: From mindset to skillset

PSD2 may be a brand-new regulatory mandate, but its underlying philosophy of open architecture isn't. The Linux Foundation, for example, has a 15-year history of open source projects.[7] From this perspective, banks are merely catching up. Still, there's a lot that needs to happen. The first thing is for banks to consider the opportunities of open banking, rather than just the risks, because fundamental strategic choices may be unavoidable. Financial institutions may end up focusing on specific products or market segments and some may become utilities or even emulate technology companies by offering platforms. Open architecture is likely to alter the way banks operate as well: while banks traditionally are closed on Sundays and public holidays, an API stays open round the clock. Although temporary and contract workers can fill any gaps in existing staff, banks may need to hire new staff who are familiar with critical areas such as cybersecurity. In addition, customer data protection and ownership will become even more important in an open-architecture environment.

Panel discussion moderated by DK Sharma, Chief Executive Officer, America, Percipient Partners, with panellists:

- Matthias Kroner, Chief Executive Officer, Chairman of the Executive Board, Fidor Bank
- Brian Behlendorf, Executive Director, Hyperledger
- Michael Tang, Global Financial Services Digital Transformation Lead, Deloitte *(pictured)*
- James Lloyd, Asia-Pacific FinTech Leader, Ernst & Young

Continuing the conversation

And so the conversation continues. The Singapore FinTech Festival will return in November 2018 for more insight, innovation, and debate. For more information on Deloitte's involvement at the FinTech Festival, please visit www.deloitte.com/sg/fintechfestival2017.

Figure 1 - The Singapore FinTech Festival by the numbers

Festival visitors
30,000

FinTech Awards submissions
309

Investor capital raised
US$2 billion

Conference speakers
160

Countries represented
100

Hackcelerator finalists
20

Investor Summit participants
1,000

Conference exhibitors
300

FinTech Awards finalists
30

Hackcelerator submissions
580

The article is an excerpt of the report, "FinTech's place in the sun," which summarises the discussions that took place during the Singapore FinTech Festival. To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.

[6] Financial Services Industry Snapshot, Deloitte Global, June 2017, https://www2.deloitte.com/global/en/pages/financial-services/articles/gfsi-survey-snapshot.html.
[7] The Linux Foundation, "About," https://www.linuxfoundation.org/about/.

The future of risk in financial services

The regulatory and business environments have become more volatile and unpredictable. Financial institutions have also faced a tsunami of new regulatory requirements which have driven up compliance costs, while increased capital and liquidity requirements have reduced returns. At the same time, FinTech start-ups are threatening to disrupt traditional financial services business models.

As a result, risk management in financial services is at a crossroads. Financial institutions need to decide if they will continue with business as usual or rethink their approach to risk management. As they plan for the new era of risk management, institutions should consider the following six imperatives, which are also outlined in greater detail in Figure 2:

01. Increase focus on strategic risks and improve identification and management of these risks;

02. Rethink the three lines of defence by enhancing business unit responsibility for managing risks and clarifying second line of defence activities;

03. Leverage emergent technologies to increase efficiency and effectiveness of risk management;

04. Establish a formal conduct and culture programme to build customer trust and gain a clear strategic advantage;

05. Enhance risk management capabilities to build a nimble infrastructure able to address newer non-financial risks as well as the challenges of regulatory fragmentation; and

06. Manage capital and liquidity strategically by enhancing governance structures and decision-making processes.

In this article, we focus on three imperatives we believe will prove most critical in Southeast Asia (SEA):

Establish a formal conduct and culture programme. Recent instances of inappropriate behaviour by employees at financial institutions have led to an increased focus by senior management as well as by regulatory authorities on the importance of instilling a risk-aware culture and encouraging ethical behaviour by employees. Efforts in this area will need to be enhanced to demonstrate a programmatic and sustainable approach to conduct risk. Organisations are placing increased emphasis on an individual's ethical, compliance and history during the hiring process, as well as refreshing recruitment, induction, training and development frameworks. The Monetary Authority of Singapore is adding an ethics and skills component to existing financial adviser and market intermediary competencies.

Enhance risk management capabilities. Institutions will need to integrate their silo-ed responses to the many regulatory requirements that have been introduced in recent years. They will also need to leverage the power of RegTech solutions to increase their agility in responding quickly to new developments, while providing the analytics that support more effective risk management.

An important Basel regulation which will apply to Domestically Systemically Important Banks (DSIBs) in SEA is the BCBS 239 principles on risk data aggregation and risk reporting. Banks will need to continue efforts on data management programmes such as those spurred by the regulation. These requirements often trigger additional enhancements in the fields of data governance, data quality and risk reporting framework. They also push the banks to promote further collaboration among the key stakeholders: risk, IT, finance and business units.

Strategically manage capital and liquidity. Recent regulatory requirements have significantly increased capital and liquidity requirements. In the current low revenue environment, institutions will need to consider carefully the impacts of their business strategy on capital and liquidity so they can improve their returns on equity by optimising the use of these scarce resources.

Some banks in SEA face new liquidity requirements including the liquidity coverage ratio and the net stable funding ratio introduced in Basel III. In response, banks should develop a robust capability to measure capital and liquidity so the institution can understand the relative capital and liquidity needs of each business unit and how the business unit contributes to the institution's overall capital and liquidity profile. Institutions will then need to build capital and liquidity measures into their strategic plans and management approaches and re-evaluate them periodically.

While we've only highlighted three, institutions will need to address these six imperatives in a coordinated programme in order to be effective. Each institution will need to decide whether to continue with business as usual, running the risk of being unprepared for new risks and falling behind their peers and regulatory expectations or seize the opportunity to take risk management to an entirely new level that truly provides the capabilities to support the organisation's strategic plan.

The article, written by Ho Kok Yong, SEA FSI Leader and Somkrit Krishnamra, SEA FSI Risk Advisory Leader, first appeared in the November 2017 issue of Asian Banking and Finance.

Figure 2 - As they plan for the new era of risk management, institutions should consider the following six imperatives.

Increase focus on strategic risk

- More frequent identification of strategic risks
- Greater degree of consideration of disruption
- Focus on survival and earnings stability disruption (e.g., technology)
- Looking for “owners” of strategic risk to improve management

Establish a formal conduct & culture programme

- Increasing refinement and combination of culture, conduct and ethics management
- Greater alignment and integration of compliance and risk management to address conduct risk
- RCSA and eGRC being used for all processes including compliance
- Employ cognitive technologies to identify patterns of behavior that warrant future investigation, assess cultural changes, and identify misconduct

Rethink the three lines of defense model and risk alignment

- Realign responsibilities of business and risk processes
- 1st Line of defense (LOD) manages risk to improve accountability from an end-to-end ownership of the controls infrastructure
- 2nd LOD focuses on oversight and effective challenge
- Greater knowledge of operations for effective risk management
- Set up 1st LOD for further process simplification and cost reduction

Enhance risk management capabilities

- New regulations addressing specific non-financial risk related concerns such as conduct risk, capital adequacy, cybersecurity, data quality
- Rationalised processes will need to comply with different regulatory requirements in different markets
- Leverage the power of RegTech solutions to increase agility and the ability to respond quickly to new developments, while providing the analytics that support more effective risk management

Do more with less

- Establish Global Risk Management (GRM) Centers of Excellence and resource sharing
- Process re-engineering which would include rationalise and standardise processes
- Offshoring, nearshoring, outsourcing, headcount reduction
- Embracing emerging technologies such as robotics process automation, artificial/cognitive intelligence, natural language processing, and machine learning
- Leveraging new capabilities such as using business decision modeling to assess the cost of change, cost mutualisation, and use of cloud based services

Strategically manage capital & liquidity

- Initial focus on technical compliance capabilities
- Address processes and governance after technical capability delivery
- An operating model for capital, liquidity and provisioning to reflect active management enabled by greater alignment or integration of capital and liquidity management

Talent, technology, and transformation: Global executives' expectations for the future of financial services

About the survey

This report is based on a survey conducted by Deloitte from February to March 2017. More than 200 financial services senior executives were asked about their expectations for change based on emerging technology, regulation, and market dynamics.

The respondents represented firms from 28 countries, and a range of different areas of responsibility, including CEOs, chief operating officers, chief financial officers, line of business executives, chief risk and compliance officers, chief information and technology officers, and other product, sales, and marketing positions.

About 30 percent of respondents were from banks, and an equal number from insurance carriers. Investment management firms accounted for 25 percent of respondents, and securities firms accounted for the rest, about 15 percent. In terms of the geographic cohorts that form the foundation of the analysis, 101 executives from financial institutions from the G7 countries were one group, and 112 leaders from 21 other countries[8] formed the other group. For highlights of the survey results, please refer to Figure 3.

Around the world, financial services industry executives face many similar challenges. Chief among these is their struggle to keep pace with myriad changes coming at them from all directions: in particular, new technologies, new market players, and shifting customer demand.

A Deloitte survey of financial services executives globally revealed that geographic differences between larger G7 economies (Canada, France, Germany, Italy, Japan, the United States, and the United Kingdom) and non-G7 economies influence how financial services firms will be impacted, and what their executives are planning to do about it.

The analysis provided some insight regarding executives' expectations for the future:

- Many G7 leaders doubt the influence of some emerging technologies, and are less likely to include them in their current plans
- There is broad agreement about the influence of regulation, and relatively less concern about both current and emerging competition
- G7 executives see changes in talent and operations coming much sooner than those in the rest of the world
- Talent needs and gaps differ; G7 leaders are looking for industry and content knowledge, whereas others value flexibility and adaptability

Technology is a major change agent, but emerging technologies may not be in the driver's seat

While all of the executives surveyed believe change is coming, they disagree about the degree of change they will likely experience over the next five years. Nearly 50 percent felt that the industry will change radically, while the other half felt that change will come more gradually. Most respondents agreed on the root causes of change, however: More than two-thirds felt that technology innovation will play a key role in industry change, while nearly one-half believed regulation will have a major influence.

The survey focused on a specific set of emerging technologies—wearable devices, the Internet of Things (IoT), biometrics, robotic and cognitive automation (R&CA), cryptocurrencies, mobile payments, and blockchain—that have received a lot of press and attention from industry players. Many financial institutions are now experimenting with, and in some cases implementing, these technologies.[9] But the survey revealed a divergence in opinion about the role that these technologies will play in driving change; some FSI leaders are not convinced that they will all have an impact. And, given the lack of track record, these leaders are cautious about rolling them out to their clients.

8 The countries represented herein as the "rest of the world" are Australia, Austria, Belgium, Brazil, Colombia, Costa Rica, Denmark, Finland, Hungary, India, Ireland, Luxembourg, Mexico, the Netherlands, New Zealand, Nigeria, Singapore, South Africa, Sweden, Switzerland, and the United Arab Emirates.

9 "The Battle for Tech Talent is Heating Up. How Can Employers Close the Hiring Gap?" Indeed, 15 August 2017, http://blog.indeed.com/2017/08/15/how-employers-can-close-tech-hiring-gap/.

"There are some regional and national differences that are important to take note of. For example, even though the larger G7 economies are still dominant, large emerging markets are catching up. Research has shown that financial institutions in emerging economies can more easily implement modern core technology platforms in part due to the relative absence of legacy investment and integration with decades-old systems often found in organisations in the G7."

Kevin O'Reilly, FSI Consulting Leader, Deloitte Southeast Asia

Moving forward: Will slow and steady win the race?
Firms outside the G7 see their futures as being much more dependent upon emerging technologies, while many in the world's largest economies wait for proof of impact. But in light of the rate of exponential change in technologies, it's quite possible that this complacency/scepticism among the G7 FSI firm executives might put them at a disadvantage. By that point, they may be too late to capture a leadership position. A handful of additional insights can also be drawn from the survey findings:

- Firm leaders around the world are less likely to be preoccupied with potential FinTech disruption moving forward. They do, however, recognise the need for innovation; acquiring talent with non-traditional profiles may be an increasing part of the solution.
- Outside of the United States, where regulatory tightening is expected, firms will likely need to continue to push for improved risk management and compliance protocols.
- G7 financial institutions may seek to increase the pace of business transformation given expectations for rapid change. But they may leave opportunities for improvement on the table if emerging technologies such as robotic and cognitive automation, blockchain, and the IoT are not in the playbook.

Leaders in both groups can benefit from considering these factors in their ongoing strategic planning and investment cycles, as well as in thinking about how they apply to their particular firms or markets.

The article is an excerpt of the report, "Talent, technology, and Transformation: Global executives' expectations for the future of financial services" written by Jim Eckenrode, Executive director of the Center for Financial Services. To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.

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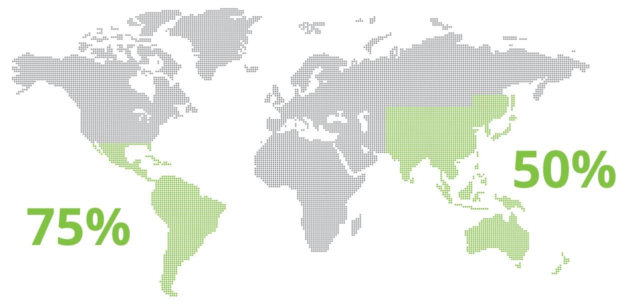
Figure 3 - Financial Service Snapshot: Industry views on talent, technology & transformation

Deloitte Global conducted a marketplace survey in Q1 of 2017.

WHAT DID WE LEARN?



Almost 2/3 of respondents felt **TECHNOLOGY WILL HAVE THE GREATEST IMPACT** on the financial industry in the next two years, ranging from over 75% in Latin America to just over 50% in Asia Pacific

MORE THAN ½ of respondents expect **FINANCIAL SERVICES TO CHANGE SIGNIFICANTLY** in the next five years, especially in Asia Pacific and Europe

REGULATORY AND GEOPOLITICAL ISSUES were also cited as causes of industry change, but these varied by sector

Capital markets firms are highest in this expectation at **68%** while insurers are lowest at **46%**

BUY SIDE / SELL SIDE

Over 50% of buy-side firms saw **REGULATION AS A DRIVER OF CHANGE,** but less than 1/3 of the sell-side did

CHANGING CUSTOMER EXPECTATIONS was cited as a key driver of industry change, ranging from over 70% in Asia Pacific to only 40% in North America

Almost 1/2 of asset managers viewed **REGULATION AND GEOPOLITICAL ISSUES** as having a large impact, while only 1/4 of insurance executives did

We spoke with more than 200 financial services executives around the world.

TALENT

Recent geopolitical developments have not dampened respondents' recognition that **GLOBAL EXPERIENCE** will be an important talent need, but it is valued less than in North America

ALMOST ½ of insurers cited **CAPACITY TO ANTICIPATE CHANGE** as the most important need

INNOVATION, PRODUCT DEVELOPMENT AND I.T. talent shortages are anticipated across all sectors

Capital market firms will need talent upgrades in **RISK & COMPLIANCE AND OPERATIONS**

As firms increase automation, **60%** PLAN TO RETRAIN EXISTING STAFF; **1/3** EXPECT TO REDUCE HEADCOUNT but this varies by sector

Insurers will look to reposition existing team members by **OVER A 2:1 MARGIN** versus reductions, while securities firms will rely on **MORE OF A BALANCED MIX**

OPERATING MODEL TRANSFORMATION

OVER ¼ of respondents expect **OPERATING MODELS** to be among the top three areas of financial services affected by change

Of that 1/4, nearly all are located in **EUROPE, THE MIDDLE EAST, AND NORTH AMERICA**

Within that group, **50%** expect the changes to happen within the next **TWO YEARS**

BY A MARGIN OF 2:1, this group believe a capacity to **ANTICIPATE CHANGE** is a top talent need

They also overwhelmingly believe **AN UNDERSTANDING OF REGULATION AND RISK** is necessary

Close to half anticipate a **TALENT SHORTAGE IN OPERATIONS**

How did things unfold?

TECHNOLOGY

Respondents saw a greater near-term impact from **SENSING TECHNOLOGIES** such as blockchain and robotic process automation

BANKERS were more likely to rate each of these as having significant to high near-term impact as compared to their peers in other sectors

Many areas are expected to be impacted by technologies, especially **CUSTOMER AND RISK MANAGEMENT,** but this expectation varies by sector

97% of insurers expect **OPERATIONS** to undergo transformation as a result of I.T.

Bankers and capital market firms cited the **CUSTOMER INTERFACE** as being most likely to see changes

Asset managers believed **INFORMATION TECHNOLOGY** would see the greatest change

REGULATORY TRANSFORMATION

OVER ½ of survey respondents anticipate **CONTINUED REGULATORY TIGHTENING** in the near term

... which is cited as the overall **1ST DRIVER OF INDUSTRY CHANGE** moving forward

Bankers are **2x** as likely as their counterparts in other industry sectors to **ANTICIPATE DECLINE** in the regulatory burden

LESS THAN ⅓ of North American respondents expect regulatory tightening moving forward, as compared to 2/3 in the other world regions

Larger institutions expect that regulatory intensity will **STAY THE SAME OR BE REDUCED** going forward

The smaller the institution, the higher the anticipation that **INCREASED REGULATION** will emerge

A wave of change: The new status quo in the financial services ecosystem

FinTechs have materially changed the basis of competition in financial services, but have not yet materially changed the competitive landscape, according to a new report, "Beyond FinTech: A pragmatic assessment of disruptive potential in financial services," by Deloitte and the World Economic Forum.

The new report represents the culmination of three years of research into the transformative role of FinTechs. The final phase of research builds on the research of Deloitte and the Forum's 2015 report, conducting a broader exploration of the forces reshaping the financial services ecosystem.

Many FinTechs came into existence with the goal of overtaking incumbents as the new dominant players in financial services, but have shifted to building partnerships as they struggle with scale and customer adoption.

Laying the foundation for future disruption

Although FinTechs have failed to disrupt the competitive landscape, they have laid the foundation for future disruption. The success of FinTechs in changing the basis of competition, as well as the increasing pace of technology, means that while financial institutions have the potential to improve rapidly, they face rapid disruption both now and in the future.

Some financial institutions have turned the threat of FinTechs into an opportunity. The proliferation of FinTechs provides financial institutions with a "supermarket" for capabilities, allowing them to use acquisitions and partnerships to rapidly deploy new offerings. However, the ability to "shop" the FinTech landscape for capabilities is not limited to incumbent institutions. Today, new entrants face significantly lower technological barriers to entering financial services, with potential long-term implications for the competitive landscape.

Shifting the competitive landscape of the financial ecosystem

Our research revealed eight key forces that have the potential to shift the financial services landscape. These forces include three core findings:

- **Cost commoditisation:** Financial institutions may aggressively commoditise their cost bases, removing it as a point of competition and creating new grounds for differentiation. Facing enormous pressure to reduce their cost base, incumbent financial institutions are embracing new technologies, as well as working with long-time competitors and new entrants alike, to commoditise cost drivers that do not provide competitive differentiation. Incumbents are exploring the creation of new utilities and the expansion of existing utilities' roles, in order to standardise processes and avoid duplicating work between companies. In Singapore, the Monetary Authority of Singapore is working with several banks to build a national Know Your Customer (KYC) utility, which will reduce duplication and lower costs for all financial institutions.

- **Platforms rising:** The rise of customer choice will have profound implications on the design and distribution of products, and will likely force companies to shift roles. Platforms that offer the ability to engage with different financial institutions from a single channel may become the dominant model for the delivery of financial services. China's Tencent's Webank platform, acts as a storefront, allowing retail customers to purchase products from multiple competing vendors of credit and asset management services.

  In the absence of a mature payments system in China, the Alipay mobile payment app now owns over 50% of the US$5.5 trillion Chinese mobile payments sector, with tech giant Tencent as its only major competitor.

- **Financial regionalisation:** Differing regulatory priorities, technological capabilities, and customer needs are challenging the narrative of increasing financial globalisation and making way for regional models of financial services suited to local conditions. FinTechs will likely face serious obstacles to establishing themselves in multiple jurisdictions, even as technology lowers barriers to entry. This in turn paves the way for incumbents to become attractive partners for FinTechs seeking to enter new markets as they look for opportunities to rapidly acquire scale.

Additional forces uncovered in the report include:

- **Bionic workforce:** As the ability of machines to replicate the behaviours of humans continue to evolve, financial institutions will likely need to manage labour and capital as a single set of capabilities.
- **Data monetisation:** Data may become increasingly important for differentiation, but static datasets will likely be replaced by flows of data from multiple sources combined and used in real-time.
- **Experience ownership:** Power will likely transfer to the owner of the customer interface; pure manufacturers must therefore become hyper-scaled or hyper-focused.
- **Profit redistribution:** Technology will likely enable organisations to bypass traditional value chains, thereby redistributing profit pools.
- **Systemically Important Techs:** Financial institutions increasingly resemble, and are dependent on, large tech firms to acquire critical infrastructure and differentiating technologies.

The fast pace of the innovation cycle in the industry means that a financial institution's success is predicated on business model agility and the ability to rapidly deploy partnerships. Financial institutions risk being left behind if they do not embrace collaboration in open ecosystems with FinTechs. At the same time, as power transfers to the owner of the customer experience, financial institutions will need to take a page from technology firms such as Apple and Google, and start to focus on providing a seamless customer experience.

The article is an excerpt of the report, "Beyond FinTech: A pragmatic assessment of disruptive potential in financial services." To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.

“FinTech in Southeast Asia is thriving, particularly in Singapore. This is in part due to the favourable regulatory conditions that the Monetary Authority of Singapore have laid out. Singapore has signed more FinTech cooperation agreements than other regulatory bodies in the world. MAS has also established a regulatory sandbox which allows businesses to test innovative products, services and business models in a live environment, thus facilitating interaction between financial institutions, regulators and start-ups. Other countries in the region are also following suit, recognising the evolving impact of FinTech in the industry.”

Ho Kok Yong, Financial Services Industry Leader, Deloitte Southeast Asia

Cyber regulation in Asia Pacific: How financial institutions can craft a clear strategy in a diverse region

In the modern digital economy cyber attacks and data breaches are inevitable, and without proper regulatory and supervisory capabilities, some regulators in Asia Pacific believe the next financial crisis might be triggered by a cyber-attack. Across the globe, and within Asia Pacific, cyber-attacks are increasing in frequency and sophistication. It has been estimated that such attacks cost the global economy one per cent of annual GDP[10] and cybercrime up to US$575bn per year.[11]

The financial system relies on confidentiality of data, protection of deposits, and provision of critical services, and all of this has come under threat in recent years as the frequency of cyber attacks has increased. Cyber risks are only set to increase as financial institutions become more data-driven digital businesses, and as more financial services are delivered online. If cyber risks and responses are not well managed, it could even threaten the stability of the financial system. Only those financial institutions who have robust cyber security and cyber risk management will be able to retain customers, maintain trust and enhance their competitive edge.

There are a number of existing challenges Asia Pacific faces in relation to cyber security including:

- **Varied regulatory approaches**
  Although cyber threats cut across borders, regulatory approaches to cyber risk in Asia Pacific are varied and localised, with no significant steps taken yet toward harmonised standards across the region. Financial institutions struggle to understand the regulatory differences at a country level, to be aware of emerging threats and to design cyber risk programmes that are coherent and robust across jurisdictions. Despite that, there is a general consistency with regulatory approaches going beyond just security to focus on governance, vigilance and response.

- **Outsourcing of work**
  The need to defend against outsourcing risk is an emerging and growing area of concern, in particular for those economies where IT services are widely contracted out to jurisdictions with weaker cyber security regimes.

- **Lack of human resources capabilities**
  Another challenge for financial institutions operating in Asia Pacific is that organisations have a shortage of dedicated IT security specialists and cyber professionals, meaning they may have difficulty staying up to date with the pace of change in the cyber landscape. Many financial institutions lack management recognition or understanding of the importance of cyber security and fail to adopt a coordinated approach across functions.

A framework for assessing approaches to cyber risk

Cyber attacks can be extremely damaging for financial institutions, and unfortunately they are here to stay. As such, a focus on robust management of cyber risk remains critical. The active development of cyber security regulation across Asia Pacific jurisdictions will also continue to progress andfinancial institutions will need to ensure that they keep pace with changes and refinements. While it may seem that there are many emerging regulations and standards, the underlying direction and overarching themes are clear. Cyber programmes that are designed with security, vigilance and resilience in mind, guided by a clear strategy and supported by strong governance measures, will be well placed to meet evolving standards.

Figure 4 outlines some recommendations on how financial institutions can get started on their cyber risk strategy.

The article is an excerpt of the report, "Cyber regulation in Asia Pacific: How financial institutions can craft a clear strategy in a diverse region." To receive a copy of the full report, drop us an email at sgindustries@deloitte.com.

[10] Commonwealth of Australia Australia's cyber security strategy: Enabling innovation, growth & prosperity (April 2016) https://cyber securitystrategy.dpmc.gov.au/assets/img/PMC-Cyber-Strategy.pdf
[11] Symantec Internet Security Threat Report Volume 21 (April 2016) https://www.symantec. com/content/dam/symantec/docs/reports/istr-21-2016-en.pdf

Figure 4 - Recommendations on how financial institutions can get started on their cyber risk strategy.

01 Set a risk appetite
Understand the business and strategic context to set cyber risk appetite and desired target state. Incorporate the cyber risk appetite into existing risk management and governance processes.

02 Develop a cyber strategy
Develop an executive led cyber strategy based on unique business needs and threats. Make sure this is not isolated within the IT department, for example by incorporating cyber security strategy into the enterprise risk management framework.

03 Keep the board and executive involved
Ensure that the board and executives are made aware of and are actively involved in cyber risk management, through regular meetings and updates on cyber risks, mitigation activities and potential business impacts.

04 Build a cyber risk culture
Embed cyber risk values and behaviours into firm culture by building a cyber risk aware workforce. Strong leadership, a coordinated communications plan, training and continuous learning, and appropriate skills recruitment are all important elements.

05 Regular vulnerability assessments and penetration testing
Conduct regular vulnerability assessments and penetration testing to ensure defence preparedness and early detection of security loopholes. As attacks change, update policies, procedures and drills to cover new threats.

06 Establish a dynamic contingency plan
An incident contingency plan should include documenting attack details, data backup, measures to prevent damage spreading and for mitigating disruptions to critical business processes, as well as root cause analysis. Continually test, review and improve, including through executive war gaming.

07 Stay informed
Keep informed of the latest and emerging cyber threats, security developments, industry standards and regulatory thinking. Incorporate learnings into internal discussions, policies, procedures and processes.

08 Review and iterate
Adopt a proactive and adaptive approach by regularly reviewing and iterating governance and cyber response strategies to ensure their continuing effectiveness and alignment with business strategy and regulatory expectations.

09 Enlist innovative solutions
Consider investing in innovative digital solutions, which can facilitate the implementation of security procedures across a large organisation and reduce the speed at which attacks evolve.

10 Engage externally
Engage with peers and regulators to encourage information sharing, cooperative and coordinated responses and the development of harmonised standards.

"As the home to the world's fourth largest internet population, Southeast Asia is particularly vulnerable to cyber attacks as it has neither a developed system of data protection laws nor a strong adoption of cyber security best practices. However, the region is moving in the right direction despite the current environment. Singapore provides a prime example on how close cooperation between the public and private sectors can help create a robust and resilient cyberspace"

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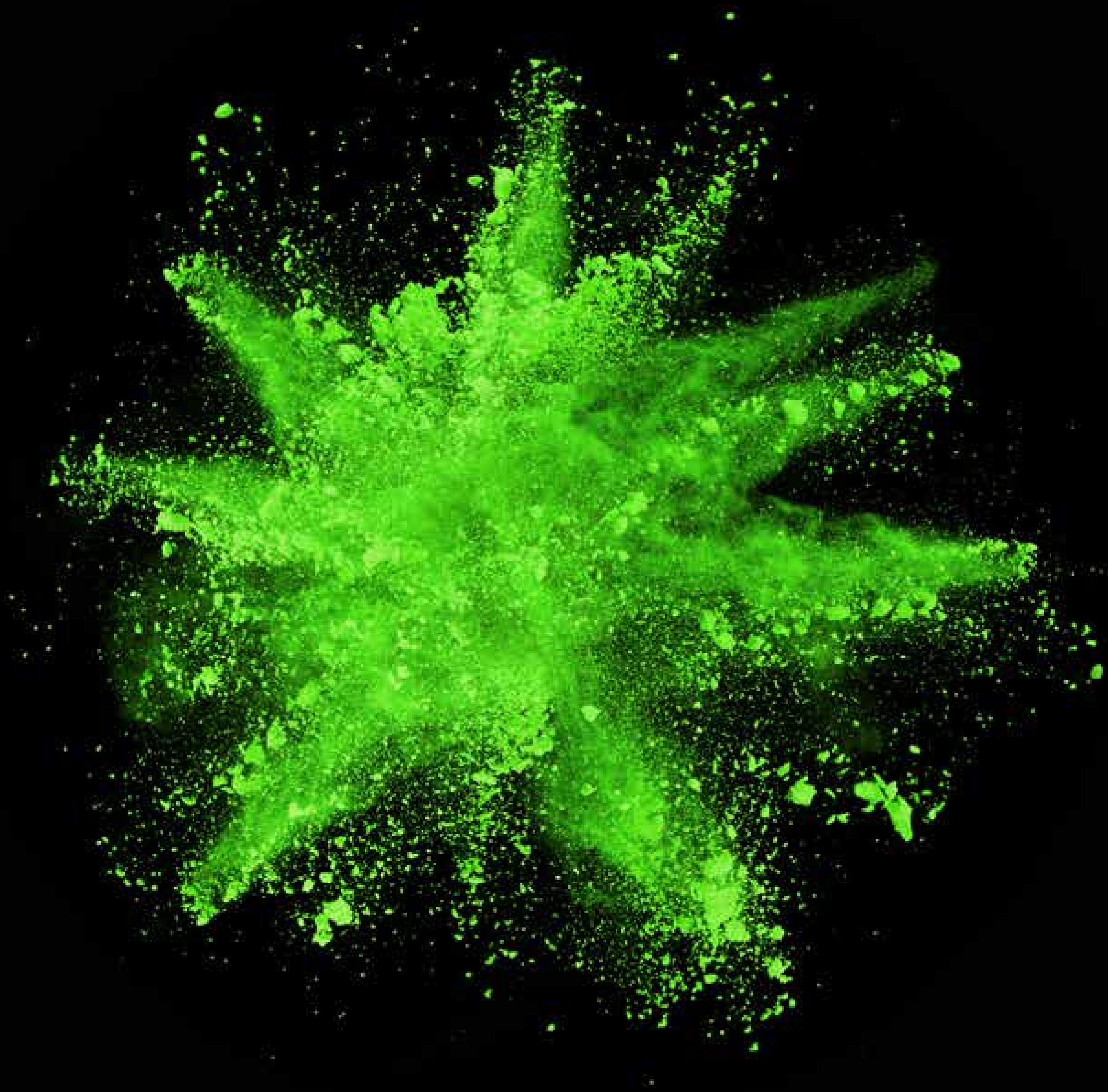

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