A Malaysian discourse | November 2016

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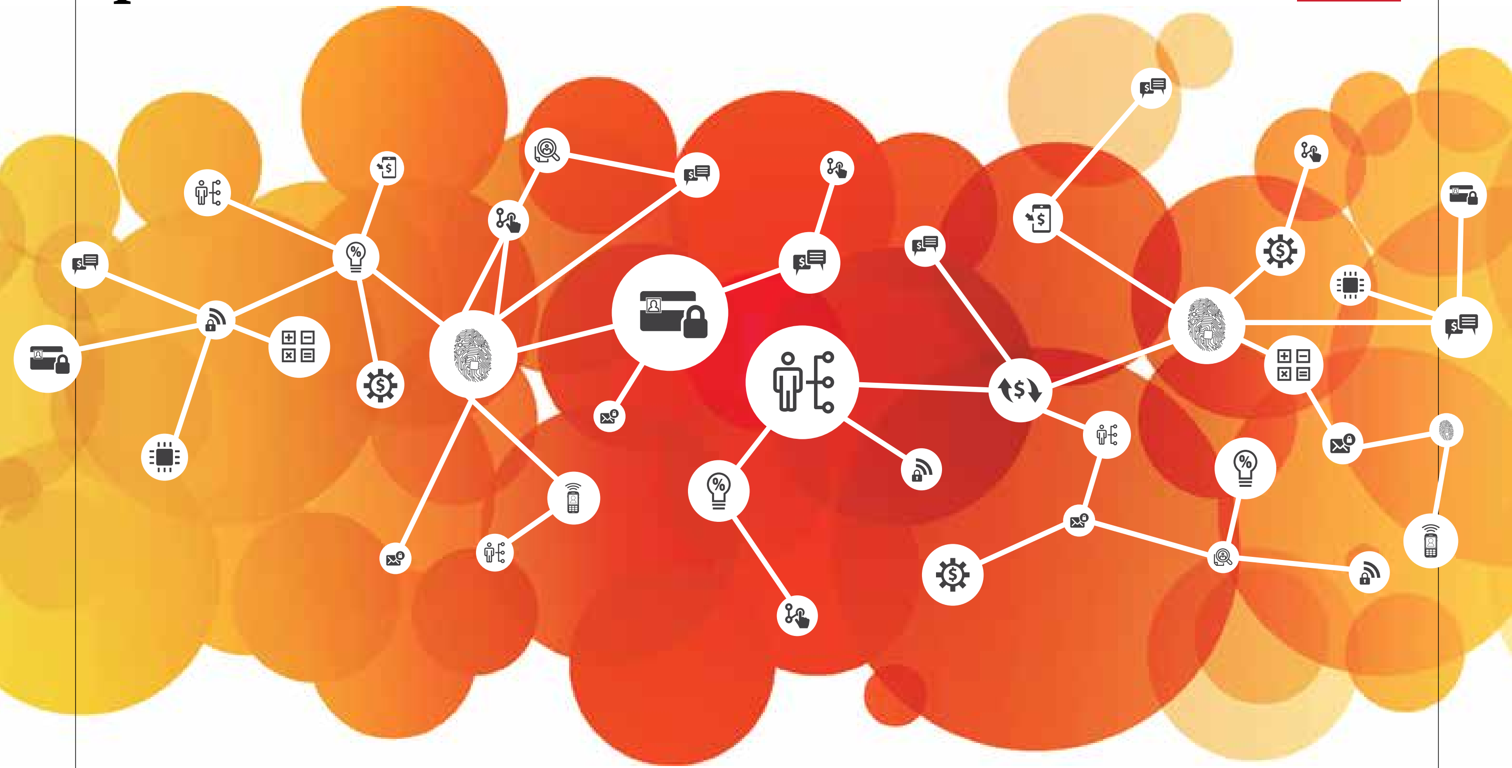

Catching the FinTech Wave

A survey on FinTech in Malaysia

KEY MESSAGES

THE CONCERNS

82% of FIs worry about losing to FinTechs

Top threats

1. Regulatory uncertainty
2. Pressure on margins
3. IT security

Areas most likely to be disrupted

- Fund transfers and payments
- Consumer banking
- General insurance

THE PROSPECTS

59% of FIs are currently dealing with FinTechs

Top opportunities

1. Differentiation
2. Cost reduction
3. Customer retention

Areas FIs need to focus on

- Boosting customer experience
- Improving operations
- Blockchain: unfamiliar and untapped

THE FUTURE

ACT NOW

THERE'S NO TIME LEFT TO WAIT-AND-SEE

CHALLENGE existing assumptions **&** **EMBRACE** the customer's perspective

DRIVE THE CREATION of a holistic FinTech ecosystem

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FOREWORD

FinTech at the gates

Financial technology (FinTech) is touted as a game changer — the revolution that is turning the financial services industry on its head. All this talk about how FinTech is blurring the lines between the financial services (FS) and technology sectors evokes a sense of upheaval and change, with the outlook and final outcome uncharted and uncertain.

Is FinTech a
THREAT
or an
OPPORTUNITY OF A LIFETIME?

Fate favours the brave and the bold. Yes, there will be risks involved, but not taking a step into FinTech is a plan destined to fail.

For financial institutions (FIs), the question on everyone's minds is, "Is FinTech a threat or an opportunity of a lifetime?"

Like any revolution, fate favours the brave and the bold. Yes, there will be risks involved, but not taking a step into FinTech is a plan destined to fail.

Some may consider taking on FinTech half-heartedly, but if you see how digital start-ups have revamped retail, music, lodging and even taxi services, you'll see that taking the back seat in the digital economy makes for a dangerous ride.

Incumbent industry players need to give their all when responding to the digital disruption, otherwise they risk losing their profit pool, or worse, becoming obsolete.

Though all this paints a picture of doom and gloom, there is a flip side to FinTech. The beauty of the digital world is that it is a sharing one. You don't need to go at it alone.

FIs and FinTech players can leverage each others' strengths and balance out each others' weaknesses. However, this is not a partnership where only the smaller firm accommodates the larger one.

FIs will need to open their minds and learn how to act and behave like a FinTech outfit: unlearning and relearning how the finance function, value chain, distribution system and marketing channels work in a digital world.

In order for FIs to thrive in the midst of this digital revolution, they will need a business strategy for the digital age, not just a digital strategy. Technology should be the enabler for strategy, not the entirety of it.

FOREWORD

A fit-for-digital business strategy will entail understanding the changing needs of customers, and developing operating models and capabilities to deliver products and services that can meet those needs.

Understanding that this is a considerable undertaking for Malaysian FIs, and in order to help them prepare for the FinTech disruption, the Asian Institute of Chartered Bankers (AICB) and PwC Malaysia have collaborated to develop a Malaysia FinTech report.

INSIGHTS FROM

- Proprietary survey of FIs and FinTech companies
- Interviews with top management from FIs and FinTech companies

FOREWORD

Drawing from our proprietary survey and interviews with C-suites and other top management from both FIs and FinTech companies, we aim to present Malaysian FS players' attitudes towards FinTech, compare their perspectives against their global peers', and offer insights into how they too can catch a ride on the FinTech wave.

We hope this report will provide an informative read, and help you prepare for the FinTech revolution that is upon us.

Prasad Padmanaban
AICB Chief Executive Officer

Soo Hoo Khoon Yean
PwC Malaysia Assurance Leader

ABOUT THE SURVEY

Our approach

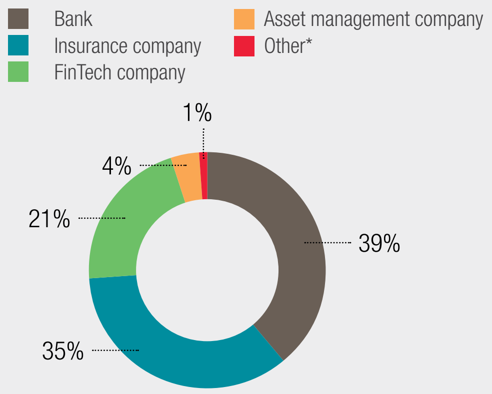
We draw our insights from:

- Primary data from our online survey of respondents from the banking, insurance and asset management segments of the FS industry, as well as FinTech companies which we conducted from 19 July - 29 August 2016.
- Face-to-face and written interviews conducted with various market players from 24 August - 12 October 2016.
- Proprietary data from DeNovo, PwC's Strategy& platform focused on FinTech.
- Comparisons of our survey results to the global FinTech survey results published in the PwC Global FinTech Report, "Blurred lines: How FinTech is shaping Financial Services".

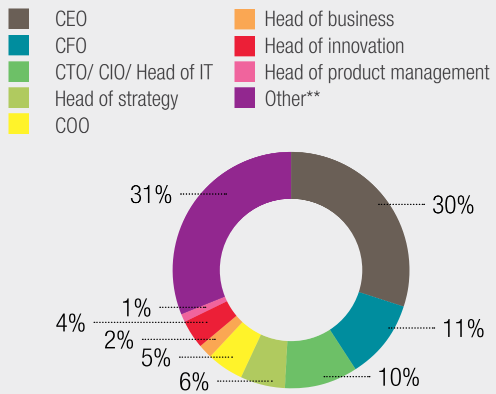
Survey participant profile

Total online survey respondents: 84

Figure 1: Composition of online survey respondents



Type of companies



Type of respondents

Other represents a national supervisory institution

*** Other includes Chief Marketing Officers; Chief Risk Officers; Chief Digital Officers; heads of corporate banking, corporate accounting, compliance and analytics; general managers; directors and consultants*

Source: AICB and PwC Malaysia FinTech Survey 2016

INTRODUCTION

Financial technology (FinTech) is a marriage of sorts between the financial services (FS) and technology sectors — a dynamic segment where technology-centric startups innovate the products and services traditionally offered by financial institutions (FIs).

FINTECH FUNDING

11%

of total venture capital funding in Southeast Asia (2015 - 1H2016)[1]

In 2015 and the first half of 2016, US$345 million, representing 11% of total venture capital funding in Southeast Asia went into FinTech[1]. The region's growing economies and relatively large underbanked populations make it doubly attractive for new market entrants.

We set out to assess Malaysian FS players' attitudes towards this emerging segment through an online survey and several interviews of top management from both the incumbents and newcomers. Here's what we found.

[1]Source: Dymon Asia Capital, Tech in Asia, DMP, PwC and Dealstreet Asia, as cited by TechCrunch, August 2016

Section

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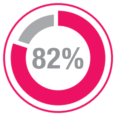
SKITTISH OVER FINTECH

SKITTISH OVER FINTECH

Section 1

Around the world, the digital disruption brought about by FinTech companies is reshaping the industry's status quo. In October 2016, one of the largest German banks announced that it will digitalise and automate 80% of its processes, cutting almost 19% of its workforce by 2020.

THE FINTECH THREAT



Are Malaysian FIs feeling the heat?

Yes - **82%** of FIs

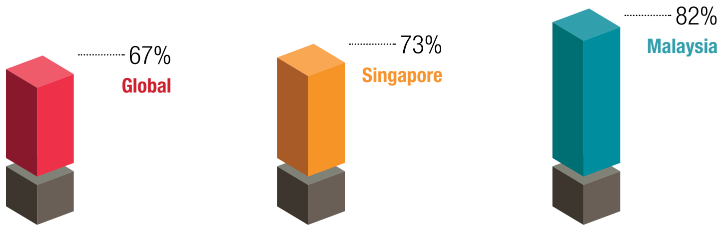
A significant majority of our Malaysian FI respondents are concerned about the threat FinTech poses to their business.

The proportion of Malaysian FIs that see some risk to their business is significantly higher than their global counterparts—higher, in fact, than even their Singaporean neighbours at 73%[1].

There's good cause for concern. As we will explore in the following sections, the digital revolution is not something FS players can afford to miss.

FIGURE 2: FINTECH DISRUPTION

Survey participants who believe that part of their business is at risk of being lost to FinTech companies.



Base: Global – 509, Malaysia – 66
Sources: AICB and PwC Malaysia FinTech Survey 2016; PwC Global FinTech Survey 2016; PwC Global FinTech Report, Executive Summary: Singapore Highlights

[1]*Source: PwC Global FinTech Report, Executive Summary: Singapore Highlights*

SKITTISH OVER FINTECH

REVENUE AT RISK

Could FIs lose more than 20% of their business?

Yes - **22%** of FIs

More than a fifth of our FI respondents believe FinTech companies could have a significant impact on their business (i.e. revenue).

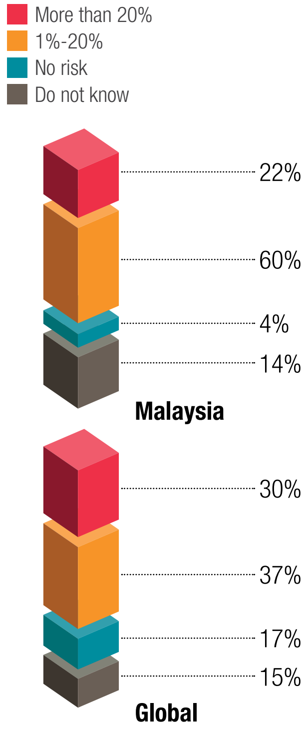
This proportion is even higher amongst banking respondents, with 33% believing FinTech companies could usurp more than 20% of their revenues.

For banks, there's a big piece of pie at stake: at RM9.7 billion, total fee-based income accounted for 19% of the entire banking system's gross income in 2015[1]. And a third of our banking respondents are saying that more than 20% of that could be lost to the newcomers!

> *"Central bankers are taking away your lunch, regulations are squeezing your lunch, FinTech is eating your lunch and some of you may still be out at lunch."*
>
> **Tan Sri Andrew Sheng**
> *Former Hong Kong Central Banker*

FIGURE 3: PERCENTAGE OF BUSINESS AT RISK

What percentage of your business (i.e. revenue) is at risk of being lost to standalone FinTech companies within the next five years?



Base: Malaysia – 66, Global – 509
Sources: AICB and PwC Malaysia FinTech Survey 2016, PwC Global FinTech Survey 2016

[1]*Source: Financial Stability and Payment Systems Report 2015, Bank Negara Malaysia*

SKITTISH OVER FINTECH

> *The boundaries between traditional financial organisations, technology companies and telecommunications firms are being smashed.*
>
> **John Shipman**
> *PwC Asia FinTech Leader*

SECTORS MOST LIKELY TO BE DISRUPTED

What are the top 3 areas that will be disrupted?

Payments, consumer banking and general insurance

- FIs and FinTech companies are in agreement

Both the Malaysian incumbents and FinTech companies think alike when asked about the top three FS areas that are prime for disruption (see Figure 4).

The fund transfers and payments sector is seen as the most likely area to be disrupted by FinTech. Increased adoption of biometric authentication, token services and global mobile payment services such as Apple Pay and Android Pay have the potential to redefine revenue distribution and profit pools across the payments value chain.

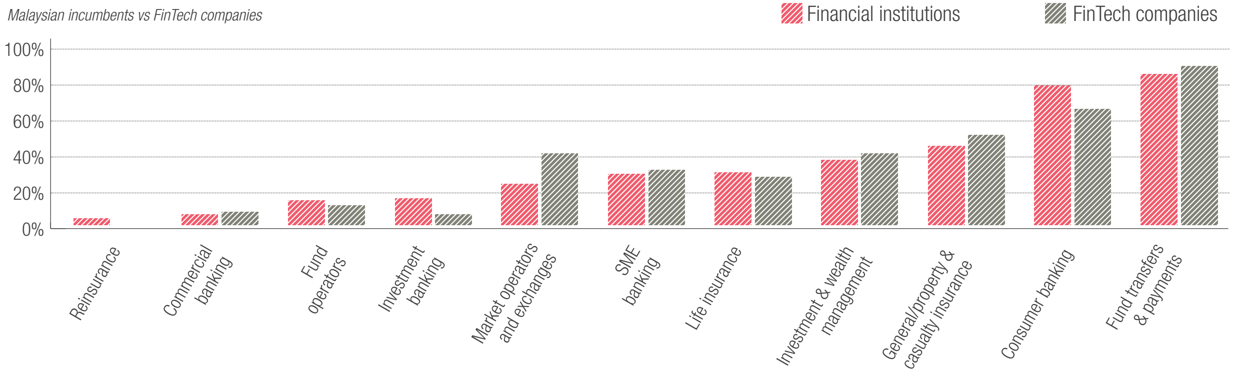
Consumer banking is the next sector that is most likely to see significant changes. FinTech can offer consumers simpler, faster and cheaper services, many conveniently available on mobile devices. Evolving consumer habits, especially amongst millennials – who value personalised service, experience and connectivity – are also redefining consumer banking.

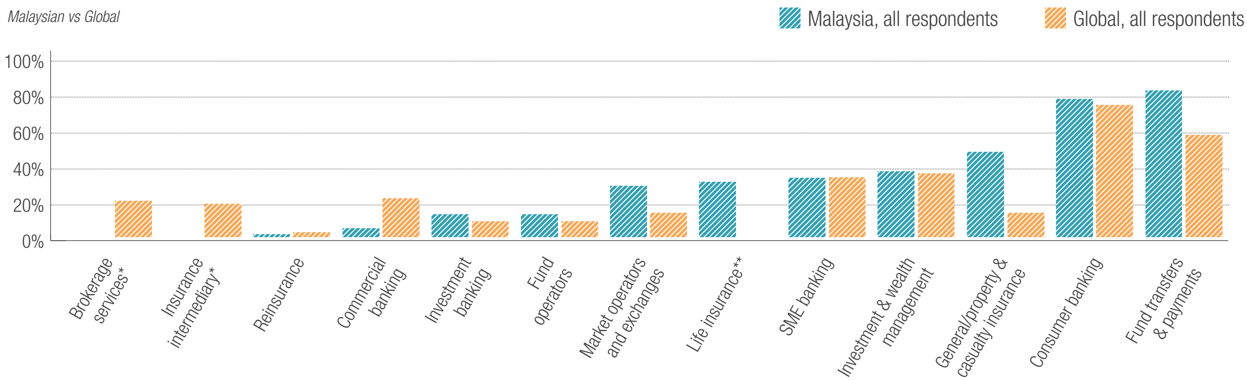
However, contrary to the results of PwC's Global FinTech Survey, our Malaysian respondents rated **general insurance** as being more likely to be disrupted compared to investment and wealth management. This is perhaps due to the threats insurance-focused FinTech (InsurTech) pose to the existing agency underwriting and distribution models.

SKITTISH OVER FINTECH

FIGURE 4: AREAS MOST LIKELY TO BE DISRUPTED

In your opinion, which part of the financial sector is most likely to be disrupted by FinTech over the next five years ?





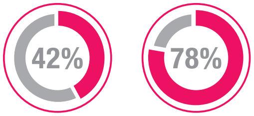
**Brokerage services and insurance intermediary were not covered in the Malaysia FinTech Survey*
***Life insurance was not covered in the PwC Global FinTech Survey 2016*

Base: Malaysian incumbents – 66, Malaysian FinTech companies – 18; Malaysia – 84, Global – 504
Sources: AICB and PwC Malaysia FinTech Survey, PwC Global FinTech Survey 2016

SKITTISH OVER FINTECH

CONSUMER READINESS

Are consumers ready for FinTech?



Yes - **42%** of incumbents
78% of FinTech respondents

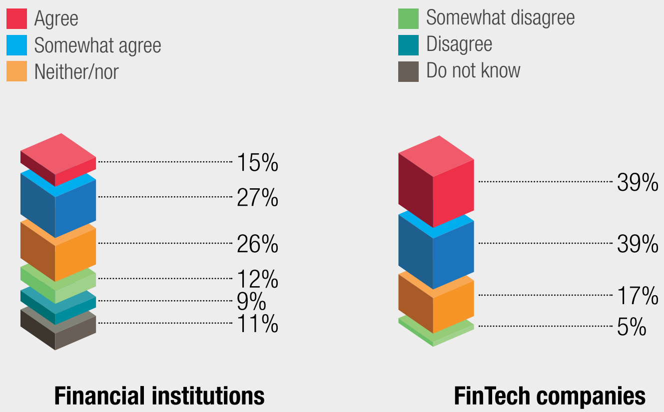
While they agree on which areas are likely to be disrupted, there is a huge difference between how FIs and FinTech respondents perceive consumer readiness for FinTech.

The FIs' more conservative view of consumer readiness may be due to perceptions about digital adoption among local consumers. The e-payment penetration rate in Malaysia is relatively low compared to more mature markets (see Figure 6). While the country's e-payment transactions per capita had increased to 82 in 2015[1], Bank Negara Malaysia's (BNM) target of 200 e-payments per capita per annum by 2020 suggests that Malaysia is still seven to eight years behind the United Kingdom, which had already exceeded such levels in 2013[2].

Or do the incumbents appear unconvinced about customer readiness simply because their territory is at stake?

Figure 5: Customer readiness

"Malaysian consumers are ready to embrace FinTech products and innovations."
To what extent do you agree with the statement ?



Base: Financial institutions – 66, FinTech companies – 18
Source: AICB and PwC Malaysia FinTech Survey 2016

[1] *Source: Financial Stability and Payment Systems Report 2015, Bank Negara Malaysia*
[2] *Source: Bank for International Settlements (2014) Statistics on payment, clearing and settlement systems in the Committee on Payment and Settlement Systems (CPSS) countries, as cited by Bank of Thailand*

SKITTISH OVER FINTECH

> *"The biggest impediments to our future success was our past success. A lot of big companies extrapolate from what was and reimagine what could be, and that is a danger for big companies."*
>
> **Daniel Schulman**
> *President and CEO of PayPal (formerly Group President of Enterprise Growth at American Express)*

Challenge existing assumptions

In managing digital disruption, it is important to ask the right questions and not let biases cloud judgement.

In the case of consumer readiness, do FIs have relatively unoptimistic views because they assume:

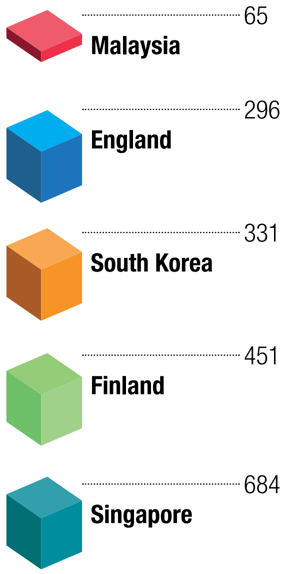
- Malaysian consumers aren't as far along the technological adoption curve;
- Consumers would not find FinTech solutions useful; or
- There are no suitable FinTech apps in the market that meet consumers' needs?

With smartphone penetration in Malaysia expected to exceed 100% by 2018[1], consumers' exposure to digital products and services will only increase. Their readiness for and ease of accepting new technology likely will too. Consider the fact that the number of people turning to electronic fund transfer services is actually increasing — the annual growth rate for Interbank GIRO had increased from an average of 18.8% prior to 2013 to 34.1% in 2014 and 2015[2].

For FinTech innovations, acceptance could merely be a question of designing the right solution that meets consumers' needs.

FIGURE 6: COMPARISON OF E-PAYMENT USAGE

Numbers represent each country's e-payment transactions per capita per annum in 2013.



Sources: Bank for International Settlements (2014) Statistics on payment, clearing and settlement systems in the CPSS countries, European Central Bank, and Bank Negara Malaysia, as cited by Bank of Thailand

[1] *Source: South East Asia and Oceania Ericsson Mobility Report, November 2015*
[2] *Source: Bank Negara Malaysia Deputy Governor's Keynote Address at the SWIFT Business Forum Malaysia, March 2016*

Section

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DARK CLOUDS AND SILVER LININGS

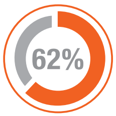
DARK CLOUDS AND SILVER LININGS

Section 2

When asked about the top threats arising from the FinTech disruption, our respondents point to regulatory uncertainty, pressure on margins and information security.

TOP THREATS

What are the top threats arising from the FinTech disruption?



63% Regulatory uncertainty
62% Pressure on margins

Regulatory uncertainty slightly edges out pressure on margins (63% vs 62%) as the number one threat. Information security marginally outranks loss of market share, making for a close third and fourth place with 56% and 54% of the respondents' votes respectively.

Regulation: from high to less

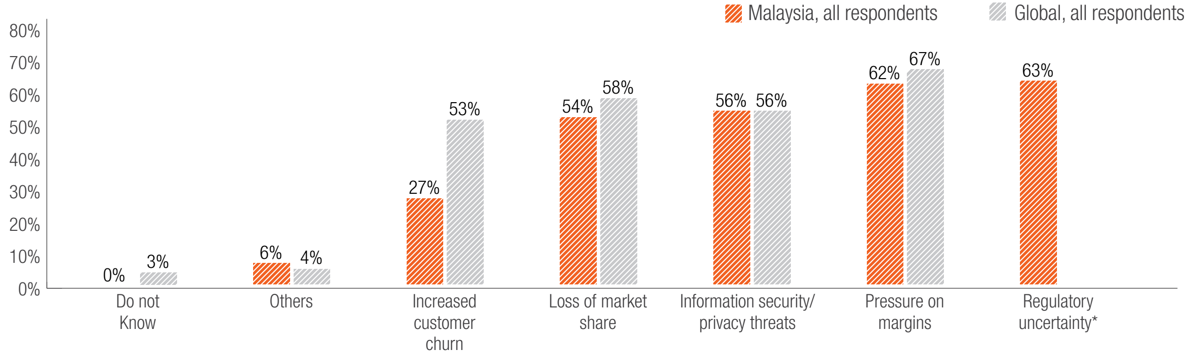
In order to provide a conducive and safe environment for FinTech to innovate and grow, BNM has issued a regulatory sandbox framework for FIs and FinTech players to experiment with new solutions in a production or live environment (see following section for details).

While this is a welcome step in the right direction, our survey respondents are likely concerned about how regulators are going to move from a highly regulated FS environment to a less regulated one for FinTech. This is why regulatory uncertainty is rated as the top threat arising from the FinTech disruption.

DARK CLOUDS AND SILVER LININGS

FIGURE 7: THREATS POSED BY FINTECH

In your opinion, what are the main threats related to the rise of FinTech within your industry?



**Regulatory uncertainty was not covered in the PwC Global FinTech Survey 2016*

Base: Malaysia – 84, Global – 510
Sources: AICB and PwC Malaysia FinTech Survey 2016, PwC Global FinTech Survey 2016

Regulatory uncertainty, if not addressed, can lead to missed opportunities for investing in FinTech.

FIs and FinTech players could be looking to regulators for direction on FinTech before investing.

But at the same time, the diversity of FinTech business models make it challenging for regulators to develop a one-size-fits-all regulatory framework.

Avoiding such a chicken and egg situation would be best for all involved. Therefore, in the current early stages of regulatory development, there is a need for deep conversations and frequent engagement between regulators, FS and FinTech stakeholders to build clarity and trust over the new FinTech regulatory environment.

DARK CLOUDS AND SILVER LININGS

At a glance: BNM's Financial Technology Regulatory Sandbox Framework

Objective

The sandbox approach aims to enable innovative FinTech solutions or services to be deployed and tested in a live, contained environment. This is meant to facilitate the process of reviewing existing regulatory requirements in order to create a regulatory environment that is conducive for the deployment of FinTech.

Effective date

The framework came into effect on 18 October 2016.

Approach

BNM will accord regulatory flexibilities to successful applicants to enable them to test their solution in a live environment, subject to specified parameters and timeframes. The extent of regulatory flexibility given will be determined on a case by case basis.

The initial testing period shall not exceed 12 months. A written application will be required to extend the testing period.

Participants must submit interim reports to BNM on the progress of the test, and a final report within 30 calendar days from the expiry of the test. The approval to participate in the sandbox and any regulatory flexibility accorded will automatically expire upon expiry of the testing period.

Upon completion of testing, BNM will decide whether to allow the solution to be introduced to the market on a wider scale.

Other matters

The sandbox is not suitable for testing of products or services that are already appropriately addressed under prevailing laws and regulations.

For such cases, BNM will take an "informal steer" approach to provide guidance and advice to the FIs or FinTech companies on the modifications that can be made to align the proposed business models or solutions with existing regulations.

Source: Adapted from BNM's Financial Technology Regulatory Sandbox Framework, issued on 18 October 2016

DARK CLOUDS AND SILVER LININGS

Other threats on the horizon

Pressure on margins

Most FinTech companies have an edge over traditional FIs in terms of cost and scalability as they operate on asset-light, digital centric business models. Some may not even own proprietary information technology (IT) systems; instead they employ the cloud for such operational infrastructures.

These agile new competitors threaten margins when they end up seizing business opportunities from incumbents, or empowering competitors by offering their services to them.

Information security and privacy risks

Also high on the watch list is information security and privacy risks. The growing number of cybersecurity events in recent years has thrown into question the adequacy of existing security standards and protocols.

PwC's Global State of Information Security Survey 2016 found that on average there were 38% more security incidents detected globally in 2015 than the year before. In addition, FS respondents in that survey rated assessing security standards of third party vendors as the most significant cybersecurity challenge.

Customer and proprietary information, key commodities in FI-FinTech relationships, will become prime targets for cyber attacks. This leads to the elevated concern towards the threat of privacy and information security which we see in our survey results.

Loss of market share and increased customer churn rate

FinTech players are aggressively offering solutions that allow a high degree of customisation, for example robo-advisors, and online-only solutions such as peer-to-peer lending platforms that are cheap, easy to use and available anytime and anywhere.

These offerings are likely to eat into and result in a loss of the incumbents' market shares, a threat recognised by 54% of our respondents. Despite this, respondents may believe that customers are not ready to completely substitute their services with FinTech innovations, which is why increased customer churn is not a big concern (27%) compared to PwC's Global FinTech results, which is much higher at 53%.

DARK CLOUDS AND SILVER LININGS

But trust in FinTech may be stronger than you think

The perception that FinTech only poses a low risk of increasing customer attrition for FIs may be due to the time it takes for start-ups to earn customers' trust and build the necessary track record and brand reputation. However, FinTech start-ups can partner with established FIs, technology or telecommunication companies to leverage on their brand and shorten the process of building trust.

The above scenario highlights the dynamic nature of the FinTech environment. Customer perception can shift and FinTech players can call on third party brands and influencers to develop trust. You might be more likely to lose customers to them than you think!

TOP OPPORTUNITIES

What are the main opportunities related to the rise of FinTech?

Differentiation, cost reduction and improved customer retention

The openings in FinTech

For all its perceived threats, take heart: FinTech can be a source of advantage and opportunity if you play it right.

Differentiation is seen as the top opportunity arising from FinTech as selected by 87% of our Malaysian respondents. Such an advantage is particularly valuable in a competitive and mature FS market like Malaysia, where loan growth is expected to remain tepid. In June 2016, banks' credit grew 5.6% year-on-year — the slowest it has grown in nine years.

As FinTech is relatively new in Malaysia, there's a first-mover advantage to be had, where FS and FinTech companies can strongly differentiate themselves from the competition. Players may yet stand a chance to be the first in the Malaysian market to provide new innovative product offerings; such was the case for mobile wallets. This is the main reason why differentiation is seen as the top opportunity arising from FinTech in Malaysia even though it did not rank as highly in the Global FinTech Survey.

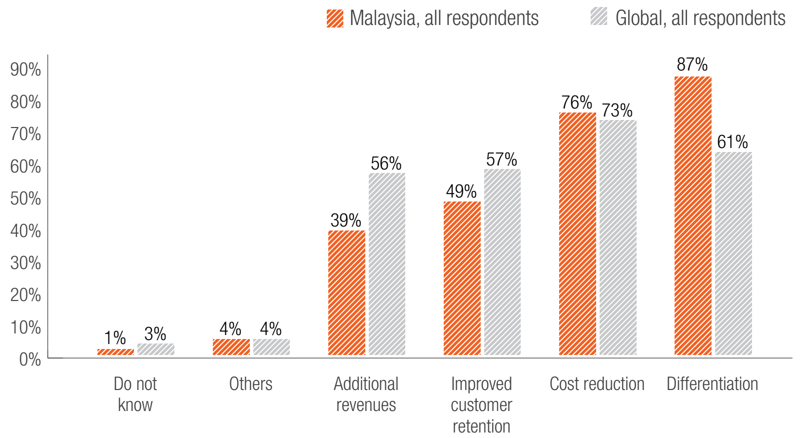
DARK CLOUDS AND SILVER LININGS

The opportunity for **lower costs** (76%) is one of the areas where our Malaysian respondents are in agreement with their global counterparts (73%). Heralding increased efficiency and cost reductions are new service offerings such as software-as-a-service (SaaS) solutions that foster the move away from physical channels towards digital and mobile delivery. Partnerships with FinTech companies can help rationalise, improve and simplify FIs' operations. Furthermore, the asset-light business models that FinTech companies operate on is also something that FIs can look to emulate to reap the benefits of cost reduction.

Incumbents also look to harness the potential for **improved customer retention** (49%) and **additional revenues** (39%) from FinTech. FinTech solutions can offer better customer engagement, with multiple touchpoints and interactions to increase repeat patronage and inspire customer loyalty. For example, this can take the form of personalising the banking experience with a simple alert to credit card users when they have spent more than their monthly average on their credit cards.

FIGURE 8: OPPORTUNITIES ARISING FROM FINTECH

In your opinion, what are the main opportunities related to the rise of FinTech within your industry?



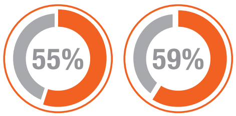
Base: Malaysia – 84, Global – 514
Sources: AICB and PwC Malaysia FinTech Survey, PwC Global FinTech Survey 2016

With the opportunities arising from FinTech in mind, the question now becomes: do the incumbents have plans in place to reap FinTech's potential?

DARK CLOUDS AND SILVER LININGS

PLANS FOR THE FUTURE

Do the incumbents plan to invest in FinTech within the next 12 months?



Yes - **55%** of FIs
59% of Banking industry participants

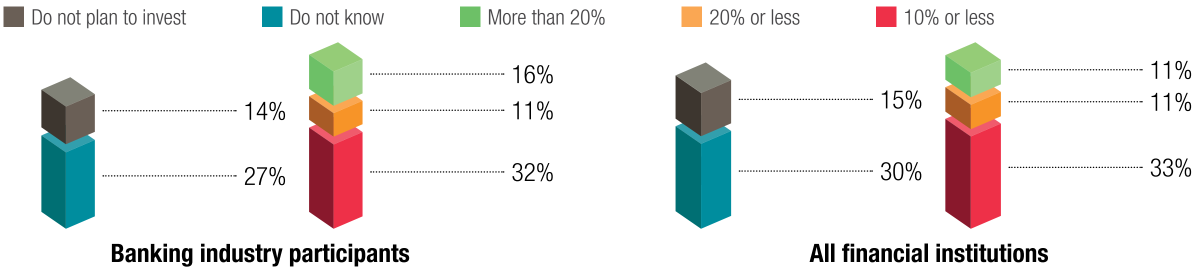
Already investing in the future

Apparently, yes: the majority of our FI respondents (55% of FIs, 59% of banking industry participants) plan to invest in FinTech in the short term. A third of FIs (33%) plan to invest up to 10% of their total IT expenditure in response to FinTech. Clearly, FS players are by no means sitting on their haunches while the industry is being disrupted.

Nevertheless, 45% of the FIs and 41% of the banking industry participants surveyed either do not know or do not plan to invest in FinTech. With more and more industries from bookstores, taxi services to travel and lodging being disrupted by digital-centric start-ups, FIs who don't have a response plan in place for FinTech run the risk of being caught in the worst kind of Kodak moment — beaten and left behind by the digital revolution.

FIGURE 9: PLANNED INVESTMENT

If you are planning to invest or allocate resources in response to FinTech, how much, as a percentage of your information technology expenditure, are you planning to invest in the next one year?



Base: Respondents with activities within the banking industry – 37, all financial institutions – 66
Source: AICB and PwC Malaysia FinTech Survey 2016

Section

03

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WHAT’S NEXT FOR BANKS

WHAT'S NEXT FOR BANKS

Section 3

To help industry players navigate the disruption emerging within the banking industry, we have asked our respondents to rank emerging trends within this industry based on their perceived disruptiveness and how likely the respondents are to invest in response to each of the trends.

DISRUPTIVE TRENDS IN THE BANKING INDUSTRY

What are the top disruptive FinTech trends for the banking sector?

Top three trends are mainly related to boosting customer experience

Most of the trends included in our survey are based on those identified by PwC's DeNovo platform and featured in the PwC Global FinTech Report. Refer to the appendix section for more information on DeNovo and the definition of these trends.

Focus on boosting customer experience

When we asked respondents which FinTech trends they believe to be the most disruptive for the banking sector (see Figure 10), the top three highlighted revolved around customer experience. In order of disruptiveness, they are:

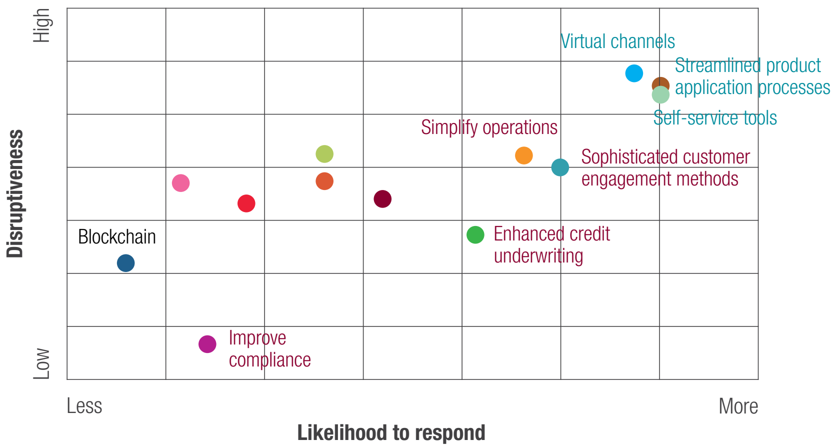
- The move towards non-physical or virtual channels (including mobile channels),
- Simplification and streamlining of product application processes, and
- Emergence of self-service tools.

Correspondingly, these three trends were also the most likely areas that respondents will invest in.

WHAT'S NEXT FOR BANKS

FIGURE 10: TRENDS IN THE BANKING INDUSTRY RANKED BY IMPORTANCE AND LIKELIHOOD TO RESPOND

In your opinion, what is the degree of disruption of the following emerging trends on the banking industry over the next five years, and how likely are you to respond (e.g. allocate resources, invest) to them?



Business Model

- The rise of peer-to-peer lending
- The increase of services and solutions for under-served consumers
- The rise of crowdfunding/seed funding
- The democratisation of banking and personal finance
- Blockchain or the application of blockchain

Improve Operations

- The implementation of solutions that banks will integrate or incorporate to improve and simplify operations
- The increased sophistication in methods to reach, engage and retain customers
- The digitalisation of cash- and treasury-management functions
- The enhancement of credit underwriting/ decision making
- The implementation of solutions to improve compliance functions

Customer Experience

- The move toward non-physical or virtual channels, including mobile channels
- The simplification and move toward streamlined product application processes to improve customer experience
- The emergence of self-service tools

Please refer to appendix section for further definition of the above trends.
Base: Respondents with activities within the banking industry – 37
Source: AICB and PwC Malaysia FinTech Survey 2016

WHAT'S NEXT FOR BANKS

> *"Design is not just visual design, it's the entire process from human-centred research – how do humans behave, what are their needs – to designing solutions."*
>
> **Carlos Torres Vila**
> *CEO of BBVA*

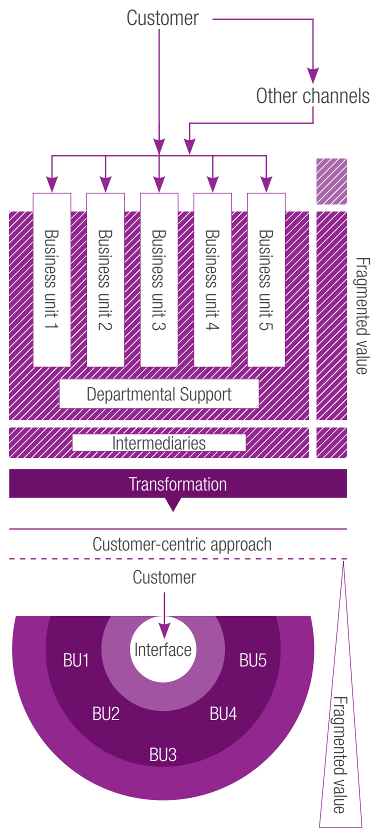
Moving to a customer-centric model

Our results indicate that the survey respondents are aware that a better quality customer experience can create a differentiated and compelling service offering.

Achieving this will require FIs to adopt a customer-centric business model that, rather than focusing on selling specific products, is designed to deliver to customers what they need when they need it as easily and autonomously as possible.

Transforming from a product-focused approach to a customer-centric model will involve breaking down (see Figure 11) silos between existing business units. This will enable the free flow of customer information between distinct functions to create a seamless customer experience.

FIGURE 11: TRANSFORMING FROM A PRODUCT-FOCUSED TO A CUSTOMER-CENTRIC MODEL



Source: Adapted from PwC's Digital engagement for inclusive governance, 2013

WHAT'S NEXT FOR BANKS

Improving operations takes precedence over reimagining business

From the results of our survey, the degree of perceived disruption emerging from FinTech trends within the banking sector related to improving internal operations and new business models is fairly moderate (see Figure 10).

However, based on the pattern of likelihood of investing in the different trends, our survey respondents generally prefer to focus investment on FinTech trends that are less "re-imaginative", i.e. they are **more likely to invest in those that will improve operations instead of the ones that will result in new business models.**

Preference markedly leans towards investing in FinTech to improve operating activities, for example by investing in trends that:

- Increase sophistication in methods to reach, engage and retain customers;
- Implement solutions that will integrate, improve and simplify operations; and
- Enhance credit underwriting and decision making.

Missed opportunities?

Light on RegTech

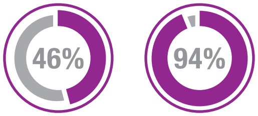
Among the potential uses of FinTech to improve operations, it is surprising that our respondents say they are unlikely to invest in technologies that can improve compliance functions (see Figure 10), so-called "RegTech".

RegTech could offer considerable advantage seeing that the FS sector is highly regulated, with substantial compliance costs. It could also help banks address mounting regulatory pressures, for example those arising from the new FI corporate governance guidelines, Basel III and know-your-customer (KYC).

WHAT'S NEXT FOR BANKS

FAMILIARITY WITH BLOCKCHAIN

Are respondents familiar with blockchain?



Yes - **46%** of FI respondents
94% of FinTech respondents
are moderately to extremely familiar

Don't write off blockchain
Our survey results highlight that there is a risk FS players could be underestimating the potential impact of blockchain, the distributed ledger technology. For instance:

- Blockchain is ranked as the second least disruptive of the FinTech trends by banking respondents (see Figure 10); and
- 59% say that they are unsure or unlikely to respond to this trend, making it the least likely trend for this group to invest in.

Globally, blockchain was also rated as a moderately important trend, but relatively low on the scale of likelihood of investment.

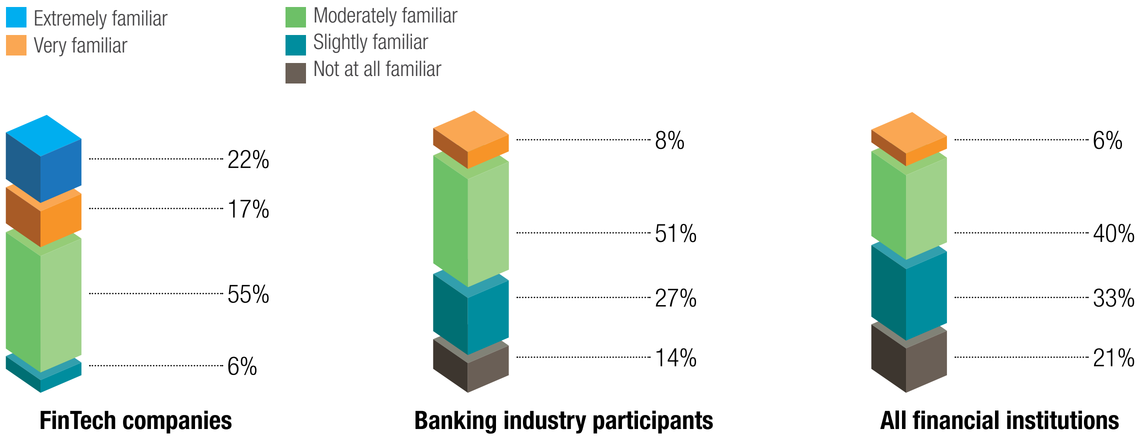
Familiarity with the technology may have something to do with this — **41% of our Malaysian banking respondents say that they are at best slightly familiar with the technology** (Figure 12). FinTech respondents are considerably more well-versed as 94% say that they are moderately to extremely familiar with blockchain.

Nevertheless, this technology has immense potential (see following subsection), and FIs cannot afford to continue staying in the dark. The FinTech companies certainly are not!

WHAT'S NEXT FOR BANKS

FIGURE 12: FAMILIARITY WITH BLOCKCHAIN

Please describe the extent to which you are familiar with blockchain.



Base: FinTech companies – 18, respondents with activities within the banking industry – 37, all financial institutions – 66
Source: AICB and PwC Malaysia FinTech Survey 2016

> *"Blockchain is a really disruptive development and banks have a lot of fear concerning this technology because, in the pure theory of blockchain, a lot of processes within a traditional bank would be obsolete."*
>
> **Thomas F. Dapp**
> *Research Analyst at Deutsche Bank, cited in American Banker*

WHAT'S NEXT FOR BANKS

Blockchain: An untapped technology

About blockchain

Put simply, a blockchain is a shared list of continually updated transactions—a distributed digital ledger that keeps a record of each transaction that occurs across a peer-to-peer network. Strong cryptography validates and chains together blocks of transactions, making it nearly impossible to tamper with any transaction records without being detected.

The technology behind blockchain essentially allows multiple participants to maintain a database without the need for third party validation or reconciliation. This eliminates the validation and verification friction for transactions associated with a centralised system, allowing for a safer, simpler and faster exchange of digitally represented assets.

Potential

The kind of simple transactions enabled by blockchain is expected to become the basis for **smart contracts**, a way to automate processes and make them both legally binding and self-enforcing[1].

This technology also has immense **potential for back-office savings, increased transparency and increased efficiency in regulatory compliance** processes.

Progress

To put blockchain development into perspective, PwC's Global Blockchain team has identified over 700 companies entering this space and believes 150 of them are worthy of being tracked.

The technology is expected to be developed in three broad phases, according to a Morgan Stanley report, "Global Insight: Blockchain in Banking: Disruptive Threat or Tool?":

- 2016-2018: Banks and corporations will test use cases of blockchain. These proof-of-concept tests will be aimed at assessing if blockchain can scale and effectively reduce costs.
- 2017-2020: Shared infra-structures begin to emerge, with proven assets being adopted well beyond the initial proof-of-concept stage.
- 2021-2025: More assets will move onto blockchain as efficiencies prove out.

[1] *Source: Adapted from articles written by Alan Morrison, Senior Manager, PwC Center for Technology & Innovation, 2015*

Section

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GETTING DOWN TO BUSINESS

GETTING DOWN TO BUSINESS

Section 4

No matter which emerging trend FS organisations choose to place their bets on, looking for ways to respond to the FinTech disruption should be high on the agenda. And as the old saying goes, "If you can't beat them…"

DEALING WITH FINTECH

What is the top method used to deal with FinTech companies?

35% of FIs prefer joint partnerships

Join forces with them

Joint partnerships with Fin-Tech companies are by far the most widely used form of collaboration with FinTech companies, preferred by 35% of the FIs surveyed—slightly higher compared to global respondents.

Partnerships allow easy, flexible and relatively low-risk arrangements for both groups to play off each other's strengths. On one hand, incumbents can harness the new comers' solutions and technologies, while limiting potential fallout from failure to what is stipulated in the partnership agreement.

On the other hand, the technology companies benefit from the incumbents' funding, and potentially from their existing customer relationships and brand. At the same time, these partnerships offer valuable opportunities for the FIs and FinTech companies to identify challenges and work towards improving how their businesses complement each other.

GETTING DOWN TO BUSINESS

INTERACTION BETWEEN INCUMBENTS AND NEWCOMERS

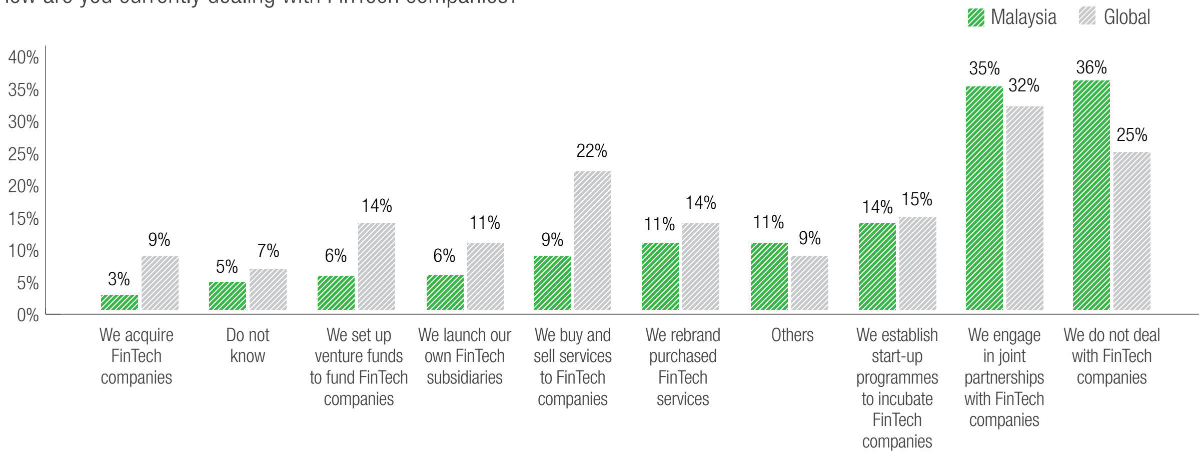
Are FIs dealing with FinTech players?

59%* of FIs currently deal with FinTech companies

***Excludes those who answered "We do not deal with FinTech companies" and "Do not know"**

FIGURE 13: DEALING WITH FINTECH

How are you currently dealing with FinTech companies?



Base: Malaysia – 66, Global – 432

Sources: AICB and PwC Malaysia FinTech Survey 2016; PwC Global FinTech Survey 2016

GETTING DOWN TO BUSINESS

CHALLENGES WITH WORKING TOGETHER

What is the main obstacle when it comes to working with each other?

Regulatory uncertainty

Working together

Growing pains

When it comes to challenges in working with each other, FIs and FinTech companies both see **regulatory uncertainty** as the major hurdle (72% of FIs and 50% of FinTech companies).

This reiterates the concern about regulation raised earlier in Section 2. However, in this case, it also refers to regulatory uncertainty around working arrangements between FIs and FinTech companies.

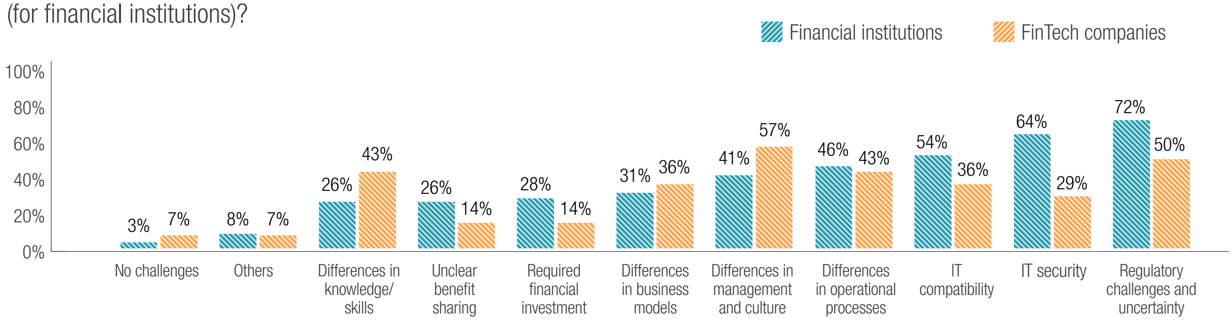
Yet regulation is also a sticky situation for regulators as there may be a risk of creating an uneven playing field for the two groups. There is a need for authorities to develop their supervisory capacity to keep pace with new technologies in order to allow and oversee their proliferation in a way that is beneficial to stakeholders and the economy.

> *"From a regulatory perspective, the priority is maintaining a stable financial sector, alongside financial inclusion. That is what regulators and policymakers have to balance."*
>
> **Douglas Pearce**
> *Practice Manager – Financial Infrastructure and Access, World Bank*

GETTING DOWN TO BUSINESS

FIGURE 14: CHALLENGES

What challenges did/do you face in dealing with traditional financial institutions (for FinTech respondents)/FinTech companies (for financial institutions)?



Base: FinTech companies – 14, financial institutions – 66
Sources: AICB and PwC Malaysia FinTech Survey 2016

Divergent views

The results of our survey (see Figure 14) also show a number of diverging opinions between incumbents and the disruptors in other areas.

The FI respondents focus on challenges involving **infrastructure** such as:

- IT security (64%)
- IT compatibility (54%)

The FinTech respondents are more concerned with **differences in how things are done**, for example, differences in

- Management and culture (57%)
- Operational processes (43%)
- Knowledge or skills (43%)

For FIs, their concerns may revolve around adapting their legacy IT systems to keep up with third party security and compatibility changes brought by FinTech.

In the case of FinTech companies, their concerns centre around finding the right fit when working with bigger corporations without losing their own culture (values and identity) and agility, which is the source of their competitive advantage.

In order to create long lasting and mutually beneficial relationships, both groups will need to be cognisant of each others' pain points and work towards addressing them.

GETTING DOWN TO BUSINESS

Going at it alone?

While 59% of the Malaysian FIs report some form of interaction with FinTech companies (Figure 13), a sizeable group (36%, see Figure 13) do not deal with them at all. To this group, take heed: you may be aware of the opportunities (Figure 8) and wary of the threats (Figure 7), but knowledge without action is not without its risks. You can only truly get to know the Ubers of the financial sector by interacting with them.

> *"The digital economy is taking over and by and large, it will pose a threat or an opportunity depending on the ability to embrace this change."*
>
> **Sebastian Molineus**
> *Practice Director, Finance and Markets Global Practice, World Bank Group*

FINTECH ENABLERS

What are the most important enablers to develop FinTech capabilities?

Security, regulation and talent

What would you need?

What would be important to enable the development of FinTech capabilities? While all enablers are important to some extent in their own right, our Malaysian FIs' and FinTech companies' views were nearly identical when it came to the top three most important enablers: security, regulation and talent.

Security

Overall, two-thirds (67%) of our respondents rated security as "very important" and 23% say it is "important", making it the top FinTech development factor.

Information sharing is the backbone of the FS and FinTech industry value chain. For FinTech to truly flourish, the importance of processes, standards and technologies that can ensure the security of customer and proprietary information therefore cannot be stressed enough. All players in the FS and FinTech ecosystem will need to work together closely to create a seamless and robust security environment.

GETTING DOWN TO BUSINESS

Regulation

Once again, we see regulation being highlighted: 54% of the respondents consider regulation to be “very important”; 27%, “important”. Clarity in the demarcation of which laws will — and will not — apply to what kind of FinTech operation is vital in order for FinTech to carve out a niche in Malaysia. Candid and regular interaction between all stakeholders and regulators is key.

Talent

Next on the wish list is talent. 39% and 50% of all respondents rated the “people” factor as “very important” and “important” respectively. To take inspiration from Capital One Financial Corporation Senior Vice President Meredith Fuchs[1], players should now consider non-traditional sources of talent: engineers, product managers, data scientists and designers — those from leading technology companies who have a different set of experiences or formal training from the usual pool of banking and finance candidates.

External catalysts such as incubation centres and hubs are seen as relatively less important for the development of FinTech, receiving 18% and 40% of respondents’ votes for “very important” and “important” respectively.

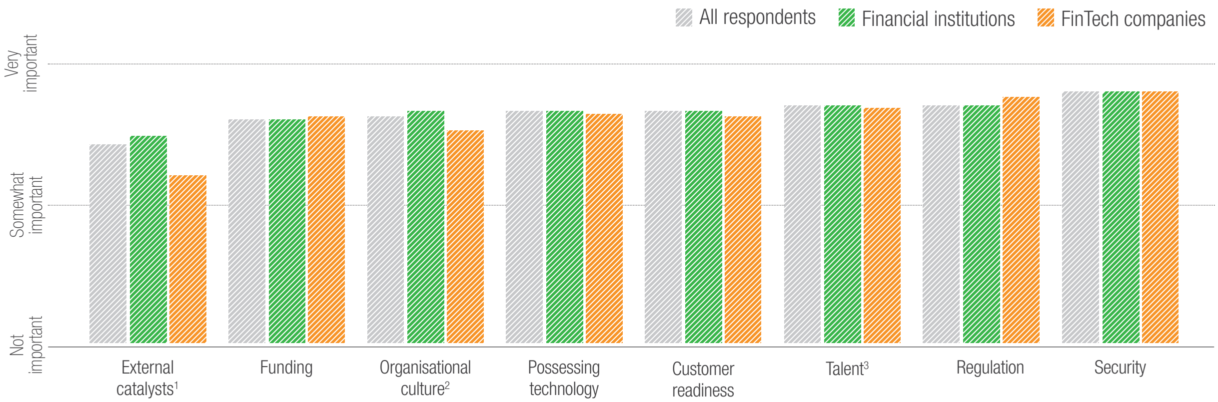
Surprisingly, FinTech respondents (the group expected to benefit the most from this factor) actually place this factor lower on the importance scale compared to FIs. With the emphasis we see on security, regulation and talent, perhaps at this point in time the players are focusing more on creating an environment in which FinTech becomes a sustainable market in its own right.

[1]*Source: Adapted from Meredith Fuchs’ comment on the Office of Comptroller of the Currency’s white paper “Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective”, June 2016*

GETTING DOWN TO BUSINESS

FIGURE 15: ENABLERS FOR FINTECH

In your opinion, what would be important to enable the development of FinTech? Please rate the importance of the following enablers for the development of FinTech capabilities in your company.



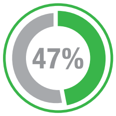
[1]*External catalysts: for example, FinTech incubation centres and hubs*
[2]*Organisational culture: for example, tone from the top and employee openness to change*
[3]*Talent: people and skills*

Base: All respondents – 84, financial institutions – 66, FinTech companies – 18
Sources: AICB and PwC Malaysia FinTech Survey 2016

GETTING DOWN TO BUSINESS

STRATEGIC DIRECTION

Is FinTech at the heart of your strategy?



Yes - **47%** of FIs

So, is FinTech top of mind?

Successful adoption and integration of FinTech will take more than getting the right people, technology and processes in place. FIs need to have a top-down approach, and it all starts with incorporating FinTech as a core element of the organisation's strategy.

While **nearly half (47%) of the Malaysian FIs surveyed agree to some extent** that their organisations have placed FinTech at the forefront of strategic decision making, and altogether a portion similar to the global respondents either do not know or disagree (27% vs 26%), **the single largest group (26%) out of those surveyed is still ambivalent.**

Time to get off the fence

Now more than ever, there's a pressing need for FIs to move their services into the digital and app space, and rethink the traditional linear product push approach.

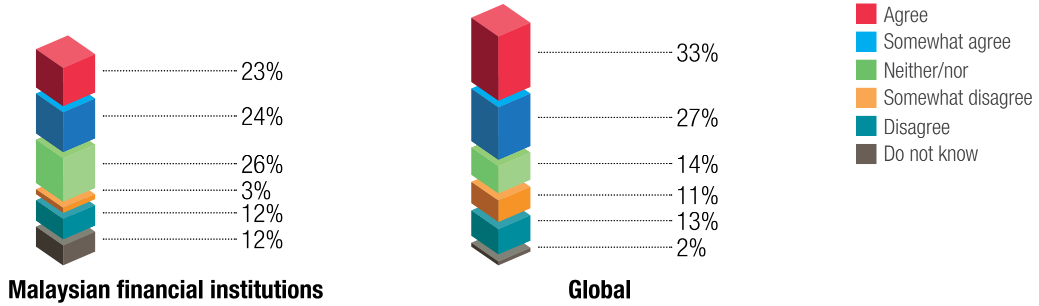
Firms that do not recognise the impact of FinTech and do not strategise accordingly will face fierce competition from new entrants, while their rivals who do become more innovative. For many traditional FIs, keeping up with disruption requires moving out of legacy comfort zones.

Strategic direction, and in a broader sense tone from the top, is the all important first step to overcoming this organisational inertia.

GETTING DOWN TO BUSINESS

FIGURE 16: FOCUS ON FINTECH

"My organisation has put FinTech at the heart of its strategy."
To what extent do you agree with the above statement?



Base: Malaysian financial institutions – 66, Global – 544
Source: AICB and PwC Malaysia FinTech Survey 2016

Section

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FROM THE FLOOR

FROM THE FLOOR

Mohd Suhail Amar Suresh, Maybank Group

Can you share your experience working with FinTech companies?

FinTechs are generally very creative and energetic. They think outside the box and are happy to fail fast in order to learn. It is hard not to be swept away by their enthusiasm and conviction to their offering. I am constantly amazed by how much these people actually know about our business and its challenges.

What they need is the help of a big brother who can hold their hand—someone to give them opportunities, nurture them and in some cases, fund them. In return, banks can learn a lot from them.

Nurturing the newcomers is a way for us to give back to society. However, we need to have strong and appropriate governance to manage the accompanying complexities and risks.

> *"We need to understand that 'banking' and 'banks' are two separate and distinct things. People need banking, but will they always need banks?"*
>
> **Mohd Suhail Amar Suresh**
> *Group Chief Technology Officer, Maybank Group*

How can banks adapt to the (potential) new norm?

We at Maybank have our own rapid development team, known as "pseudo-FinTech". We take the "quick to prototype, quick to fail" approach. When we agree that something is not going to work, we learn from it and move on.

There are certain differences between FinTechs and FIs. While FinTechs have the option to start and fail quickly, FIs build their reputation over the years, and the customer's trust is paramount. As such, we in the FS industry cannot compromise on customer security, privacy and compliance. Hence, there is a need to balance between evolution and revolution.

For any organisation, if the rate of change on the outside exceeds the rate of change on the inside, the end is near.

FROM THE FLOOR

“The fundamental idea behind FinTech — innovation — has been and will always be there. As a result, there will always be disruption. Even if you don’t do anything, things will still change. How you deal with disruption depends on your strategic objective. For institutions, the choice is to either embrace change or not. If you don’t, chances are you might get left behind.”

What is your organisation’s approach to FinTech?

With FinTechs, there is no “one-size-fits-all” approach. There are FinTechs that compete with banks and there are FinTechs that augment banks. Both have different levels of challenges and opportunities in terms of collaboration, creating alliances, partnership and/or acquisitions. If the value proposition is good enough to collaborate and go to market, then why not?

Within Maybank Group, we are always looking for potential strategic partnership, from fledgling FinTechs to large technology players like Samsung and Apple. We have a group of people to identify such FinTechs, and with our own innovation centre we run a number of hackathons and tie-ups with them.

One of the key success factors of FinTechs is their ability to fail fast and break boundaries. I believe that when we do bring in FinTechs, we need to ensure that they are given room to grow. This is because banks are in a perpetual state of evolution while FinTechs are in the revolution cycle.

FROM THE FLOOR

Amran Hassan, Maybank Group

Photo credit - The Edge Media Group

> *One thing that has become clear now is that we cannot only have one team that looks for innovation. What we need is an entire culture that is open to it and ready to innovate.*

Amran Hassan
Head of Corporate Development & Innovation, Maybank Group

What do you think is driving the FinTech disruption?

The disruption we see is mostly due to changes in customer demands and behaviour, as the general public is largely going digital. We rarely go to physical bank branches. We still want good consistent advice, but more importantly we want speed and convenience. This changes the nature of the services that customers demand, and that drives a need for the change we're seeing.

If we didn't have innovative FinTech companies "forcing" us to move along, I think customers would have likely ended up frustrated because a lot of banks would have been happy to just keep the status quo. That being said, there is an inherently different approach when it comes to serving corporate customers. Here, there is closer customer engagement and a different value proposition.

What do you think can help with some of the challenges in rolling out new solutions?

Businesses are naturally cautious when they experiment with something new or roll out a new product. One thing to remember is that even if we have the appetite to experiment, do our customers have the appetite to allow us to do so?

We have to play within the dynamics where every decision we make impacts the customers. For instance, people expect that new functions will be totally secure and error-free when it relates to banking. This expectation is higher than what is expected of non-banking applications, for example concierge or travel applications. These are the things we need to highlight to FinTech companies.

FROM THE FLOOR

Would you be open to collaborating with other banks?

It depends. It is unlikely if it has to do with competitive advantage, such as something that will improve customer experience. But if it is something more platform-related, like KYC that benefits everyone, then I think we can work together on it. It will depend on whether there is a common need or a shared goal to collaborate on.

How does your bank look out for potential FinTech partners and opportunities?

Traditionally, we let the FinTech companies come to us directly with their business case. Then we realised that some of the younger FinTech players don't even know which door to knock on. So we started Maybank FinTech to invite them to come share with us.

Innovation is

"We have a President's Innovation Award where we source for ideas internally. This has run for about 6 years now. What we have learned is that the journey of innovation doesn't stop. I think the idea part is about 10% of the process, the other 90% is execution."

We look out for three things: technology, skills, and ideas. What they propose should offer a solution to a worthwhile problem, and we will try to marry their ideas with the business if it is something that customers would be looking for. We have been running our Maybank FinTech program for two years now, and the start-ups now know there's an innovation team in Maybank. We become a kind of funnel for the bank to look for FinTech companies to partner with.

We also do public and internal hackathons[1]. These help speed up prototyping. What's good about hackathons is that we end up with more than just the idea, but an actual workable code.

[1]Hackathons are events where programmers and software developers collaborate intensively on software projects, usually within a short timeframe.

FROM THE FLOOR

Based on your experience working with and looking at potential FinTechs, do you have any advice for the newcomers?

We often say yes to FinTech players who are keen to innovate. While we are open to collaborating with them, we will still have to go through different processes of governance and regulatory compliance, and this slows things down. This can be frustrating for them because decisions can't be made within two days. My advice to anyone looking to start a FinTech company that depends on working with a bank is to be patient with the process. Banks are not as nimble as they need to be yet.

In terms of building capabilities in FinTech, do you see it as something your bank would develop internally or collaborate on with external parties?

I think it's both. To some extent you will always want to retain core skills internally and develop homegrown talent. But what we see becoming more and more of a core competency now is the capability to create and operate digital channels.

We can't expect that the skills we have now to be 100% enough in 50 years — technology is advancing too quickly. Relying on partners is how we can bridge the gap between what we have now and what we envision the bank to be. So this is where FinTech companies come in. They focus on the technology, and we partner with them, pick them up and help them mature.

FROM THE FLOOR

Foo Seik Chiang, OCBC Bank Malaysia

"The truly successful FinTechs will be the companies that can incorporate the innovation they have with the ability to also serve the customer in a financially safe and risk-managed environment."

Foo Seik Chiang
Head, Business Transformation - Consumer Financial Services, OCBC Bank Malaysia

What is the importance of FinTech, and what does it mean to your organisation?

FinTech brings a new wave of innovation that can benefit both banks and customers alike. Innovation plays a big role in improving the future of banking, and these changes will help the banking industry evolve in the years to come.

For OCBC, with the opening of our Incubator programme "Open Vault", this means that we can work in partnership with promising FinTechs that can help us improve our customer experience, be a more efficient organisation and differentiate ourselves from our competitors.

How is your organisation responding to the innovation arising from FinTech?

There are tremendous opportunities if we find viable robust solutions that can scale in these spaces. OCBC has already made inroads into these areas both from our internal solutions as well as in partnership with selected FinTechs.

FROM THE FLOOR

How do you see FinTech shaping Malaysia's financial system landscape?

FinTech companies have the speed and mobility to run pilots in small scale set-ups. The next step is for them to exist in the financial ecosystem that involves both FIs as well as the regulators. In doing so, it would then be viable for FinTechs to shape the future financial landscape in Malaysia. The truly successful FinTechs will be the companies that can incorporate the innovation they have with the ability to also serve customers in a financially safe and risk-managed environment.

How can the FS and FinTech community come together to create a conducive environment for FinTech?

The upcoming sandbox that banks, regulators and FinTechs are discussing and collaborating on would be a good start. It provides a platform to not only safely test new ways of banking, but also serves to stimulate partnerships and business relationships between FinTechs and banking partners. In doing so, it lays the foundation for collaboration and mutual benefits for years to come.

FROM THE FLOOR

Joel Tay, Soft Space

I think that tough times are when you need innovation the most, to find cheaper and better products that differentiate you in the market. In challenging times, innovation is what's going to make money.

Joel Tay
Chief Business Officer, Soft Space

How does Malaysia compare to other parts of the world when it comes to raising funds?

Unfortunately, Malaysia is not as conducive an environment for fundraising as we'd like it to be. Compared to the west, a lot of investors in Malaysia are still used to the traditional model of investing. The concept of massive injection of capital for rapid expansion early on in a company's life cycle is very foreign here. Add the fact that they may not understand FinTech even if they have a look at the company's books, and you can see why the funding is very small. We are starting to see some changes, but these changes are slow to come.

What is on your wish list of things for FinTech in Malaysia?

From the regulators, what we need the most is clarity. FinTech exists in the grey areas of current regulations. We hope for clear cut answers on what laws apply, and what is or is not allowed when we go to the regulators. Ideally, we would like to get such clarifications in a timely manner, and look to the regulators to play a more active role in setting a clear direction for the local FinTech regulatory environment.

From the banks, we hope to see more people who are enthusiastic about change. These would be the ones involved in strategy and transformation, who know the difficulties of changing existing mindsets, but can see the whole picture and recognise the urgency for change.

FROM THE FLOOR

How has your experience been working with banks?
In some ways it can be quite a challenge to work with banks. Banks tend to be conservative and risk-averse. Most have a tendency to accept “the way things have always been done”, and feel comfortable with the status quo.

Due to this risk-averse nature, banks are less enthusiastic about being the first to do things differently, as those who do are the ones who get questioned, critiqued and criticised the most. Hence, it can be tough for FinTech newcomers to gain a foothold in the FS industry as banks prefer to work with people who are well-established, and whom they understand very well. It can be difficult to get the banks’ buy in if you have not built your reputation or have existing clientele.

Do you see any risks in avoiding change and sticking to the status quo?
I think the risk here is missing out on the next big thing. All around the world we see banks’ profits falling. In these tough times, I understand why banks would prefer to avoid risks by falling back on core products and sticking to tried and tested business models.

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THE WAY FORWARD

THE WAY FORWARD

Section 6

There is unlikely to be a one-size-fits-all winning strategy when it comes to embracing FinTech, however we see three key takeaways from our survey and from listening to the various FS players:

Act now. There's no time left to wait-and-see

There needs to be a sense of urgency amongst FIs to address these gaps:

- 82% of FI respondents are concerned about the threats presented by FinTech; but
- Only 47% of them, to some extent, have placed FinTech at the forefront of strategic decision making.

FinTech companies are an inevitable addition to the already crowded FS dinner table. Whether they end up a foe who takes what's on your plate, or a friend you can work with to add to it, depends not only on how you choose to react, but when, too.

It is time for the FS sector to establish a clear, long-term FinTech strategy that not only allows for disruption, but embraces it.

Challenge existing assumptions, embrace the customer's perspective

Move away from the mindset of maintaining the status quo towards one that is forward looking and puts the customer first.

What customers are asking for may not actually be the new technologies per se, but the outcome those technologies can help achieve: easy-to-use, cheaper, faster and always-on services. The key to a fit-for-digital business strategy is engaging your customers to fundamentally understand their wants and pain points, and transforming your operating models, business capabilities and service offerings to achieve the results your customers value most.

THE WAY FORWARD

Drive the creation of a holistic FinTech ecosystem, and become the dynamic centre of it

Creating a robust FinTech ecosystem[1] and taking centre stage in the digital world will require you to:

- Learn from every point of engagement with other FinTech stakeholders, including start-ups, technology companies, talent from non-FS fields and regulators;
- Look outwards and explore FinTech with a view towards finding new investments, products and partners that you can work effectively with. Also, get involved in discussions with regulators to set the foundation for the local FinTech ecosystem; and
- Mesh the innovation the newcomers bring with your knowledge of the market and regulation, customer data and your position of trust with customers to create a unique customer experience.

Embracing FinTech isn't a short-term play. It requires patience, discipline and a commitment to realising long-term results.

The FinTech wave is here. Are you ready to ride it?

> *FinTech is challenging the status quo of the financial industry. New business models will emerge. Delivery channels will challenge existing norms. Transaction costs will be reduced. Rather than looking at the FinTech revolution as unwelcoming, financial institutions ought to embrace it as an opportunity.*

Datuk Muhammad Ibrahim
Bank Negara Malaysia Governor

[1]*Source: Adapted from Strategy&'s 2016 Financial Services Trends*

Others

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ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

Others

AICB and PwC would like to thank the following persons and organisations for their invaluable contribution to the development of this publication:

- Shireen Kandiah, AICB
- Amran Hassan, Maybank Group
- Mohd Suhail Amar Suresh, Maybank Group
- Foo Seik Chiang, OCBC Bank Malaysia
- Angie Wong, PwC Malaysia
- Dr. Paul Francis, PwC Malaysia
- Dr. Siew Chan Cheong, PwC Malaysia
- Ismail Awang, PwC Malaysia
- Lum Kar Hoe, PwC Malaysia
- Manjit Singh, PwC Malaysia
- Ng Khai Yan, PwC Malaysia
- Ong Khar Keong, PwC Malaysia
- Scott Goh, PwC Malaysia
- Tan Cheng Yeong, PwC Malaysia
- Joel Tay, Soft Space

We would also like to express our appreciation to the following persons for their assistance in the distribution of our online survey:

- Johnathan Lee, Malaysian Global Innovation & Creativity Centre (MaGIC)
- Joseph Wong, Malaysian Insurance Institute (MII)

Others

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APPENDIX

Others

Summaries of FinTech trends

The FinTech trends used in our survey are based on the trends identified by DeNovo.

DeNovo is a platform powered by Strategy& and PwC focused on FinTech, designed for CEOs, CTOs, Business Unit Heads and other key decision makers to explain which start-ups, technologies, trends and new market entrants to look out for, and more importantly, why.

The following trends are a snapshot in time of the most relevant ones for the banking sector. For more information and to obtain an updated view, please visit the DeNovo webpage and subscribe to the platform at http://www.strategyand.pwc.com/denovo

Summary of trends for banking

1. The rise of peer-to-peer (P2P) lending	Increased levels of technology have enabled an increase in lending without an intermediary.
2. The move toward non-physical or virtual channels, including mobile channels	Virtual banking utilises online and mobile platforms to integrate and simplify customer banking experience. Virtual banking platforms equip customers with on-demand access to manage bank accounts, pay bills, apply for loans, open new accounts, and perform other banking activities through a single portal. Banks are using these channels to collect data from customers, generate new revenue streams and offer compelling value propositions.

APPENDIX

Summary of trends for banking (Continued)

3. The simplification and move toward streamlined product application processes to improve customer experience	The consumer product application process (i.e. loan origination) has been streamlined with the emergence of cloud-based lending solutions and electronic bank account management systems which automate the loan origination process and increase overall transparency in the lending process. The move towards such solutions improves customer experience by reducing the amount of manual work, cutting down time and reducing errors.
4. The increased sophistication in methods to reach, engage, and retain customers	Engaging customers through gamification techniques in a collaborative environment is leading to better customer experience and reflecting in retention.
5. The digitalisation of cash- and treasury-management functions	Cash and treasury management includes the administration of external and internal funds, cash flow management, and corporate finance policies and procedures. The digitalisation of cash and treasury management functions utilises online platforms to disrupt the traditional models, creating new revenue streams and value propositions. Cross-border payment transfers for businesses, foreign exchanges and invoice management are a few of the functions that are enabled primarily through the advent of online platforms. For example, organisations are developing new processes to perform international money transfers using mobile wallets and crytopcurrencies to improve speed and safety.

APPENDIX

Summary of trends for banking (Continued)

6. The enhancement of credit underwriting/ decision making	More granular data enable financial services providers to more accurately assess and price risks.
7. The implementation of solutions that banks will integrate or incorporate to improve and simplify operations	Application Programme Interfaces (APIs) enable third parties to develop value-added applications for company platforms, artificial intelligence is enabling companies to extract greater customer and insights, employees and intelligent machines are integrating to work as a team, banks are expediting the deployment of digital delivery. And there are many more ahead.
8. The increase of services and solutions for under-served customers	Lower cost of providing services to customers that are currently underbanked, e.g. in rural Africa.
9. The rise of peer-to-peer lending	Increased levels of technology have enabled an increase in lending without an intermediary.
10. The rise of crowdfunding/seed funding	New funding options have emerged in mid-market, such as peer-to-peer (P2P) lending and marketplace lending platforms.
11. The democratisation of banking and personal finance	The democratisation of banking and personal finance describes the shift in which customers take control over their financial health and seek new channels and solutions to assist in this process.

APPENDIX

Summary of trends for banking (Continued)

12. Blockchain or the application of blockchain	Use of distributed and decentralised ledger technology in which transactions are recorded in order to improve payments, clearing and settlement, audit or data management of assets. There is also the possibility to create a so-called “smart contract” using blockchain technology. This is essentially a contract that is translated into a computer program and, as such, has the ability to be self-executing and self-maintaining.

Additional trend for banking

In addition to the trends identified by DeNovo listed in the previous pages, we have also included the following trend, which was suggested based on our discussion with a national supervisory institution prior to carrying out the survey.

1. The implementation of solutions to improve compliance functions	For example, regulation technology (“RegTech”) applications that help automate compliance tasks to make compliance faster, simpler and more flexible.

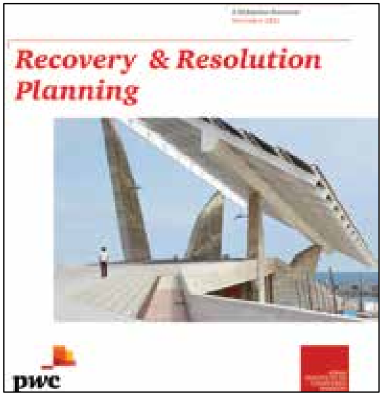
APPENDIX

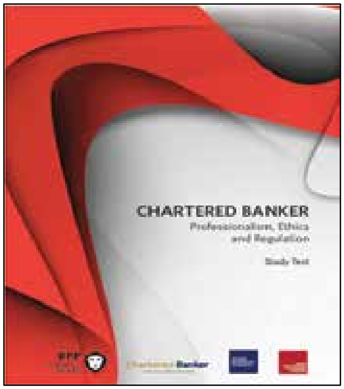
Glossary of terms

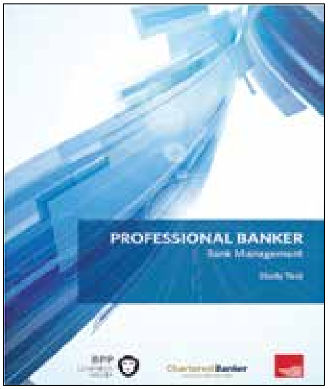
AICB	Asian Institute of Chartered Bankers
BNM	Bank Negara Malaysia
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIO	Chief Information Officer
COO	Chief Operating Officer
CPSS	Committee on Payment and Settlement Systems
CTO	Chief Technology Officer
FI	Financial institution
FinTech	Financial technology
FS	Financial services
InsurTech	Insurance technology
IT	Information technology
KYC	Know Your Customer
RegTech	Regulation technology
SaaS	Software-as-a-system

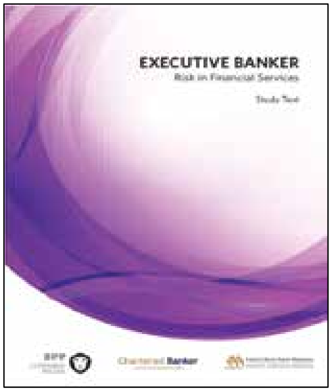
APPENDIX

AICB publications









APPENDIX

PwC publications

Blurred lines:
How FinTech is shaping Financial Services

Customers in the spotlight
How FinTech is reshaping banking

Opportunities await:
How InsurTech is reshaping insurance

Financial services legislation:
Remaining relevant in the digital age

Financial Services Technology 2020 and Beyond:
Embracing disruption

Meeting the FinTech Challenge

Others

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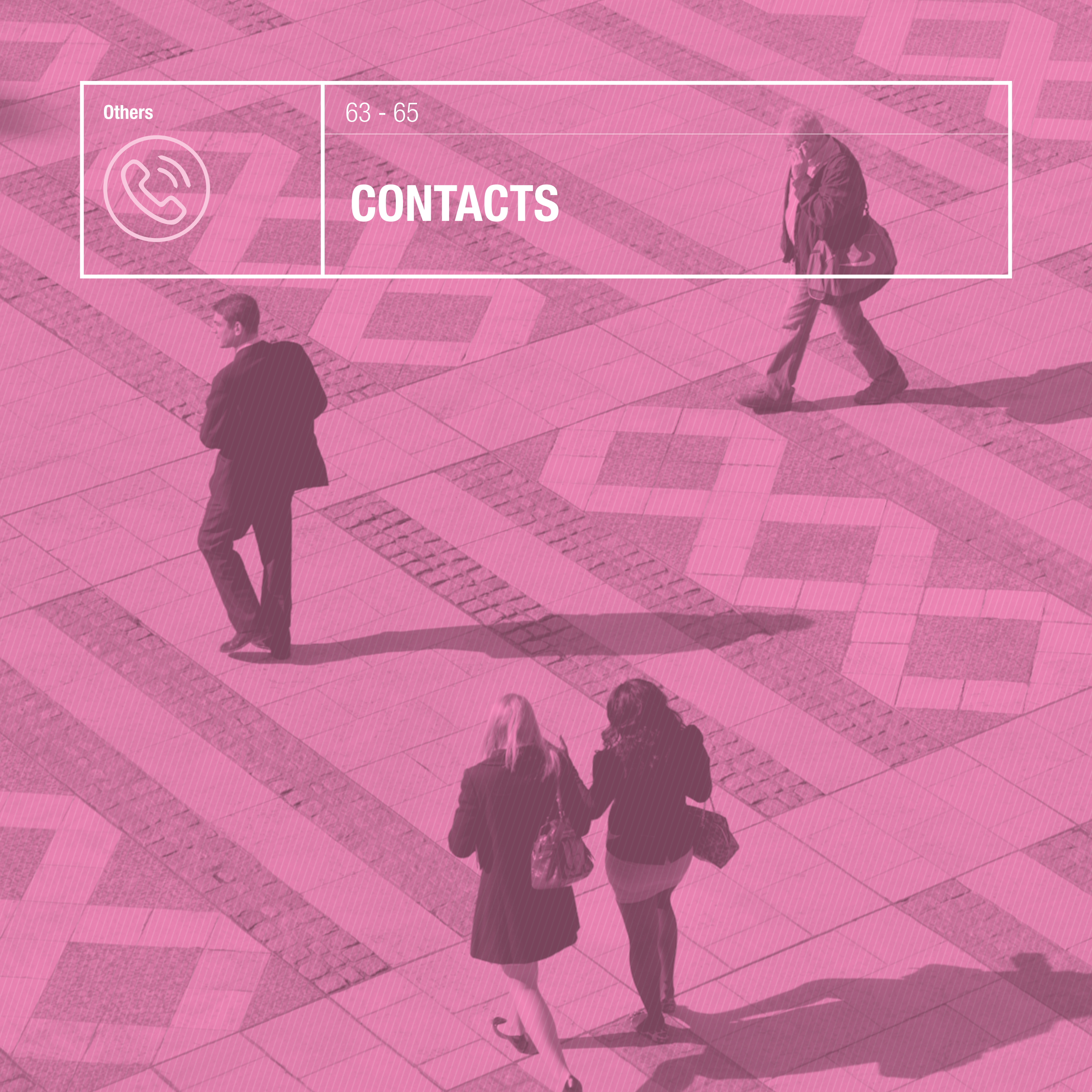
CONTACTS



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