IDEAS FOR LEADERS | JUNE 2018

banking insight

PP 17327/05/2013(032407)

'NEXT SET OF OPPORTUNITIES FOR BANKS IS IN SLOW MONEY'

Catching Up With the Platform Economy: A New Ecosystem of Platforms

THE 'ABSOLUTELY' GENERATION

BANKING IN THE DIGITAL AGE

DISRUPTION. REINVENTION. REVOLUTION.

Defining a future blueprint for empowering businesses to be ready for a digitally invasive world, where the touch points and interactions are different from traditional models

DATA IN THE DARK

ISSN 2231-8267

A PUBLICATION OF ASIAN INSTITUTE OF CHARTERED BANKERS

Editor's Note

PROFESSIONALISING THE BANKING INDUSTRY

WITH SEVERAL ISSUES UNDER OUR METAPHORICAL BELT, this is an opportune time for us at *Banking Insight* to review our goals to ensure that we are seamlessly aligned with our overarching agenda of sharing knowledge and upskilling to professionalise banking talent.

To achieve this, in every issue, we strive to cover the most compelling and relevant developments affecting the industry, adding value by examining these issues within the Malaysian and ASEAN context. This time around, we revisit digital disruption and its impact on banking, because the urgency to embrace technology and innovate business models to deliver greater value is snowballing for financial institutions. In our cover story 'Banking in the Digital Age', we look at how banks are transforming their business models to integrate technologies and deliver better value, by adopting tools such as cloud, analytics and mobile. Looking further ahead, Manish Bahl of Cognizant Technology Solutions, a distinguished speaker at our recent banking conference on Mastering the Application of Digital Thinking and Technology in Banks is urging financial institutions to look beyond the current fintech hotspots of mobile wallets and payments to address the void in slow money, which refers to any future spending or saving by consumers, e.g. pensions, insurance and investments. Meanwhile, EY's Chow Sang Hoe imagines banks as platforms for financial transactions, where consumers and producers interact using smartphones as the universal banking tool. Senior contributing writer Angela Yap, on the other hand, imagines how retail banks can reconfigure their branches – which are still responsible for approximately 30% of a bank's operating costs and 45% of all banking revenue – to become digitally anchored, mobile-centric and more competitive and viable in this shifting landscape. Other issues worth checking out in this issue include a look at the evolving regulatory landscape for bitcoin and cryptocurrencies *vis-à-vis* fiat currencies and an overview of financial inclusion and social finance initiatives.

While it is critical for Malaysian and ASEAN financial institutions to keep abreast and ahead of technological innovation, it is even more imperative that talent is trained and upskilled to integrate technological know-how with impeccable ethics and professional standards. This is a key strategic agenda at the Asian Institute of Chartered Bankers (AICB), which seeks to imbue ethics and elevate professional standards among banking professionals in Malaysia and the region. In this issue, I am sharing at length on ethics, integrity and professionalism, the three pillars of financial stability. As today's banking industry evolves rapidly, driven by regulatory and technology advancements, it needs talent who are not only competent and skilled, but who possess strategic insights and adaptability, underpinned by "ethics, integrity and professionalism to contribute to the stability of the financial industry and the greater economy". I am also proud to share some of AICB's key initiatives that will elevate the industry's professional standards and governance: hard on the heels of our earlier commitments with stakeholders to implement professional standards for the holistic industry and anti-money laundering, with effect from 1 January 2023, reporting submissions by Development Financial Institutions (DFIs) to Bank Negara Malaysia must be undersigned by DFI officers who are qualified Chartered Bankers. This will go further towards raising the profile and relevancy of the Chartered Banker qualification, while ensuring enhanced corporate governance and public trust in the financial ecosystem and market. As AICB matures, we intend to keep upholding our two key roles: as custodian of professional banking standards and membership development. *Banking Insight* is a key tool for promulgating and championing banking professionalism and we hope to keep improving and serving our members and readers better in the years to come. ✱

+ This time around, we revisit digital disruption and its impact on banking, because the urgency to embrace technology and innovate business models to deliver greater value is snowballing for financial institutions.

Hope you have a fruitful read.

The Editor

ASIAN INSTITUTE OF CHARTERED BANKERS

bankinginsight

Ideas for Leaders

Editor | Prasad Padmanaban **Assistant Editor** | Shireen Kandiah
Writers | Amrita Kundu, Angela Yap, Stephanie Francesca Pereira, Hisyam Ali, Anirban Kundu, Nazatul Izma

PUBLISHER

Asian Institute of Chartered Bankers (35880-P)
(formerly known as Institut Bank-Bank Malaysia)
Wisma IBI, 5 Jalan Semantan, Damansara Heights, 50490 Kuala Lumpur Malaysia
Tel: +603 2095 6833 Fax: +603 2095 2322 Email: enquires@aicb.org.my

PUBLISHING CONSULTANT

Executive Mode Sdn Bhd (317453-P)
Tel: +603 7118 3200 Fax: +603 7118 3220 Email: executivemode@executivemode.com.my

PRINTER

Percetakan Lai Sdn Bhd
No.1, Persiaran 2/118C, Kawasan Perindustrian Desa Tun Razak, Cheras, 56000 Kuala Lumpur
Tel: +603 9173 1111 Fax: +603 9173 1969

We want to hear what you have to say on Banking Insight.

Why not drop us a line now? e-mail: **enquires@aicb.org.my**

Visit us online at our website **www.aicb.org.my**

CONTENTS PAGE
June 2018

COVER STORY

BANKING IN THE DIGITAL AGE: DISRUPTION. REINVENTION. REVOLUTION.

Defining a future blueprint for empowering businesses to be ready for a digitally invasive world, where the touch points and interactions are different from traditional models.
pg.12

PROSPECTS

CATCHING UP WITH THE PLATFORM ECONOMY: A NEW ECOSYSTEM OF PLATFORMS
pg.24

PROSPECTS

INSIDE THE CRYPTOCURRENCY BUBBLE

Cryptocurrencies have given birth to virtual billionaires — is it time to regulate the playing field?
pg.32

CEO SPEAKS

ETHICS, INTEGRITY AND PROFESSIONALISM: THE THREE PILLARS OF FINANCIAL STABILITY

In an exclusive interview, Prasad Padmanaban, Chief Executive Officer at the Asian Institute of Chartered Bankers shares insights into the effect of professionalising bankers in the Malaysian banking industry. **pg.07**

THOUGHT LEADERSHIP

SOCIAL FINANCE 101

Investors are cashing in on a burgeoning sector that merges social goals with financial returns.
pg.60

PROSPECTS

06 **Insights**

18 **The Open Banking Battle for Hearts and Minds**
Disruption for banks isn't just coming from technology. It's coming from legislators and policymakers too.

20 **'Next Set of Opportunities for Banks is in Slow Money'**

28 **Lean, Mean Retail Machine**
What it takes to create the mobile-centric, digitally-anchored branch of the future.

GOVERNANCE

38 **The 'Absolutely' Generation**

40 **The Changing Face of the Mobile Payment Industry**

44 **Financial Inclusion; Where are We Today?**
An update on the current situation of financial inclusion around the world and how Malaysia got it right.

THOUGHT LEADERSHIP

48 **I, Robot – You, Banker?**

50 **How to Work with an Autocratic Leader**

54 **Market Behaviours: Analysis and Controls**
In a sequel to the earlier article on Market Behaviours, Gerry Harvey and Craig Beevers speak about behaviour analysis, regulation and legal framework.

58 **Business Plan 2018-2020: Framing the Future with Talent and Technology**

TECHNICAL

66 **Data in the Dark**
When asked what they understood about the new Open Banking regime, many retail banking customers drew a blank.

68 **Leveraging AI to Combat Fraud**

MALAYSIA FEATURED IN THE LIST OF TOP 25 BANKS IN ASIA PACIFIC

According to The Banker's Top 25 Banks in the Asia Pacific 2017 report (Excluding China and Japan) 2017, Malaysia Building Society entered the highest movers list with a Tier 1 capital increase of 35.36%, while Maybank grabbed the 17th position. Indonesia-based Bank Mandiri and Bank Rakyat Indonesia also entered the highest movers list for the first time. The rise of Indonesian banks in the list has led to a drop in rankings for a number of Taiwanese and Thai banks. Australia-based ANZ Banking Group was ranked first, moving the erstwhile topper National Australia Bank to the second position. The total number of South Korean banks remain unchanged in 2017 with seven banks in the rankings. ✱

"85% OF BANKS CITE IMPLEMENTATION OF A DIGITAL TRANSFORMATION PROGRAMME AS A BUSINESS PRIORITY FOR 2018"

— *Global Banking Outlook 2018, Ernst & Young.*

'The Global Banking Outlook 2018' published by Ernst & Young states a complete digital transformation is imperative for banks to protect themselves from "the impacts of future downturns on financial performance and business continuity". It states that banks need to channelise investments on "end-to-end processes and infrastructure" to improve efficiency of the entire organisation instead of investing in specific projects, especially customer-facing interfaces. The global consultants recommends banks to be more "digitally mature". ✱

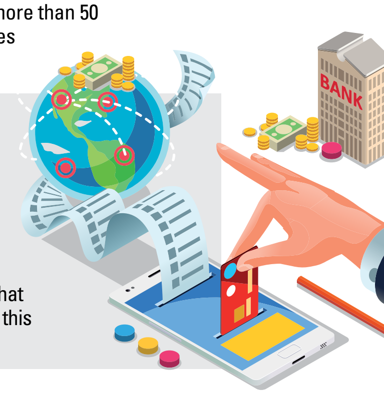
The Digi-Way

Thailand's central bank Bank of Thailand is developing its own **digital currency** to conduct interbank settlements through 'Project Inthanon'. It aims at exploring the use of the wholesale central bank digital currency in back-office operations and is expected to make transactions cheaper and faster.

DEALING WITH TRANSITION

In 2017, the UN Environment Programme Finance Initiative convened 16 leading banks from four continents to publish a jointly-developed methodology for an increased understanding of climate change and impact of climatic actions on business for banks. Following this, a Guide was published on 26 April 2018, which is expected to help banks manage risks associated with the transition to a low-carbon economy. It also provides guidance on methods of seizing opportunities arising out of such transitions.

HONG KONG'S CENTRAL BANK recently issued revised guidelines for virtual banking entities following a thorough public consultation. The central bank has already received enquiries and interest applications from more than 50 companies and is aiming to award licences for virtual banks by the end of the year. ✱



PwC'S 2017 DIGITAL BANKING SURVEY reveals that consumer banking habits have continued to evolve, especially since users now have a choice of where and how they bank, thanks to the availability of digital banking tools. However, traditional banking is still preferred by some. The report concludes that "banks need to think 'mobile first' to win in this market". ✱

In its April 2018 publication, 'Asian Development Outlook 2018: How Technology Affects Jobs', the Asian Development Bank mentioned technology will be the driving force behind better-paid jobs and economic growth. Although new technologies replace manpower, they also "unleash countervailing forces that generate more jobs". Acknowledging the truth that technology replaces jobs, it suggests governments across developing Asia to respond to the challenge by exploiting the new opportunities they provide. This can be done by focussing on "skills development, labour regulation, social protection and income redistribution". ✱

Ethics, Integrity and Professionalism

THE THREE PILLARS OF FINANCIAL STABILITY

IN AN EXCLUSIVE INTERVIEW, **PRASAD PADMANABAN, CHIEF EXECUTIVE OFFICER AT THE ASIAN INSTITUTE OF CHARTERED BANKERS** SHARES INSIGHTS INTO THE EFFECT OF PROFESSIONALISING BANKERS IN THE MALAYSIAN BANKING INDUSTRY.

Q You have nearly two decades of experience in the banking and financial services industry, with an exposure to multiple economies across the world. Could you please give us a brief overview of your career?

I began my career at CIMB in Corporate Finance over 20 years ago then moved to Singapore with Barclays de Zoete Wedd, now known as the Barclays Investment Bank. Following that, I moved to London to work with Société Générale and later with J. P. Morgan for nearly 12 years, starting in London and then Hong Kong. I later joined MUFJ, the securities arm of what is now MUFG – the Japanese bank, in Hong Kong for over four years. I was the Executive Director at MUFJ and J. P. Morgan, working in various markets capacities covering all manner of Asia-ex and Japan securities from fixed income to equity derivatives.

Interestingly, I began my career overseas at the beginning of the Asian Financial Crisis in 1997 and have survived the SARS epidemic in Hong Kong as well as

The banking industry has faced many highly publicised scandals of misconduct where internal cultures have unfortunately focussed more on revenue generation instead of customer support and care. These actions, seen in the last financial crisis, greatly undermined the reputation of the banking sector and highlighted the lapse in professionalism in bankers, which resulted in the loss of public confidence and trust.

the Global Financial Crisis (GFC) that began with first the collapse of Bear Stearns, followed a few months later by the collapse of Lehman Brothers in September 2008. I do not have a great recollection of the Bear Stearns collapse despite then being at J. P. Morgan, who bailed them out by buying them. The reason being I was busy getting married! These crises and the breadth of financial instruments available have given me a wealth of experience in financial instruments and the markets, for which I am morbidly grateful.

Q How do you think the Malaysian banking industry has transformed over the years, and what, in your opinion, lies ahead?

Just as we saw the transition from traditional over-the-counter banking to a focus on electronic operations, online banking and the introduction of ATMs, we are now seeing the emergence of digital disruption, which has forced banks to rethink their business strategies, engagements with customers and the way they do business. The phrase 'digital disruption' is one with which we have become all too familiar and now, with the new wave of Digital 2.0 transforming the way customers bank and transact, bankers must be able to see the value and opportunities that lie with these new and influential emerging technologies that are being introduced. New technology such as robotic process automation (RPA), artificial intelligence (AI), blockchain and so forth is expected to drive greater change in banking and shape its future, and everyone in the banking industry must take steps to keep pace with this disruption or risk becoming irrelevant.

In Malaysia, I think banks are still at the exploratory stage with these new technologies – they are embracing these changes and definitely not lagging behind, diligently keeping abreast of current developments. However, I believe they will take a more collaborative approach – meaning there will be greater cooperation between traditional banks and fintechs to create stronger value propositions for customers, as well as greater cost and service efficiencies. This will definitely drive the future of banking and shape the new business model for banks. However, customers will always require – and to a certain extent, prefer – some human element in banking, so it is important that banks and fintechs achieve that delicate balance to remain competitive and profitable, but are still able to connect with their customers.

Rapid changes in the banking landscape have also necessitated the upskilling and re-skilling of banking talent – the challenge is to reshape the banking workforce and equip them with the relevant knowledge and skill sets to ensure that they are agile,

relevant and equipped to navigate the digital revolution. With greater emphasis on risk management post-GFC, financial institutions are now focused on IT investments to meet regulatory requirements such as Know-Your-Customer (KYC) and Anti-Money Laundering (AML). Coupled with regulatory pressure to ensure that their KYC and AML related compliance systems adhere to international standards and regulations, there is a high demand for talent who can demonstrate and understand IT requirements from a compliance point of view.

A more holistic and integrated talent management strategy is needed if this additional demand is to be met with the supply of qualified talent. Understanding trends shaping the financial services industry and how these trends will drive the future of jobs and skills needed are imperative to closing talent gaps. In my view, bankers of the 21st century must increase their respective organisational value amidst the constant technological disruption that we are witnessing today and be resilient, agile, technologically proficient, able to think critically, and of course, be ethically and professionally competent.

To this end, AICB works closely with industry to ensure we incorporate the relevant knowledge required in our professional qualifications to meet industry needs and equip banking talent with the requisite skill sets and values to thrive in the evolving banking landscape and strengthen public trust and confidence.

Q As Chief Executive of the Asian Institute of Chartered Bankers (AICB), what are your views on the importance of professionalising bankers to ensure the sustainability and resilience of financial organisations and the broader financial system?

Today's banking industry is evolving rapidly with many regulatory and technology advancements taking place, and I believe it needs talent who are not only competent and skilled, but who possess the ability to understand the breadth and depth of the business and the mindset to adapt to the rapid changes that are taking place. And of course, talents who possess ethics, integrity and professionalism to contribute to the stability of the financial industry and the greater economy.

The banking industry has faced many highly publicised scandals of misconduct where internal cultures have unfortunately focussed more on revenue generation instead of customer support and care. These actions, seen in the last financial crisis, greatly undermined the reputation of the banking sector and highlighted the lapse in professionalism in bankers, which resulted in the loss of public confidence and trust. I cannot stress enough how vital independent, highly competent and professionally qualified bankers are to further strengthen corporate governance and contribute to financial stability.

To this end, over the past two years, AICB has focussed on implementing a crucial industry-wide initiative with Malaysian banks to professionalise bankers. In November 2016, we signed an industry commitment with Member Banks of The Association of Banks in Malaysia (ABM) to create a workforce characterised by high standards of professional conduct, knowledge and competence through the Chartered Banker programme supported by Bank Negara Malaysia.

We also signed a second industry commitment in October 2017 to enhance the professional standards in the Malaysian banking industry through specialised certifications on Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT), Internal Audit, Compliance, Credit and Risk Management. And on 27 December 2017, we signed an industry-

A more holistic and integrated talent management strategy is needed if this additional demand is to be met with the supply of qualified talent.

wide commitment to professionalise Development Financial Institutions (DFIs) with six DFIs. As an extension of this initiative, with effect from 1 January 2023, reporting submissions made by DFIs to BNM must be undersigned by DFI officers who have attained the Chartered Banker or Chartered Professional in Islamic Finance qualification (for full-fledged Islamic DFIs). These efforts, I believe, represent a momentous step for AICB and the Malaysian banking industry towards elevating professional standards in banking as it will further strengthen the critical foundations for banking institutions to maintain an effective role in promoting inclusive economic growth and development, supported by a highly competent and professional workforce.

Q What are some of the key initiatives which AICB has embarked on to deliver its mandate of professionalising bankers and creating quality knowledge workers?

As the complexity and intricacy of the banking curriculum content broaden and deepen, particularly with greater deployment of technology in the banking industry, AICB is committed to ensuring that our suite of professional banking and financial qualification programmes continuously remain relevant and meaningful to the banking fraternity and are in line with developments that are taking place in the banking industry. We work closely with industry as well as several strategic partners such as the Asian Banking School (ABS), the Chartered Banker Institute (CBI), the International Compliance Association (ICA), the Financial Markets Association of Malaysia (FMAM) and the Finance Accreditation Agency (FAA), among others, to develop and design our professional curriculum and promote greater awareness of our qualifications.

To uphold the highest standards in banking, we introduced a Disciplinary Framework and established a 16-member Disciplinary Panel in early 2017, and developed a set of Disciplinary Regulations to ensure a fair and robust process that serves to uphold industry standards while supporting AICB's mission to protect the public interest.

To advance AICB's thought leadership initiative we also organise synergistic thought leadership events and participate in various international conferences and forums. We have also signed various industry commitment initiatives, MoUs and collaboration agreements with banking, financial and educational institutions to promote collaborations on thought leadership and professional education excellence initiatives, both domestically and regionally.

To support and engage members, as well as enhance membership value, AICB has developed various initiatives to promote continuing professional development (CPD) for members to keep abreast of the latest industry developments.

AICB has also established various technical and advisory committees known as Networking Groups, which include the Chief Risk Officers, Chief Compliance Officers, Chief Internal Auditors and the Heads of Human Resources. These Networking Groups act as an advisory committee to AICB and function as effective channels for knowledge sharing and discourse on important issues and development affecting the industry. Additionally, these subject matter experts also contribute content and bring to the table the latest banking knowledge and

To uphold the highest standards in banking, we introduced a Disciplinary Framework and established a 16-member Disciplinary Panel in early 2017, and developed a set of Disciplinary Regulations to ensure a fair and robust process that serves to uphold industry standards while supporting AICB's mission to protect the public interest.

methodologies to further enhance our professional qualifications.

Q The number of Chartered Bankers in Malaysia is expected to rise in the coming years. In your view, how will this impact the industry, particularly in the area of people management and skills?

AICB's membership numbers have definitely been growing steadily – to date, we have over 18,000 individual members across Malaysia, Cambodia, Maldives, Myanmar and the Philippines, and over 80 corporate members. This surely reflects the growing reputation of AICB's qualifications among bankers — both domestically and regionally — who are looking to build a reputable career in the banking industry.

Guided by the transformation blueprint for the Malaysian banking education landscape, AICB has two key roles: to be the custodian of banking professional standards and membership development. This is one of the key reasons for Institut Bank-Bank Malaysia (IBBM) being repositioned as AICB in 2015, so that as a fully-fledged professional body, the Institute would be able to focus its efforts on raising the bar on professionalism and competency standards to propel the banking industry to the next level of proficiency, where a greater number of individuals will be able to take professional qualifications to succeed in the new banking 4.0 environment.

AICB's professional membership and qualifications are an excellent start in enhancing this knowledge and professionalism, as members are guided by the Institute's Code of Professional Conduct and Continuing Professional Development. This will further boost competence, influence and encourage continuous improvement, thus contributing to the resilience and stability of banks and the financial sector.

There is a need to attract regional and international talent by facilitating entry into the domestic financial sector workforce and at the same time, profile Malaysia's financial sector as a destination for international and regional talent. Of course, this includes simplifying procedures for temporary or permanent international skilled migration to the financial sector.

As such, I believe the focus of the banking industry will be on talent acquisition, retention and development. There is a need to attract regional and international talent by facilitating entry into the domestic financial sector workforce and at the same time, profile Malaysia's financial sector as a destination for international and regional talent. Of course, this includes simplifying procedures for temporary or permanent international skilled migration to the financial sector.

In terms of the impact on skills, the focus will be on plugging skill gaps in industry practitioners. The education system plays a pivotal role in producing a sustainable pool of talent to compensate for recurring leakages of talent. It can do this by establishing formal working arrangements between the industry and tertiary education institutions to produce more industry-ready entry-level graduates. I believe the four key ingredients to producing truly useful graduates are: student selection from diverse backgrounds; the acquisition of both technical skills and a comprehensive understanding of the work environment; an apprenticeship ethos throughout the degree; and a determined focus on 'job readiness'.

To advance this agenda on our end, AICB has signed several MoUs with universities to further demonstrate our commitment towards academic cooperation and collaboration to promote joint research and education activities, the exchange of expertise in the development of curriculum relating to banking, and thought leadership activities, including conferences and seminars. These efforts are done with the common objective of enhancing the quality of human capital for the banking industry. ✱

BY ANIRBAN KUNDU

Banking in the Digital Age

DISRUPTION. REINVENTION. REVOLUTION.

Defining a future blueprint for **empowering businesses to be ready for a digitally invasive world,** where the touch points and interactions are different from traditional models.

+ Digitisation and the advent of big data have radically changed the global banking scenario. Access to the Internet is no longer the privilege of a select few. More than 54% of the world has Internet access and spend a considerable time on social media.

Mohammad Aamer, a young Malaysian professional, sat pondering over investment ideas for his recently received bonus payout. He was inclined to put his money in a fixed deposit, a relatively risk-free option. During his lunch break, he Googled the interest rates offered by various banks. When he returned home later that evening and logged on to Facebook, he noticed several 'sponsored' bank adverts. These were advertisements on their fixed deposit interest rates and other secured products. Over the next few days, he noticed that such advertisements kept appearing on most of the websites and webpages he visited, gently reminding him of his idle funds.

The following Sunday, while sipping on his *teh tarik* at home, he zeroed

in on a particular bank that offered the most attractive rates. Perusing their website, he noticed that the bank had a good home loan proposition and their credit card offer seemed attractive too. He applied for a credit card along with the fixed deposit. He was impressed with the usability and overall responsiveness of the website. Based on this seamless experience, he called up his friend who was planning to invest in a property and recommended to him the same bank for a home loan. His friend had an online chat with the bank's representative through their website and within a fortnight, had an approved home loan.

This is just one of the myriad scenarios highlighting the power of a digitally driven and connected world, one which is propelling the way in which banks and other establishments do business today.

THE NEED FOR DIGITISATION

Digitisation and the advent of big data have radically changed the global banking scenario. Access to the Internet is no longer the privilege of a select few. More than 54% of the world has Internet access and spend a considerable time on social media.

The 'Internet Users Survey 2017' conducted by the Malaysian Communications and Multimedia Commission (MCMC) reveals the following facts:

The predominant device through which Malaysians access the Internet is the smartphone (89.4%), followed by the netbook/notebook/laptop (36.3%), personal computer/desktop (29.3%), tablet (18.0%) and feature phone (9.4%).

Text communication (96.3%), social networking site visits (89.3%) and online searches (86.9%) are the dominant activities.

Of those who visited social networking sites, 97.3% had Facebook accounts and 56.1% had Instagram accounts.

The number of e-commerce users stands at 48.8%, a rise of 13.5% from the previous year. Online bank transfer (63.8%) remains the favoured mode of payment for purchases followed by ATM bank transfers (48.8%) and credit card payment (21.7%). 14.7% use payment gateway services such as Molpay, Alipay and PayPal.

CATERING TO MILLENNIALS — THE 'FUTURE CONSUMERS'

There has been a major shift in consumer expectations — especially among the youth — with the increase in Internet literacy and penetration. A 2016 research report published by the Asian Institute of Finance (AIF) titled 'Digital Banking: Measuring the Consumer Pulse in Malaysia' revealed some interesting facts. Based on a survey conducted on 2,000 Malaysian respondents aged 18 and above, the report states that 31% of respondents consider "speed of access"

There has been a major shift in consumer expectations — especially among the youth — with the increase in Internet literacy and penetration. A 2016 research report published by the Asian Institute of Finance (AIF) titled 'Digital Banking: Measuring the Consumer Pulse in Malaysia' revealed some interesting facts.

as one of the key factors for choosing a bank over its competitor. Other factors ranked lower, such as ease of use (18%), cost (17%), interface (13%) and usefulness (12%). Additionally, almost 50% of respondents confirmed that they would like to adopt and increase their digital transactions in the coming years.

In this context, banks are budgeting for larger technology investments towards digitisation, aimed at churning out bespoke initiatives targeting the youth consumer segment. This segment is a natural choice to initiate the digital push as they are constantly connected and already live parts of their lives online.

With increased investments in technology and platforms to cater to the demand from online channels, the traditional business model involving face-to-face interactions is crumbling. A critical yet sometimes overlooked success factor in such a large-scale transformation is the management of change across the organisation. Significant attention needs to be given on training and mentoring the staff so that they can embrace this 'cultural' change.

INITIATING THE DIGITAL PUSH

Most banks in Malaysia have now moved beyond the stage where they need to understand the impact of digitisation on their business. As per a report issued jointly by Telekom Malaysia (TM) and American Technology provider Akamai titled 'Transforming Digital Banking in Malaysia, — More Than a Channel Strategy', "banks in Malaysia are past looking at digital as yet another channel. Today, it is part of strategic intent and organisational process".

The next step is to initiate the digital push and implement it in an effective manner.

+ Building a digital 'culture'

The digitisation of banking operations involves an effective change management strategy where every bank staff has to be equally involved — from the top management right down to the lowest levels. Strategies and action plans devised by the Board have to percolate through various strata of the organisation to the grassroots level for seamless implementation. Building an organisational culture centred around digitisation can be the winning factor.

+ Investing in digitisation

Digitisation involves massive investments in terms of upgrading the existing technology and implementing new ones. This investment should be viewed from the perspective of laying a solid foundation stone for the future rather than an immediate cost. The real benefit will come over a period of time and be a deciding factor in staying ahead of the competition. Banks in Malaysia understand and acknowledge this fact. As per the aforementioned report by TM and Akamai, "Banks in Malaysia are cognizant that they will need to consider the business cost of not having invested 15 years from now when their competitors or other disruptors might be already ahead of the game".

+ Improving online presence

An integral part of the digital push is to reach out to the right set of customers at the right time. Investment in online marketing channels such as Google and Facebook for advertising are tools to showcase products and services offered. Online marketing techniques such as search engine optimisation, social media marketing, pay-per-click advertising and content marketing can be the vehicles to make a mark in the online world.

Over the past few years, there has been a rapid increase in online advertising spending across all industries. According to a 2017 report published by the Interactive Advertising Bureau (IAB), Singapore, titled 'Ad Spending in Southeast Asia', digital advertisement spending of the entire Asia Pacific will increase from 34.4% in 2015 to an estimated 53.5% in 2020 (refer **Table 1**). Malaysia's spending is expected to rise from 19.7% in 2017 to 25.2% in 2020. While these are overall figures of each country, it will not be unjustified to assume that the banking and financial services sector will contribute majorly to the figures.

TABLE 1: SHARE OF DIGITAL ADVERTISEMENT SPEND OUT OF TOTAL MEDIA ADVERTISEMENT SPEND IN SELECT COUNTRIES IN ASIA PACIFIC (2015–2020)

	2015	2016	2017	2018	2019	2020
Taiwan	30.1%	35.8%	40.4%	44.6%	48.1%	51.0%
Singapore	16.9%	20.3%	23.8%	27.2%	29.6%	30.8%
Hong Kong	15.7%	18.4%	20.4%	21.8%	23.1%	24.0%
Malaysia	14.3%	17.0%	19.7%	22.3%	23.9%	25.2%
Philippines	13.1%	16.2%	18.7%	21.0%	22.9%	24.2%
Vietnam	13.0%	16.0%	18.4%	20.6%	22.5%	23.6%
Thailand	12.7%	15.1%	17.5%	19.8%	21.5%	22.7%
Indonesia	12.5%	14.8%	17.1%	18.8%	20.1%	21.5%
Asia Pacific	**34.4%**	**39.4%**	**44.4%**	**48.8%**	**51.2%**	**53.5%**

SOURCE 'Ad Spending in Southeast Asia' report published by the Interactive Advertising Bureau (IAB), Singapore.

THE COMPONENTS OF DIGITISATION

Globally, banks have initiated the transformation into a digital era with the help of disruptive technologies in social media, mobile, analytics (big data) and cloud, commonly known as SMAC.

- **Social.** Social media has long been acknowledged as one of the major influencers in the lives of many. Customers are relying more on recommendations from their social

Social media presents an excellent opportunity for banks to stay connected with customers and address their enquiries quickly and effectively. While tools such as social media campaigns and contests help to actively engage with customers, responding to customer enquiries in real-time can increase customer confidence manifold.

connections and online influencer reviews rather than traditional advertising methods.

Social media presents an excellent opportunity for banks to stay connected with customers and address their enquiries quickly and effectively. While tools such as social media campaigns and contests help to actively engage with customers, responding to customer enquiries in real-time can increase customer confidence manifold. Banks that focus on having a strong social media presence today will lead the way in customer satisfaction and confidence as financial service providers.

In this context, New Zealand-based ASB Bank's efforts in the social media space is worth mentioning. They launched a 'Virtual Branch' on Facebook as early as May 2011. It was the world's first Facebook-based branch, where customers could have real-time secure online conversations with ASB banking specialists. Since then, the bank has kept innovating in this space and is well-known for its marketing practices such as linking the home loan rate of a customer to the number of Facebook likes received.

Nigeria-based GTBank is also considered a progressive bank, in this regard. It has a "social banking" section with a "social account login" for account management on their Facebook page. Further, their Facebook page can be used for opening bank accounts and checking account balances. The bank tracks a distinct ROI for its Facebook page.

- **Mobile.** As per the 'Internet Users Survey 2017' by MCMC, 89.4% of the Malaysian population use their smartphones to access the Internet. This poses a great opportunity for banks. With a multi-device compatible website and a user-friendly mobile application, banks can make a lasting impression and effectively engage customers, especially the Millennials. The AIF report titled 'Digital Banking: Measuring the Consumer Pulse in Malaysia' identified features that Malaysians prefer in their mobile banking app in order of importance (refer **Table 2**). Personalised products and services and reward points were given priority over biometric security features by the respondents of the survey.

- **Analytics.** Analytics and big data are the core of all digital activities. A customer's 360° data needs to be

TABLE 2: PRIORITY RATING OF MOBILE BANKING FEATURES

Must-Have	Good to Have	Not Necessary
Personalised products and services based on spending and bill amount patterns.	Personal financial capabilities.	Real-time personal money management and financial alerts and financial management games.
Personalised homepage.	Shopping updates on the mobile app.	Mobile wallet and biometric security features.
Loyalty points/cashback/ discount for mobile banking.	Seamless experience across channels.	Support features.

SOURCE 'Digital Banking: Measuring the Consumer Pulse in Malaysia' published by the Asian Institute of Finance.

The methods of protection and use of customer data by commercial enterprises, including banks, have been a matter of debate globally. Regulators are tightening laws to implement stringent regulations to ensure transparency in transactions. The European Union has started implementing General Data Protection Regulation (GDPR), which provides strict guidelines on usage of user data.

collected and analysed methodically to personalise customer experiences. Creating a complete profile of customers helps banks create razor-sharp effective marketing strategies.

The opportunities are endless. According to McKinsey & Company's 2017 article 'Analytics in Banking: Time to Realize the Value', turning to machine-learning algorithms have helped a notable European bank pre-empt customer attrition. Following the results, the bank launched a targeted campaign and managed to reduce churn by 15%. According to the same article, another US-based bank used machine learning to understand the effect of reduction of unnecessary discounts on cost control. Adoption of methods identified through this analysis raised revenue by 8% within a few months. An Asian bank recently used big data to build new products and increase its product per customer share. The banks remain unnamed in the article for the purpose of data confidentiality.

Opportunities in analytics are endless and proper usage can provide eye-popping results which may be useful in various ways. Specific data-driven approaches can help banks develop the right offering for the right segment.

- **Cloud.** Adoption of cloud computing or distributed computing technologies enables banks to reduce expenses in deploying and upgrading the IT infrastructure. The banking industry deals with enormous volumes of confidential data. Cloud computing provides several models through which banks can reduce expenses, minimise wastage of resources and significantly streamline operations. Although most banks have been apprehensive about implementing cloud computing due to safety and reliability concerns, the benefits are far too many to ignore the technology completely.

THE OTHER SIDE OF THE COIN

The proliferation of digital does not come without risks and concerns. People are still wary of online data privacy. The 'Internet Users Survey 2017' by MCMC reported online privacy to be the biggest concern among Internet users (91.9%). Concerns with respect to data security is not completely unfounded, especially due to the rise in the number of hacking and fraud cases.

The methods of protection and use of customer data by commercial enterprises, including banks, have been a matter of debate globally. Regulators are tightening laws to implement stringent regulations to ensure transparency in transactions. The European Union has started implementing General Data Protection Regulation (GDPR), which provides strict guidelines on usage of user data. It includes penalties and compensation for damages and loss of reputation to the affected entity. The Department of Personal Data Protection in Malaysia has also started enforcing the 'Personal Data Protection Act 2010', where those in breach are dealt with severely. Banks which take proactive measures to protect customer confidentiality will be the forerunners in building customer confidence and brand loyalty.

As we move rapidly into a digitally converged world driven by artificial intelligence, where the reach, reputation and reliability of any business are propelled by its digital brand, the time and need to invest early and substantially in a digital push is upon all banking entities. ✱

■ *Anirban Kundu has more than 15 years of experience working in the financial services sector and stock exchanges. He specialises in banking, stock market investing and financial planning. A prolific author, his work has been published in various publications globally.*

THE OPEN BANKING BATTLE FOR Hearts and Minds

DISRUPTION FOR BANKS ISN'T JUST COMING FROM TECHNOLOGY. **IT'S COMING FROM LEGISLATORS AND POLICYMAKERS TOO.** THE EU COMMISSION'S TASK FORCE ON FINANCIAL TECHNOLOGY (TFFT) AND THE OPEN BANKING INITIATIVE DON'T SOUND OMINOUS, BUT THEIR DIGITAL PROPOSALS HAVE PROFOUND IMPLICATIONS FOR BANKING.

Bankers should mark the year 2021 in their diaries. It's the year the industry could be summarily disrupted. By then, customers will be in full control of their data and the banking experience will be frictionless, full of new digital offerings, while the big incumbent banks could be transformed from one-stop shops to open platforms hosting a range of financial services providers.

That's if you believe the media buzz, the tech evangelists and the change-makers. "Listening to the tech hype three years ago, you would have sold all your bank shares," says Mark Curran, Director of Open Banking Strategy at CYBG, owner of Clydesdale and Yorkshire Banks. "Come 2018, the market hasn't been turned on its head. But, yes, there is more willingness now to team up with other players."

The fact is policymakers in London and Brussels want more competition. "Increasingly, regulators and consumers are demanding greater transparency and control over how data is collected and used," says Sam Pfeifle, Content Director at the International Association of Privacy Professionals.

Part of this process is opening banking up to more third-party providers (TPP), primarily through data sharing, common interfaces and standards. The aim is better and innovative customer experiences when it comes to payments, investments and lending. "At the moment, big, as in banks, trumps small, as in start-ups. In the future, fast, as in innovation and service, will trump slow," declares David May, Director of Learning and Development at RBS Group. "In this new market, modular, layered and partner-orientated platforms will be crucial."

A BULLISH NEW ERA

Open data is integral to Open Banking and other initiatives, and the winners will be those who use data analytics to understand and service customers in the best way possible. The legacy banks could have the most to lose in this process, since they will be forced to share their most prized asset – customer data. Creating value based on information currently locked up in banks could also be an imperative.

However, the banks we asked (including Lloyds, HSBC, RBS and CYBG) were all bullish about the prospects of a more open, democratised market. The buzz word is 'co-creation', in some cases with agile and innovative FinTechs.

"Regulatory changes such as PSD2 and Open Banking are opportunities to innovate so we can bring the best services to customers," explains Josh Bottomley, Global Head of Digital, Data and Development at HSBC. "Banks have significant assets in the Open Banking world, including a deep understanding of customers' needs and behaviours, distribution, reach and, most importantly, customer trust."

Certainly, vetting providers and building trust will be needed. "Our customers trust us to support and protect them every day," points out Marc Lien, Director of Applied Sciences at Lloyds Banking Group. "As part of Open Banking, the nine largest banks and building societies have been testing Open Banking APIs with other banks and third-party providers since the start of 2018. Testing is vital to provide a robust and controlled service."

FinTech companies that team up with banks will also have to make sure they not only comply with the data privacy and security laws that govern the handling of personal information, "They will also have to adopt and implement best practices to stay ahead of the curve," claims Nancy Libin, Partner at law firm Jenner & Block.

BANKS COULD SHIFT THEIR POSITION

The big question for incumbent banks is where to position themselves in this evolving digitised landscape. "These changes will likely decouple banking products from their distribution and propel a bank's axis towards platform strategies," states Scott Vincent, CEO of consultancy Parker Fitzgerald.

Firstly, banks can try to become information aggregators, utilising their data well and providing personal financial management along with other services. ING has already taken steps towards this goal, while HSBC has developed a proprietary platform that allows customers to see accounts from all providers on one screen. Others, too, are entering the platform game. "Take Belfius Bank in Belgium," suggests Ian Bradbury, CTO Financial Services at Fujitsu. "It already has a market-leading mobile banking app that provides customers with a significantly enhanced experience using real-time analytics.

"This allows personalisation of the mobile banking experience in real-time, based on many different data sources, including a social media feed. With Open Banking potentially providing additional sources of data on the consumer for Belfius from other banks, this experience is going to become even more beneficial."

Secondly, banks could become marketplaces, by combining Open Banking data with other information sources, as well as deep learning and the fact that we trust our bank. They could then deliver more tailored and third-party services incorporated into a bank's existing mobile app. These services may not even be connected to banking.

If Open Banking shifts the retail sector towards a platform or marketplace model, the battle for the interface will be won by those who utilise data and offer the best customer experience. "Banks will have to decide whether fighting over the interface is the right strategy," says Neil Tomlinson, Head of Banking at Deloitte. "They may think they're better placed to provide best-of-class products via a third-party platform."

NEW PLAYERS, NEW TERMS OF ENGAGEMENT

The greatest curveball could come from the tech giants known collectively as GAFA (Google, Apple, Facebook and Amazon), as well as from mobile phone companies. "Many CEOs have told us they believe it will be these players that drive the real change and disruption in the banking industry," states John Lyons, retail and commercial banking leader and PwC partner.

GAFA's ability to harvest data from established banks, together with their own vast customer databases, could be a potent force. "This might enable them to become customer-facing 'banks', while utilising the back-end infrastructure of traditional institutions," suggests Richard Waller, Partner and Head of the Financial Services sector at law firm TLT.

What shouldn't be ignored is where and with whom the liabilities and balance sheets will sit in this new era. This is still ultimately with legacy institutions. CYBG's Mark Curran likens this new phase to when Sainsbury's, Tesco and M&S muscled in on banking some years ago. "The challenge with these supermarket partnerships at their founding is that the assets and liabilities existed with the banks and not with the joint venture or the third-party provider," he says. "This is the big issue, and it is a lesson for the future: how do you manage the relationship when the liabilities sit with the incumbent bank?"

One thing for certain is that in this new Open Banking era, the stakes are high. Banks have a lot to play with and a lot to play for. Only time will tell who will emerge victorious. ✱

■ *This article was previously published in the Chartered Banker Magazine, April/May 2018.*

'NEXT SET OF OPPORTUNITIES FOR BANKS IS IN SLOW MONEY'

DISTINGUISHED SPEAKER AT AICB'S RECENT BANKING CONFERENCE **'MASTERING THE APPLICATION OF DIGITAL THINKING AND TECHNOLOGY IN BANKS'**, MANISH BAHL OF COGNIZANT TECHNOLOGY SOLUTIONS RECOMMENDS BANKS TO FOCUS ON LONG-TERM FINANCIAL OBJECTIVE OF CUSTOMERS AND 'BE DIGITAL' FROM THE CORE.

The next set of opportunities for banks as they go further down the digital path is in tapping people's 'slow money' needs, according to Cognizant Technology Solutions, a US-based global professional services group.

"Right now, the hot areas [in digital] are in wallets and payments. But for how long can you continue to focus on that? You have to move beyond mobile wallets and payments, and that's where I think the next set of opportunities are going to be — addressing the slow money needs of people, which is definitely missing right now," says Manish Bahl, a senior director who leads Cognizant's Center for the Future of Work in Asia Pacific.

'Slow money', a phrase coined by Cognizant and its partner ReD Associates in a recent study, refers to any future spending or saving by consumers, and this can include pension, insurance and financial market investments.

This is opposed to 'fast money', which refers to their daily and short-term spending and can include current accounts, credit facilities, cash and overdrafts. The results of that study, which was published by Cognizant and looks at people's emotional relationship to money, show that banks need to better understand their customers'

'Slow money', a phrase coined by Cognizant and its partner ReD Associates in a recent study, refers to any future spending or saving by consumers, and this can include pension, insurance and financial market investments.

relationship to money and focus on where those needs are not being met.

It estimates that banks can achieve a financial impact corresponding to an increase of 14.2% of revenue by getting the slow-money challenge right. "Until now, digital innovation and fintechs have largely focused on solving problems related to people's fast money. While digitisation has delivered many benefits for customers and companies, it hasn't resulted in the strong customer relationships necessary for winning in the future. In contrast, our study demonstrates that getting slow money right will make consumers more loyal, less price sensitive and more inclined to do more business with your organisation. That's why we believe that resolving people's slow money challenges is the next digital imperative in financial services," reads an excerpt from the study.

The study, conducted over five months in 2016 and 2017, comprised an ethnographic look into 32 families and their social networks in the US, UK and Germany, as well as a survey of 3,000 people in the US and UK to test the insights from the ethnographic study. It also included in-depth conversations with financial institutions and fintech entrepreneurs.

Right now, the focus is very much on payments and wallets, both from fintechs as well as banks. But over the next three to five years, I believe banks need to start focusing on the long-term financial objectives of people, which mean pensions, investments and so on. These are opportunities that are sort of overlooked by many banks and fintech companies in the country.

In relating this to banks in Malaysia, Manish notes that almost every bank here has already formed some kind of collaborative approach with fintechs.

"Right now, the focus is very much on payments and wallets, both from fintechs as well as banks. But over the next three to five years, I believe banks need to start focusing on the long-term financial objectives of people, which mean pensions, investments and so on. These are opportunities that are sort of overlooked by many banks and fintech companies in the country," he says.

"Right now, the relationship that people have with banks is more transactional…and that has been the case for so many decades and there's nothing wrong with it. But now, with fintechs coming into the picture, things are going to get changed a lot, which means establishing a deep-rooted customer relationship that is going to be critical to succeed in digital," he adds.

Manish was speaking to *The Edge* in Kuala Lumpur, where he was a speaker at the Asian Institute of Chartered Bankers' global banking discourse series, 'Mastering the Application of Digital

	FAST MONEY	SLOW MONEY
	Current checking accounts, overdrafts, credit facilities, cash, mobile payments	**Standing orders, savings accounts, pensions, insurances, financial market investments, physical assets**
Defining parameters	Short timeframe	Long timeframe
	Little skill/faith needed	Significant skill/faith needed
	More intelligible	Less intelligible
	Mostly simple decisions	Mostly complex decisions
	Goal: Simplicity	**Goal:** Stability and security

SOURCE Cognizant Technology Solutions

"Right now, the relationship that people have with banks is more transactional… and that has been the case for so many decades and there's nothing wrong with it. But now, with fintechs coming into the picture, things are going to get changed a lot, which means establishing a deep-rooted customer relationship that is going to be critical to succeed in digital."

Thinking and Technology in Banks', in March 2018.

He cites Google, Amazon and Facebook as examples of companies that have developed a deep connection with people.

"Whether we like it or not, they have developed a deep connect. Why? Because we feel that they understand us, and they provide or tailor-make their services based on what we are sharing online. I'm not saying that banks need to become like the Amazons of the world, but there are some interesting lessons that we can learn from these companies," he remarks.

Manish is convinced, however, that things are shaping up and that over the next three to five years, there will be a "rapid explosion" in terms of innovation and investments that will take place in Malaysia.

DIGITAL LAGGARDS/LEADERS

Banks in Asia Pacific are at different stages of their digital journey, with digital laggards and digital leaders, says Manish. What differentiates the two is whether they are just 'doing digital' or actually 'being digital'.

'Being digital', he explains, means going beyond revamping the bank's website or tweaking existing services and re-branding them as digital. It means injecting digital into the very core of what the banks do and how they interact and transact with customers.

"What we have seen is that companies that are applying digital to the core, you know, changing their business model, are definitely growing much faster compared with companies that are slow (in doing so)," he says.

Manish says Singapore's DBS Group is an example of a bank that is being "digital to the core", having launched a bank without branches, 'Digibank', in India, the country's first mobile-only bank.

"They did it all in nine months…so, in nine months, they had a bank ready to compete with traditional peers in the market. That's the speed of change that DBS brought to the country. And obviously, their customer base is growing like anything…because they're passing all these savings of opening a physical branch to customers with a high rate of interests on their savings accounts. So definitely, it's a win-win proposition for both customers and the bank," he says.

He singles out China as leading the pack in Asia, by far, on the digital curve, having come out with the most innovative products and services. But how does Malaysia fare on that curve?

"China's a different story — it's not an apple-for-apple comparison — and I don't think we should be comparing against China, frankly. It (Malaysia) is a very protective market and obviously, banks are quite advanced — they're providing all the digital channels to consumers, so things are moving at a gradual pace. But yes, there is always room for improvement. We can do things much faster and we can do it at a much faster speed, no doubt about it. They can do more, especially on the execution and on the infrastructure-readiness part. But, I think they are on the right path".

"On the regulations front, maybe a little bit more flexibility is going to help banks move up the digital curve much, much quicker. But, like any regulator across the world, obviously regulators here have their own [considerations] they need to fulfill. But, to me, I think the Malaysian banks are doing fine", he says. ✱

■ *This article was originally published in The Edge and is reproduced here under permission. Writer: Adeline Paul Raj.*

CATCHING UP WITH THE PLATFORM ECONOMY

A NEW ECOSYSTEM OF PLATFORMS

PLATFORM-BASED ACTIVITIES ARE CHANGING AND DISRUPTING THE TRADITIONAL STRUCTURE; HOW CAN BANKS ENTER THIS ARENA?

Enterprises (banks included) are now at the cusp of something new, something different. With the onset of the 'digital platform' economy, a new wave of platform-based activities is changing and disrupting the traditional structure of industries, and significantly impacting our socio-economic behaviours – it is changing how we live, how we generate income and how we interact with each other, and it will spur both opportunities and challenges for banks.

The rise of platforms has transformed competition – the new competition is more complex and superfluid. Acknowledging this new wave, a number of Malaysian banks have embarked on strategic partnerships and acquisitions with fintechs to foster a collaborative ecosystem of platforms.

A SUPERFLUID PLATFORM THAT LEVERAGES ON COMMUNITY INTERACTIONS

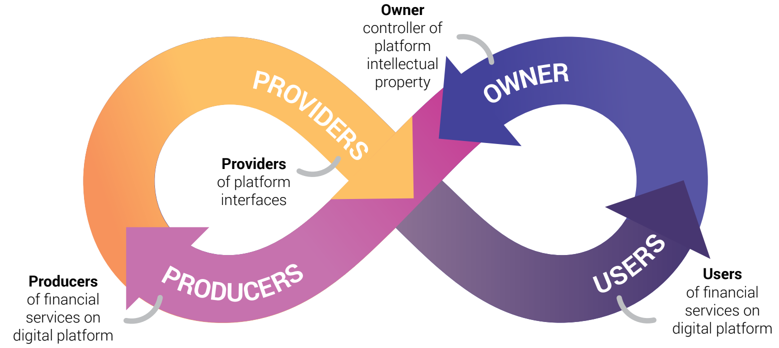
So, what exactly is a platform? And what are the new strategies for banks and enterprises to consider?

A platform provides the infrastructure and rules for a marketplace – bringing together producers and consumers. It allows multiple participants, including producers, users/consumers, providers and owners to connect to it, interact with each other and create and exchange value.

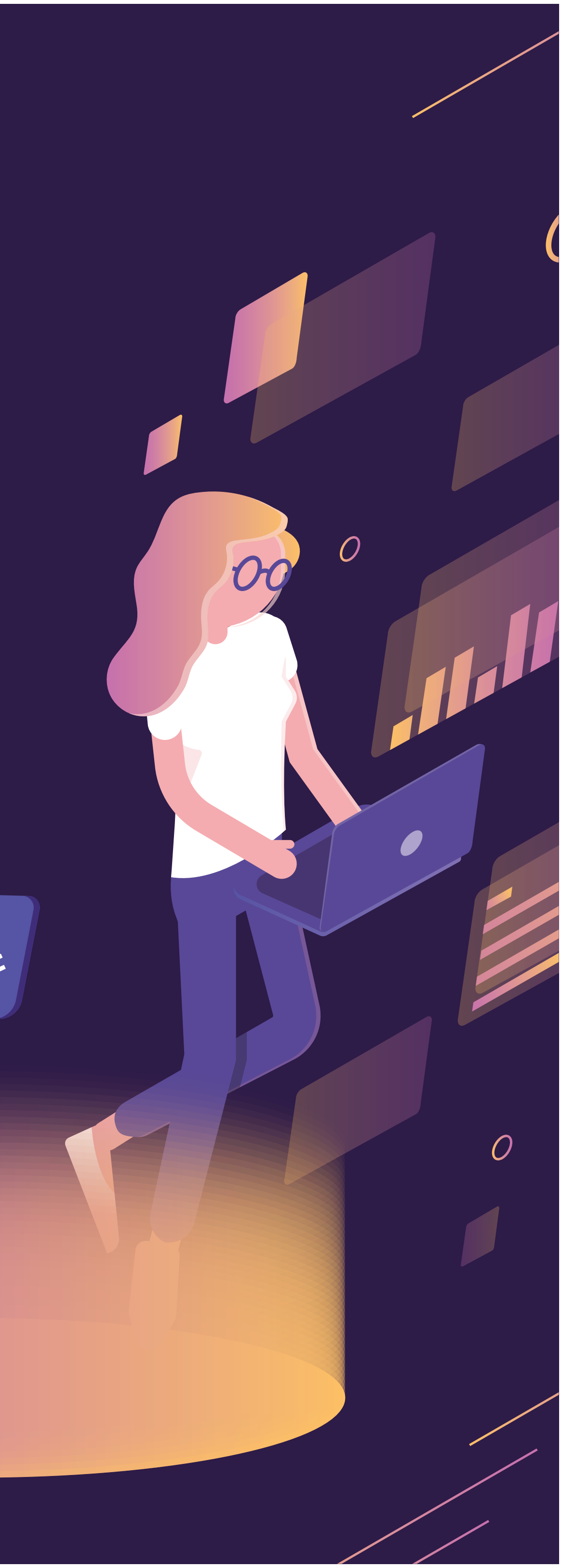
The ecosystem's players fulfil four main roles (Refer **Chart 1**). Whilst owners control intellectual property and governance, providers facilitate the interface platforms, producers supply goods and services, and users consume the goods and services. Roles between players are interchangeable and fluid, e.g. players can swap roles – users can ride with Grab and drive for it as well. This shape-shifting platform can abruptly transform an incumbent's set of competitors.

The exchange of huge amounts of data between providers and users provides valuable datasets for consumer analysis and setting market strategies. More importantly, as producers and consumers

CHART 1 SPEEDY AND FLUID INTERACTIONS BETWEEN PARTICIPANTS IN THE PLATFORM ECONOMY



SOURCE EY research



interact and share their ideas on products and services, the power of network influence is leveraged. Successful platforms operate in managing openness to maximise positive network effects from targeted communities. Understanding both the internal and external relationships of the ecosystem is critical to a platform strategy.

COULD BANKS BE THE NEXT PLATFORM BUSINESS?

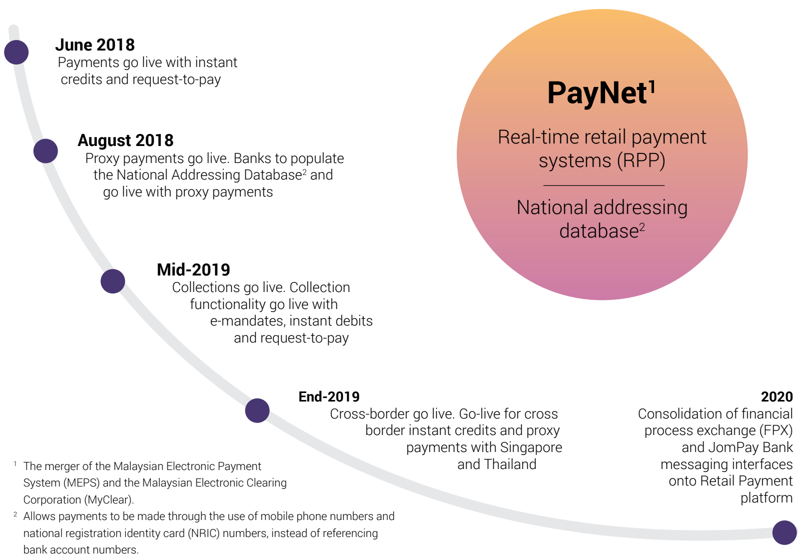
Current conventional wisdom may not support this idea of banks as the next platform business due to the industry's complex regulation, solid branding, franchise strength, and the stickiness of the personal current account. But we can imagine a platform-based architecture where consumers conveniently and confidently acquire financial services in seamless transactions with producers of financial services.

Instead of banks continuing with the classic value-chain model, imagine a future where banks become platforms for financial transactions. Rather than produce goods and services, banks could create open ecosystems where consumers and producers interact. Smartphones could be the core tool for all users of the platform – a universal banking product as ubiquitous as a wallet or credit card, but with infinitely more functionality.

In Malaysia, the groundwork has commenced in the digital payments sphere. A few major banks

+ Rather than produce goods and services, banks could create open ecosystems where consumers and producers interact. Smartphones could be the core tool for all users of the platform – a universal banking product as ubiquitous as a wallet or credit card, but with infinitely more functionality.

CHART 2 FIVE MILESTONES OF PAYMENTS NETWORK MALAYSIA (PAYNET)



[1] The merger of the Malaysian Electronic Payment System (MEPS) and the Malaysian Electronic Clearing Corporation (MyClear).
[2] Allows payments to be made through the use of mobile phone numbers and national registration identity card (NRIC) numbers, instead of referencing bank account numbers.

SOURCE EY research and PayNet website

have forged partnerships with fintechs, including major global online payment providers. Even Malaysia's sole electronic payment system, Touch 'n Go Sdn Bhd, has a joint venture with Ant Financial Services Group to build an e-wallet for the Malaysian consumer market.

In addition, the banking industry and Bank Negara Malaysia are developing a more unified retail payment platform called the Retail Payments Platform (RPP) under Payments Network Malaysia Sdn Bhd (PayNet). It grants eligible non-bank players access to the RPP, which will pave the way for a more competitive financial services landscape, particularly from third-party mobile payment companies. The mobile payment facilitation to a cashless society marks the banking industry's transition from a producer of services to a platform for financial transactions (See **Chart 2**).

Under PayNet's RPP, banks will pool resources to develop a common 'backbone infrastructure', which will allow users to link a common piece of identification to a bank account or digital wallet. This will allow for a seamless consumer payment experience, particularly since it will be open to both banks and non-bank payment operators. Once RPP goes live, consumers would be able to send money seamlessly to registered individuals and businesses and possibly connect directly with many independent producers of goods and services. As consumer data on the platform grows, consumers could potentially benefit from tailored support and guidance to confidently make decisions.

Producers, in turn, could potentially gain better data and direct access to consumers, thereby reducing marketing and onboarding costs. Consumers should ideally be in control of their data and decide how to share it securely and conveniently to save money on financial services and other non-financial services products.

Even the platform providers could benefit as well. The network would become increasingly valuable as the rising number of transactions generate a steady stream of data. The providers can analyse that data and offer insights to consumers and producers – promoting greater interactions. Over time, users will develop increasingly rich platform identities that have value in the non-financial sectors as well.

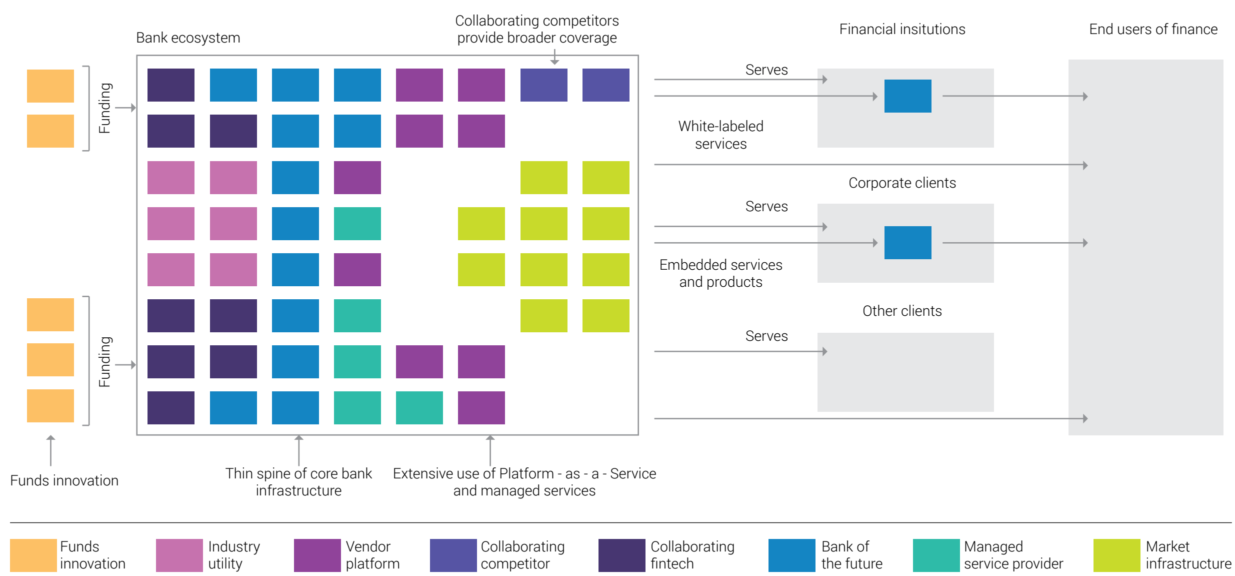
Thriving in the platform economy depends on some enabling elements, including:

- **Ultra-cheap, universal and real-time payments**
  In order to attract a wide variety of producers, platforms must reduce friction and support the micropayments required by the digital economy. The platform must be robust enough to handle transactions from many diverse users and allow instantaneous settlement so these users have no need for sponsoring institutions.
- **Open banking**
  If consumers can securely consent to offer their personal data, they will place more trust in the platform. Consequently, if they could control the use of, as well as see the benefits from sharing their data, they would more readily and intensively engage with the platform.
- **Near to zero-cost Know-Your-Customer (KYC) process**
  Producers that can access basic customer data are able to bypass the lengthy onboarding process to offer products immediately. At present, many elements of KYC still require paper-based identification and even face-to-face contact, which create significant barriers to switching.

With the rise of platform-based activities, bank operating models need to have a much thinner spine than they have today, making extensive use of

The providers can analyse that data and offer insights to consumers and producers – promoting greater interactions. Over time, users will develop increasingly rich platform identities that have value in the non-financial sectors as well.

CHART 3 **A BETTER ECOSYSTEM FOR BANKS AND THEIR PARTNERS**

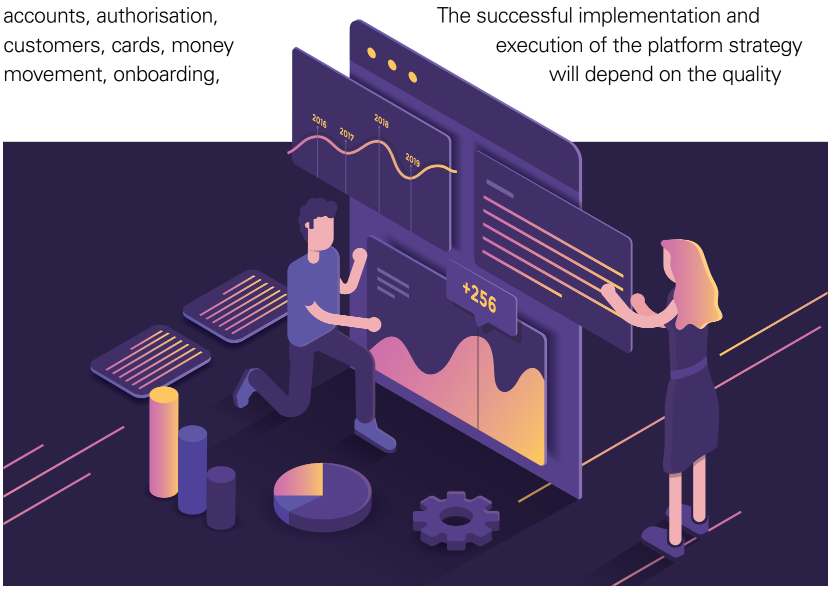


SOURCE Global Banking Outlook 2017, EY

industry utilities and a diverse range of partners (including producers, owners and providers) to deliver better services, drive out costs, manage risks and help protect the organisation.

Already, a major international bank has created an online sharing platform which grants software and application developers access to its Application Programming Interfaces (APIs) across nine banking process categories, namely accounts, authorisation, customers, cards, money movement, onboarding, pay with points, services and utilities. API is a technology that allows enterprises (including banks) to conveniently and securely share data with each other.

Building platform-based ecosystems will require substantial engagement with regulators, who increasingly expect banks to be able to guarantee that third-party providers can offer the same level of resilience and assurance of processes as banks themselves (See **Chart 3**). The successful implementation and execution of the platform strategy will depend on the quality of the ecosystem that banks can build with their partners – balancing the need for innovation and developing a robust cybersecurity infrastructure (including protection of data privacy and consumers' confidentiality) as well as meeting banking regulations.



We anticipate bankers and regulators will continue to ramp up their conversations on ensuring a seamless transition to the digital platform economy. So, let's look forward to exciting times ahead! ✱

■ *Chow Sang Hoe is the ASEAN and Malaysia Advisory Leader in Ernst & Young Advisory Services Sdn Bhd. The views in this article are those of the author and do not necessarily reflect the views of the global EY organisation or its member firms.*

This article contains information in summary form and is therefore intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgement. Member firms of the global EY organisation cannot accept responsibility for loss to any person relying on this article.

BY ANGELA YAP

Lean, Mean Retail Machine

What it takes to create the **mobile-centric, digitally-anchored** branch of the future.

For the first time since 'financial technology' (fintech) entered the mainstream banking lexicon, 2016 global investments in the sector plunged to USD25 billion from its prior-year peak of USD47 billion.

Far from pessimistic though, the Basel Committee on Banking Supervision (BCBS) reasoned: "Fintech, in general, may well be hyped and some innovations may already be entering the 'trough of disillusionment', but, as history shows, this does not necessarily mean that fintech will have no lasting effect on the banking sector."

The global regulator's findings in its February 2018 report, 'Sound Practices: Implications of fintech developments for banks and bank supervisors', is its most comprehensive (and perhaps, most frank) paper on fintech to date.

Merging historical research, current media, fintech products and scenario analyses, a member survey and 10 recommendations for financial institutions, the BCBS states: "While some market observers estimate that a significant portion of banks' revenues, especially in retail banking, is at risk over the next 10 years, others claim that banks will be able to absorb or out-compete the new competitors, while improving their own efficiency and capabilities."

In this context, the report simulates five possible end-game scenarios in the incumbent-challenger face off. Though the jury is still out, many are betting their dollars on the emergence of Retail 2.0 — a lean-cost and more powerful version of its predecessor, one that is mobile-centric and digitally-anchored.

BIONIC TRANSFORMATION

Branch operations are a bank's most expensive yet essential capital expenditure. Some experts estimate that branch networks account for roughly 30% of a financial institution's total operating costs and 45% of all banking revenue.

In Asia, the cost is likely higher. Bain & Company's Financial Services Brief flagged it as an "acute problem in some Asian countries such as China, India and Thailand" as

Fintech, in general, may well be hyped and some innovations may already be entering the 'trough of disillusionment', but, as history shows, this does not necessarily mean that fintech will have no lasting effect on the banking sector.

Fintech firms are responsible for reimagining much of the sleek payment platforms, powerful analytics engines and market-shaping innovations we see today. But fintechs are highly fragmented and when it comes to trust, customers are less likely to hand over their personal financial information to fintech compared to banks, which are governed by strict regulatory oversight.

the average customer makes twice as many physical branch visits for routine transactions as counterparts in Australia, France and the UK.

But the true cost of being a cost-heavy and infrastructure-laden retail bank goes beyond numbers. Agility, culture, mind and skill sets are latent costs, but equally crucial.

Optimal branch operations don't answer the question "How many branches do we need?", but rather "How should these branches be configured?". To this, there is no one-size-fits-all solution.

Here's what we do know: Retail banks are still exploring a combination of possible formats to reinvigorate their branch networks, with some hits and misses along the way.

CASE IN POINT: Bank of America (BofA).

In February 2017, BofA opened three fully-automated, humanless branches termed 'robo branches' which were a quarter the size of its 5,000 sq ft average branch in a bid to cut costs and headcount. Customers could use ATMs and have video conferences with employees at other branches. By end-2017, BofA shuttered a total of 1,597 branches in 253 counties nationwide. One year later, in an about-turn, it announced a 4-year plan to open over 500 new branches nationwide, a hiring spree of 5,400 new employees including 3,500 'digital ambassadors' trained to assist customers on mobile and online channels.

The BofA experience is not unique. In fact, it is undergoing what Boston Consulting Group (BCG) coins 'bionic transformation' — the optimal fusion of meaningful human interaction with digital functionalities in order to drive sustainable growth and profitability within retail banks. In the retail world, it is known as the 'click-and-brick' business model, integrating both the digital (the clicks) and physical (brick-and-mortar) aspects into a cohesive retail strategy.

The management consultant's July 2017 report, 'Global Retail Banking 2017: Accelerating Bionic Transformation', sheds light on the latest in branch network science and predicts retail banks that embark on bionic growth strategies can increase their net profits by as much as 30% come 2020:

- **Consumer trust in banks precedes fintech.** Fintech firms are responsible for reimagining much of the sleek payment platforms, powerful analytics engines and market-shaping innovations we see today. But fintechs are highly fragmented and when it comes to trust, customers are less likely to hand over their personal financial information to fintech compared to banks, which are governed by strict regulatory oversight.

- **Digital-only and hybrid banking consumers are on par.** Research shows that customers today want an omnichannel banking experience — a hybrid of digital and physical banking, in which digital tools and capabilities combine with human input and advice at the moments that matter. One solution by banks is to channel routine transactions to virtual/automated channels, thus lowering costs and delegating personalised interactions for other more complicated transactions such as investments or pricing to relationship managers. This mix will change in future as consumers grow accustomed to digital fusion in their banking channel mix.

- **A move to customer-centric service models.** Improving cost-to-income ratios at branch networks is a key target, but in today's connected world, branches need to connect in more meaningful ways, transcending sales-dominated strategies to make the leap to a customer-centric mindset. Connecting, retaining and generating more revenues from existing customers is central to sustainable growth.

- **Reconfiguration to accommodate multiple branch formats.** Uniformity is out; diversity is in. This extends to not just the mindset but also branch formats. Redesigning branch networks means that full-service, specialist, self-service and virtual branches all have a place in a bank's ecosystem. Powerful data analytics assist in determining what type of branch and where to deliver maximum earnings. Relationship managers will also need retraining and upskilling as part of each new configuration.

- **New regulations mark opportunities for the taking.** Regulations such as Europe's Payment Services Directive II requiring banks to enable third-party access to customer account information via Application Programming Interfaces (APIs) are believed to turn a deeper store of customer and market data into new income-generating activities for banks. Even without the regulatory push, banks in the US are already considering their own API-driven open-banking business models.

An additional trend not addressed in the report is banks are doing more with less and cost savings are also coming from the shrinking floor space of these new branches. According to Jones Lang LaSalle (JLL) in its Banking Outlook 2017 report, 'Branch Banks: Navigating a Sea of Industry Change', American bank branches today are also smaller in size, averaging under 1,500 sq ft versus the typical branch of yesteryear, which exceeded 5,000 sq ft. Also, branch by metros closed down by 4.2% in all its US markets between 2010–2016. However, US deposits as of 2016 have risen USD11.3 trillion, a 70% increase that points to greater efficiency.

TECH ON THE FLOOR

Convergence of richer data analytics, intuitive tech, delivered through well-rounded omnichannel efforts are today creating a seamless customer experience. The following is just a taste of how transformative technologies are reaping big rewards for retail banks:

- **Beacons**

Touted by Chuck Martin in his 'Harvard Business Review' article as "the missing piece in the whole mobile-shopping puzzle", beacons are indoor positioning systems that interact with a customer's mobile app on smartphones to deliver highly personalised content based on his/her profile. This contextualised customer profiling leads to more meaningful engagement at branches and potentially greater income.

According to Accenture's 2017 Global Distribution & Marketing Consumer Study, 54% of consumers want specific real-time location-based goodies such as tailored financial offers based on credit card activity, and 58% want banks to send them information about relevant services such as mortgage deals when shopping for the cheapest or best home loan.

Beacons assist branches in achieving the dual objective of cost reduction and income growth.

For instance, Citi's rollout of beacons at select branches enabled 24/7 cardless entry into ATM lobbies after-hours and receive personalised, location-based services.

Another leading bank in the Middle East employed branch beacons to create a seamless customer experience — officers greet clients by name upon entering their branch, speed up transactions, recommend appropriate actions and product mix based on historical behaviour and inform of relevant ongoing credit or debit card privileges based on their profiles.

Monetising on-site deployment of beacon technology in branches — whether through welcome interaction, customer ID recognition, desk and clerk allocation, up-selling, cross-selling, new income generation, customer education, satisfaction surveys, mobile payments or contextual advertising — has proven profitable.

One European bank upped its daily banking revenue nearly 15% by simply tailoring bundle pricing to customers' preferences, according to BCG. It merged purchasing histories and surveys, and adjusted its product and service mix for different client segments to deliver a superior bundle relevant to its clients' needs.

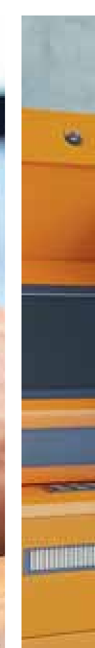
- **API**

Banking philosophy has also evolved into one of 'open banking', enabling more external parties to link their products and services to those of banks whilst maintaining confidentiality and data security.

At the core of this are APIs, a set of commands used to allow third-party developer software to 'talk' with banks' software applications.

Merging fintech's agility and technological expertise with banks' intimate knowledge of regulations and capital access plus customer base, the objective is to enhance both top- and bottom-lines whilst delivering customer-centric solutions.

To illustrate, Spain's second largest bank, BBVA, grows its business with open APIs. Its API Market allows business to link to the bank more easily, such as in white-label banking. Fintechs can register their customer accounts with BBVA in order to offer them white-label



In the virtual bank set-up, cloud computing — the delivery of computing services such as storage, databases, networking, software and analytics over the Internet rather than a local server — is deployed to rein in costs and raise efficiency.

banking products such as money payments and transfers, routing and settlement, ATM servicing and even co-branded credit cards.

Cloud Computing

In the virtual bank set-up, cloud computing — the delivery of computing services such as storage, databases, networking, software and analytics over the Internet rather than a local server — is deployed to rein in costs and raise efficiency.

Similar to outsourcing non-core activities, this Platform-as-a-Service (PaaS) solution is the backbone for many banks seeking to shift its technology spend from capital to operating expenditure and boost its agility to respond to customers' demands. As far back as 2014, banks such as Robeco Direct N.V., jointly owned by ORIX Corp and Rabobank, moved its entire retail banking platform to the cloud.

In Asia, virtual customer onboarding via e-Know Your Client and voice biometrics are already part of the financial industry's structure. Implementation is governed by guidance notes and acts by regulators such as Bank Negara Malaysia and Bank Indonesia to mitigate fraud and AML/CFT risks.

Using cloud computing, Bankinter, Spain's sixth-largest bank, reduced credit risk simulations from 23 hours to 20 minutes. The Commonwealth Bank of Australia halved IT costs by moving its storage to the cloud which takes eight minutes at the cost of 25 US cents to expand storage space versus eight weeks and thousands of dollars previously to set up a new server.

These efficiency gains make virtual banking functions — real-time face-to-face video conferencing with financial advisers, biometrics, on-screen signing, client onboarding and even more complex processes such as remote loan approvals from the comfort of customers' own homes — a value-add to current relationships and future profitable ones.

A major stumbling block, however, centres on security and prevention of fraud and abuse. A recent survey by the European Union Agency for Network and Information Security noted that inconsistent data privacy levels in jurisdictions and also data security concerns — exacerbated by the Facebook–Cambridge Analytica scandal — have resulted in hesitance and the late adoption and integration of these innovations.

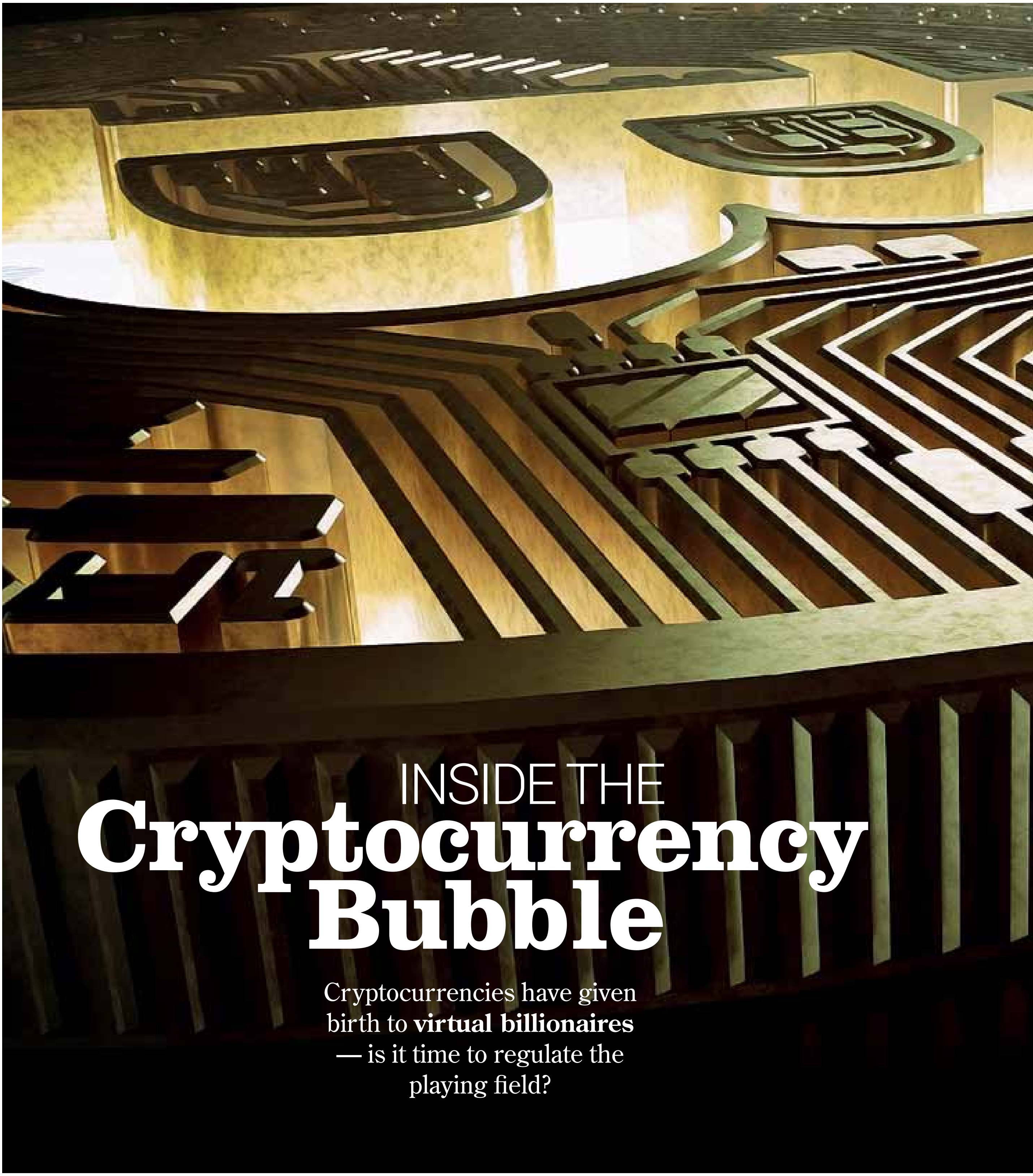
NEXT CHAPTER

Though many have heralded the death of retail banks — there's even a hashtag, #retailapocalypse for this — history is a good reminder that we've been down this road before.

Indeed, the BCBS affirms that "technological innovations have also historically tended to follow the hype cycle", citing the Internet's own 2001 boom-bust cycle that dashed early day hopes of virtual becoming a major marketplace. Yet today, the Internet hasn't just survived but revolutionised business in a way that few could have imagined.

In a similar vein, this chapter in banking is yet to be written. ✱

■ *Angela Yap is a multi-award-winning entrepreneur, author and the founder of Akasaa. She was previously a corporate banker, strategist with a Big Four firm and an officer with the United Nations Development Programme. She holds a BSc. Economics (Hons) from the LSE.*



INSIDE THE Cryptocurrency Bubble

Cryptocurrencies have given birth to **virtual billionaires** — is it time to regulate the playing field?

In its February 2018 issue, *Forbes* revealed its first ever list of cryptocurrency's richest people. Most of the names were no surprise — Chris Larsen, co-founder of Ripple, came in at first place with a net worth of USD7.5–8 billion. Just one month earlier, he had briefly catapulted ahead of Facebook's Mark Zuckerberg into fifth place in the overall *Forbes'* richest list.

The rest of the list was populated by equally noteworthy crypto celebrities: Joseph Lubin and Anthony Diiorio, co-founders of Ethereum; Brian Armstrong, CEO of Coinbase; Brock Pierce of Bitcoin Foundation (and Mighty Ducks) fame; Changpeng 'CZ' Zhao of Binance; and of course, the Winklevoss twins, Tyler and Cameron. Their good looks, Facebook fame, and billionaire comeback story were just the right ingredients to push cryptocurrency into the public eye.

Speaking for his peers at the time, Lubin argued against the repeal, stating that they were "simple programmers who weren't looking for public attention", that the list exposed them to theft — a concern since crypto exists outside regulated banking systems, and more importantly how was *Forbes* even sure its numbers were right?

Just nine months earlier in June 2017, an anonymous trader had made over USD200 million in one month, a 413% profit on his initial paper worth USD53 million. His only identification? A 42-character alphanumeric virtual wallet ID code and an Instagram account where the user posted a screenshot of his wallet with a caption in Bahasa Indonesia.

It's a factor that *Forbes* acknowledged in the article that accompanied their rich list. "It's a near certainty that we've missed some people and that some of our estimates are wide of the mark." Comparing it to the controversies that met the first *Forbes* rich list, they also added, "…we firmly believe we made the world a better place by shining a light on the invisible rich… fortunes of this magnitude should never be allowed to lurk in the shadows".

Speaking for his peers at the time, Lubin argued against the repeal, stating that they were "simple programmers who weren't looking for public attention", that the list exposed them to theft — a concern since crypto exists outside regulated banking systems, and more importantly how was *Forbes* even sure its numbers were right?

FIGURE 1: CURRENT REGULATORY PRACTICES ACROSS THE WORLD

BITCOIN AROUND THE WORLD

EUROPE A patchwork map of cryptocurrency regulation is currently in evidence across EU states. As such, issues such as tax can vary considerably, while like in the US there has hitherto been little EU-wide legislation. This is expected to change in the short-term. Meanwhile, Russia has been more critical of cryptocurrency with fines threatened for its use and promotion.

AFRICA With the exception of South Africa's consumer-based warning on using cryptocurrency, Africa is being seen as a test case for its implementation. A wide range of charity and business startups are using Bitcoin to facilitate social and economic mobility, while regulations is mostly unheard of on the continent.

OCEANIA Australia is currently in legislative state of flux regarding particularly taxation of cryptocurrency, with the latest double tax issue prompting domestic businesses to move offshore. The tax office has intimated a slow reviewing of the situation. Elsewhere in New Zealand, the situation is more liberal at present.

SOURCE https://cointelegraph.com/news/cryptocurrency-regulation-in-the-international-community-2015-part-1

A TRANSPARENT, SELF-REGULATED FAIRY TALE – WHAT LURKS?

This threat of anonymity is not lost on global leaders. Cryptocurrencies were a hot topic at the World Economic Forum in Davos, Switzerland this year, where many panellists brought up familiar 'black market' arguments. Steven Mnuchin of the US Treasury Department said that his number one focus for cryptocurrencies was making sure they were "not used for illicit activities". International Monetary Fund head Christine Lagarde warned that the anonymity and lack of transparency "conceals and protects money laundering and financing of terrorism". UK Prime Minister Theresa May went one better, saying that cryptocurrencies were used "particularly by criminals".

Of course, these concerns — as sensational as they are — are not without merit. A 2017 study conducted by researchers from the University of Sydney and the University of Technology Sydney found that 44% of Bitcoin transactions and 25% of all users — about 24 million participants — were using Bitcoin "primarily for illegal purposes".

At the time of writing, Bitcoin itself is becoming less popular among criminals as its ledgers record addresses, exact timestamps and amounts — allowing easier monitoring and tracking of criminal activity, with analytics firms like Chain Analysis flagging and alerting exchanges to prevent conversion into traditional cash.

Instead, Europol recently warned that other cryptocurrencies were gaining popularity in the criminal underground, especially for 'ransomware attacks'. One of the hottest cryptocurrencies for criminals at the moment is Monero, which boasts on its website that it "is secure, private and untraceable".

A team of researchers at a group of institutions that include Princeton, Carnegie Mellon, Boston University, MIT, and the University of Illinois at Urbana-Champaign have uncovered some vulnerabilities in Monero's privacy, but they're ones that Monero's developers themselves are acutely aware of and actively working on.

"Privacy isn't a thing you achieve, it's a constant cat-and-mouse battle," says its core developer and spokesperson Riccardo Spagni in an interview with Wired. When speaking to *Bloomberg*, he goes on to say, "As a community, we certainly don't advocate for Monero's use by criminals. At the same time, if you have a decentralised currency, it's not like you can prevent someone from using it. I imagine that Monero provides massive advantages for criminals over Bitcoin, so they would use Monero."

This blasé attitude towards criminal activity by some individuals is why global governments have ramped up efforts to make Know Your Customer (KYC) and Anti-Money Laundering (AML) rules as a part of the cryptocurrency space, with their focus levelled at crypto exchange platforms. Japan and South Korea lead the pack: on 30 January 2018, the Korean Government's Financial Services Commission rolled out a real-name system, effectively banning any anonymous trading of cryptocurrencies. Under the system, transactions would only be allowed between real-name bank accounts and matching crypto exchange accounts opened at the same bank. Foreigners and underage investors were also banned from opening cryptocurrency accounts.

WHY THE URGENCY TO REGULATE NOW?

The regulations were a toned-down compromise to initial threats of an outright ban, which had led to public uproar — more than 200,000 South Koreans signed a petition demanding that the government stop regulating cryptocurrencies. What's interesting to note is the language surrounding regulations in Asian countries, especially South Korea and Japan. In Western countries, illicit activities like fraud, money laundering, tax evasion and theft remain topical at the governance level — as is evident at the World Economic Forum.

Not so in the two East Asian countries, where protecting vulnerable, less knowledgeable users have become key, as the appeal of a highly speculative market has pushed cryptocurrencies into the mainstream and become a big draw to everyday people. South Korea accounts for about 20% of global Bitcoin tradings, behind only the US and Japan. A study by local job portal Saramin showed that more than 30% of salaried workers had crypto investments; many Koreans place their life savings in crypto assets to make up for the lack of high yield investment vehicles available.

Speaking to *Forbes*, Steve Lim, CEO of digital exchange start-up Coinone says, "People are crazed over it. Grandpas and grandmas come to our office lobby and say they want to put half a billion won (USD447,000)...they say, 'I heard about you through a friend who invested a couple thousand and made a killing, and I want to do it too'...but they have no idea how to use the app or email."

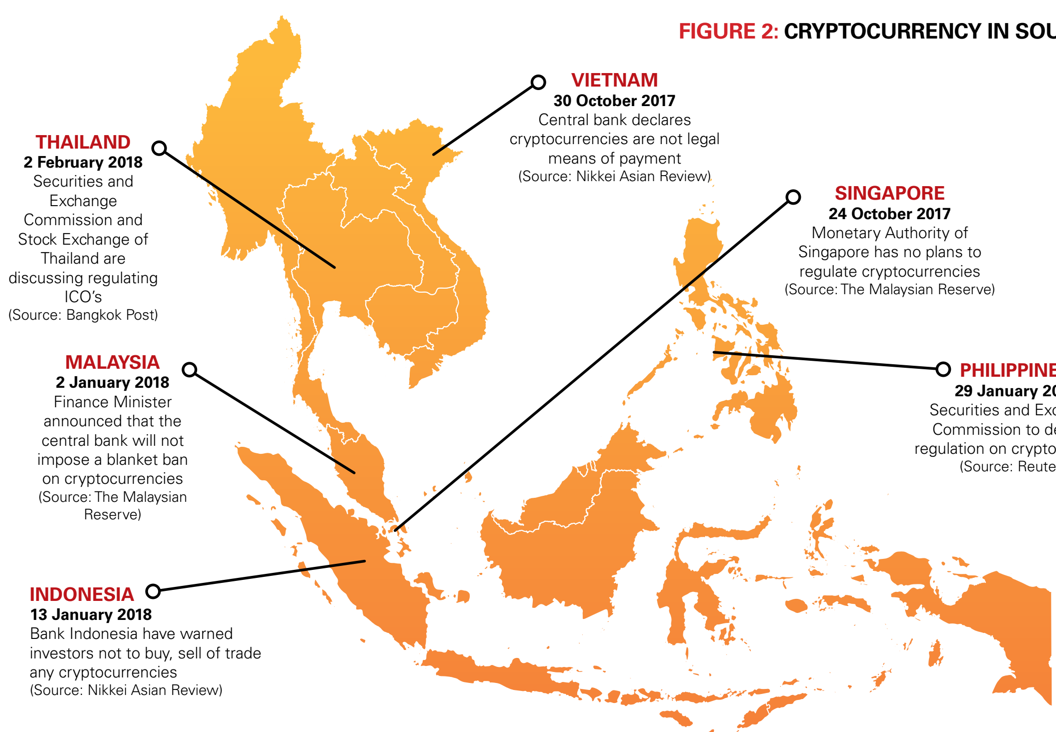
This issue has shown its early marks in Malaysia as well. In May 2018, the Malaysian Muslim Consumers Association (PPIM), reported that 130 Malaysians had lost about RM30 million over the past three years after investing in a cryptocurrency scheme called Bitkingdom.

For a long time — and even now, cryptocurrencies were concentrated within a tight online community of cypherpunks and whale clubs, which means that big swings by a select few can sway the entire market. In fact, some estimate that 4% of addresses own more than 96% of all Bitcoins in circulation, with the top 1% controlling half of the entire market. Cryptocurrency ranking and evaluation website CoinGecko's founder TM Lee also briefly acknowledges cryptocurrency's small network locally. "Although cryptocurrencies [in Malaysia] is not as big as say Singapore, China, or Korea, there is definitely a niche. Within this niche there are engineers, traders, and entrepreneurs. By being involved in these meetups you tend to find the people that can help you one way or another."

And it's an incredibly volatile market, easily subject to spoofing, pumping and dumping, and other manipulations by those within its inner circle who have the technical know-how that newcomers lack — manipulations that are otherwise controlled in regular financial markets. In their 2018 paper 'Price Manipulation in the Bitcoin Ecosystem', researchers Neil Gandal, J. T. Hamrick, Tyler Moore and Tali Oberman found that for various cryptocurrencies, "...despite the huge increase in market capitalisation...many of these markets are thin and subject to price manipulation".

The earlier 2017 University of Sydney paper also suggests that the popularity of cryptocurrency among criminals

FIGURE 2: CRYPTOCURRENCY IN SOUTHEAST ASIA



SOURCE https://theaseanpost.com/article/has-cryptocurrency-bubble-burst may be a major contributor to its value, making it highly susceptible to falls when criminals move on to more privacy-focused currencies. Then there's the prevalence of crypto Ponzi schemes: In January this year, the US Commodity Futures Trading Commission (CFTC) cracked down on a cryptocurrency known as My Big Coin, where the company was accused of posting fake prices and falsely claiming to be in partnership with Mastercard, using money received to purchase a home, antiques and jewellery, among others.

Of course, it goes without saying that not everything in the crypto world should be tainted by these allegations. The more 'crypto-friendly' countries like Japan, Switzerland and Denmark acknowledge the innovative, positive aspects of cryptocurrencies and prefer liberal regulatory frameworks that allow new ideas to flourish — though we'll come back to address Japan's policies again.

Still, the growing mainstream popularity of cryptocurrencies is worrying, as no one is certain yet of what the impact will be if the market crashes. At the World Economic Forum, Bank of Canada Governor Stephen Poloz compared it to the dot-com stock bubble, saying "it barely had [a] perceptible effect on the real economy because it was not a stock market crash but just a segment of the stock market". British Chancellor of the Exchequer Philip Hammond was more cautious, arguing that it had the potential to grow to a point where it would have a significant impact very soon.

There's also the fact that cryptocurrency systems themselves are not as secure as they're touted to be. In April 2018, the Indian cryptocurrency exchange Coinsecure accused its Chief Strategy Officer, Amitabh Saxena, of being involved in the loss of 438 Bitcoins (USD3.3 million), though Saxena alleges that the funds were lost due to an attack. In January this year, Japan too was rocked by what newspapers called "the world's biggest cryptocurrency theft" when hackers broke into the Coincheck network and stole USD660 million.

While the country has sought to tighten checks in the wake of the incident, some argued that its early rush to capitalise on the market had led to oversights, especially when compared to countries like China and India that have chosen to ban crypto trading while they figure out the next steps.

For now, most countries have taken a cautionary 'wait and see' policy with regulations existing in a grey area, including Malaysia, where the new Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) policy guidelines came into effect in February this year. The legislation enforces KYC regulations but does not recognise virtual currencies as legal tender.

It is a move that innovators like CoinGecko have largely welcomed. "You see a lot ICO [Initial Coin Offering] projects and right now the Malaysian government is trying to understand how cryptocurrencies work while trying to regulate exchanges", says Lee. "We are making pretty good progress because the government is not putting on any kind of blanket ban. The government is really trying to work together with the people in the industry."

There are currently nine cryptocurrency exchanges in Malaysia registered with Bank Negara Malaysia (BNM), though they are recognised only as reporting institutions and not licensed, regulated entities. The policy guidelines make it very clear that they are intended to mitigate money laundering and terrorism financing (ML/TF) risks, but do not cover consumer protection or redress in the event of loss or damages.

Naturally, there are also calls for authorities to move faster. Addressing the Bitkingdom scam, PPIM legal bureau chairman Hishamuddin Hashim maintained that the authorities needed to be 10 steps ahead of crypto scammers. "They have found a formula which negates the abilities of enforcement agencies in Malaysia as there are no laws which tackle such schemes…there are consumers who are not so informed about such schemes and need the help of the authorities to advise them and to help them when they are cheated.'

WHAT'S NEXT?

+ In the coming months (or years), countries will need to decide where they stand on the following issues:

Are cryptocurrencies legal tender?

Is the market sufficiently mature for regulation?

Should cryptocurrencies be regulated on an international level or be left to individual countries or even independent self-regulatory bodies that police from within?

At the G20 Summit in March this year, the member countries agreed that the Financial Action Task Force would have its standards applied to the cryptocurrency markets in the respective countries. However, a firm deadline for July was also set to put forward further recommendations on how to regulate cryptocurrencies. These are baby steps for now, with the Central Bank of Argentina Chair Federico Sturzenegger saying, "In July, we have to offer very concrete, very specific recommendations on not 'what do we regulate?' but 'what is the data we need?'"

The Winklevoss twins have also put forward their own proposal to create a members-only self-regulatory body, the Virtual Commodity Association, to fill the current regulatory gaps in the US market.

These are interesting times ahead: regardless of the regulatory outcomes, as Lagarde says, "...there will be new things and innovations coming out of this movement, and we just need to keep them under our watch". ✱

■ *Stephanie Francesca Pereira's works have been featured in various publications over the past ten years. She has a background in e-commerce content and operations, and holds an LLB (Hons).*


بنك معاملات
Bank Muamalat
MUAMALAT Gold-i
For centuries, **Gold** has been a highly sought after source of wealth - being one of the few items that can retain its economic value in recessions and even depressions.
Recognizing the importance of Gold, we at Bank Muamalat, took steps to make Gold affordable to everyone – and now you can own Gold through our **Muamalat Gold-i Account** from as low as **RM10!** Yes that's right, our system serializes the kilobars into milligrams so that you can purchase and own gold conveniently. What's more, we even safe keep your gold in account for **FREE!**
Remember Muamalat Gold-i for all your gold investment needs. Our gold is **Shariah compliant, 99.99% purity** from the Perth Mint, Australia and accredited by the London Bullion Metal Association (LBMA) - which means that your gold can be accepted anywhere worldwide!
Start your gold journey today with our **Muamalat Gold-i Account** and even open a **Junior Account** for the kids or simply just purchase the physical minted bars. You can even make your purchases online, it's that easy. In times of need, just pawn your Perth Mint Gold bars with us hassle free and enjoy one of the highest margins in town.
With all this in place, what's there to say no to? Hurry over to your nearest Bank Muamalat branch, call **1-300-88-8787** or visit **www.muamalat .com.my** today.
At **Bank Muamalat,** we're here for you.
MUAMALAT Gold-i
ACCOUNT
Not protected by PIDM
Terms & Conditions Applies
mybankmuamalat
BankMuamalatMalaysiaBerhad

 BY ROBERT SOUSTER

the 'absolutely' generation

While banks are judged on the basis of what is **'right' and 'wrong'** with nothing in between, there remains a grey area which cannot be ignored.

We live in a world that is becoming increasingly polarised. In the US, there are those who believe President Trump to be the best thing to happen to the country while others loathe him. In the UK, those who voted to stay in the European Union (so-called 'remainers') accuse those who voted to leave of being 'stupid', which those who are in favour of leaving accuse remainers of being equally stupid. The chances are that with a voting outcome of 51: 49 in percentage terms, some voters from each side will be stupid but the vast majority will not. It is small wonder that the word 'absolutely' has become such a common response in television and radio interviews. It seems that for so many national and world issues, opinions polarise in black and white, with few shades of grey.

Individuals have a right to voice strong opinions, and this has important implications for how business is conducted. In 2014, American Express carried out a survey of customers of banks, and one conclusion was that the majority of customers believed that the maximum waiting time when placed on hold by a call centre was 13 minutes. Yet, only three years later, a survey by Arise concluded that nearly two-thirds were prepared to wait for two minutes or less, while 13% stated that their expectation was not to wait at all. In the same survey, just over 14% said that they never contact a call centre as they anticipate an unreasonable waiting time. These findings demonstrate that customers do have expectations, but over time those expectations shift. Given that the old branch banking model is no longer financially sustainable, the increasingly demanding standards expected by customers present a challenge. Banks are not suddenly going to reopen branches that have been closed, just as criticisms of future branch closures will be just as vociferous as those of the past.

It is plain to see that banks are in the public spotlight, and what banks do (or do not do) will often be judged in terms of right and wrong, with nothing in between. When we consider this in ethical terms, academics use the phrase 'ethical absolutism'. Behind this term is an interesting history.

It is plain to see that banks are in the public spotlight, and what banks do (or do not do) will often be judged in terms of right and wrong, with nothing in between. When we consider this in ethical terms, academics use the phrase 'ethical absolutism'.

The roots of ethical absolutism lie in the work of German philosopher Immanuel Kant (1725-1804). Kant was concerned with moral law, which he believed to be founded on duty to others. He believed that moral laws could be set down as 'categorical imperatives', which would be applicable in all situations, irrespective of consequences. This idea appears to fit well in the world of banking, where some imperatives are broadly accepted. For example, the duty of confidentiality to a client is sacrosanct, and that duty may only be overridden when certain situations arise that are prescribed by law. Likewise, there is a duty to be honest: nobody who enters the banking profession should be under any illusion that honesty is a minimum expectation. Bankers are expected to act with integrity, which we can take to mean the maintenance of consistently high ethical standards. So at face value, the almost three hundred-year-old thoughts of Kant sit comfortably with perceptions of banking as a profession.

This line of thinking is utilised by regulatory bodies and professional institutes when it comes to formulating rules and codes respectively. The vast majority of the provisions of both sources are duty-based, promoting absolute adherence to the defined standards. Therefore, one implication is that if a body of laws and rules can be created which will reflect the good of society, the job of government and regulators should be straightforward. Unfortunately, this does not work in the real world. Why not?

Firstly, duties to others are a reflection of stakeholder claims, and stakeholders have conflicting claims. They may even be opposite claims. For example, just as a shareholder thinks it is right to close a branch in pursuit of higher profits and dividends, a customer of the branch may believe it to be quite wrong particularly if they are old or immobile with limited computer literacy. Perceptions of duties change over time, just as the standards expected of bankers also change.

Secondly, views of right and wrong are subjective and are influenced by a complex range of factors, including culture. This is especially important for banking organisations operating across international frontiers. Banking is a global business, and something that is unacceptable in Malaysia might be acceptable in another country and vice versa. This can be a serious problem when the standards differ between home and host country and both have absolutist approaches. An example of this occurred following the enactment of the 'Patriot Act' in the US in 2001, which sought to combat terrorist financing. Many citizens of European countries with bank accounts in the US found it very difficult to access their funds due to the imposition of more robust controls. To the owner of these assets, it was seen as an affront ('It's my money, why can't I have it?'), whereas to legislators it was seen as a crucial measure in reducing the cash flows to terrorist organisations, even if that meant inconveniencing bona fide customers.

Thirdly, even broadly-accepted categorical imperatives are not 100% categorical. For nearly every categorical imperative, it is possible to present an exception, or describe a nonsense outcome which will arise if followed. This is likely to arise when the application of the imperative will have adverse consequences. Moral philosopher R. M. Hare (1919-2002) believed that ignoring the consequences can result in absurdity. He cited the example of 'Do not steal', which is almost universally accepted by individuals and organisations. Hare asked if it would be wrong to steal a terrorist's plans to blow up a nuclear facility. Similar debates can arise around questions such as 'Is it ever right to kill?' or 'Is it ever right to tell a lie?'.

Bankers are expected to act with integrity, which we can take to mean the maintenance of consistently high ethical standards.

This returns us to how these issues apply in a banking environment. Earlier in this article, it was asserted that bankers are expected to be honest and that this is a minimum expectation. Yet if a counter assistant has to delay a suspicious transaction for fear that the customer is a money launderer, it may be necessary to tell a lie, and failure to do so might create a risk of tipping off the individual. By telling the truth, the counter assistant may break the law.

Critics of the ethical absolutism approach tend to favour the alternative of ethical relativism. This centres on the view that all moral statements are subjective and open to challenge or debate. Ethical relativism accepts that there will be differences in rules of behaviour in different cultures and communities. This is especially important to organisations that conduct business in different countries, especially if there are material differences in values, beliefs and culture. When faced with such issues, a banking organisation has serious decisions to make in respect of the extent to which it is prepared to abide by different sets of standards. For example, it may be considered abhorrent to exploit child labour at home, but in a host country, it might be seen as a norm that children work in order to provide a subsistence level of income for the family unit. Conversely, if due regard is paid to overseas standards and these standards are applied, it can result in perceptions of unfairness, as demonstrated by the British government's pay differentials applicable to domestically recruited soldiers and the Gurkhas recruited in Nepal.

These issues present a minefield through which regulators and bankers must tread very carefully if they are to maintain the confidence and trust of their stakeholders. It is not an easy task in a world where things are often seen as 'absolutely right' or' absolutely wrong'. ✱

■ *Robert (Bob) Souster is a Partner in Spruce Lodge Training, a consultancy firm based in Northampton, England. He lectures on economics, corporate and business law, management, corporate governance and ethics. He is the Module Director for 'Professionalism, Regulation and Ethics', a core module of the Chartered Banker MBA programme at Bangor University, Wales.*

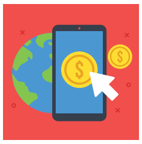
 | BY ANIRBAN KUNDU

THE CHANGING FACE OF THE MOBILE PAYMENT INDUSTRY

THE UPWARD TRAJECTORY OF THE **MOBILE PAYMENT INDUSTRY MUST BE MATCHED WITH ROBUST REGULATORY** MEASURES TO MITIGATE THE RISK OF FRAUD.

In the move towards becoming a cashless society, economies around the world have been driving the growth of the electronic payments industry. Estimates show that 62.9% of the world's population now possess mobile phones, and the number of mobile users is expected to cross the 5-billion mark by 2020.

As newer and better technology continues to surface, people are increasingly warming up to electronic modes of payment. In Malaysia alone, the percentage of mobile banking subscribers to the total number of people who have a mobile connection has increased from 0.7% in 2005 to 27.1% in 2017, while the volume of cheque issuances has decreased by almost 42% since 2011. These figures will only continue to rise in the coming years. Globally, banks have realised that mobile payment is an effective way to reach out to unbanked or underbanked communities and thus, are moving towards a completely inclusive economy.



+ As the mobile payment industry grows by leaps and bounds across the globe, concerns about safety and security will arise, hence the importance of ensuring that regulations keep pace with the rapid changes in technology and security risks.

As the saying goes, "With great power comes great responsibility". As the mobile payment industry grows by leaps and bounds across the globe, concerns about safety and security will arise, hence the importance of ensuring that regulations keep pace with the rapid changes in technology and security risks. With unscrupulous individuals and hackers lurking in the online and mobile space, the number of scams and fraud cases are on the rise.

THE EUROPEAN UNION

The EU was among the first to introduce stringent regulations for the payments industry back in 2007, through the Payment Services Directive (PSD 1).

With technology having changed completely since then, and the industry facing a rising number of fraud cases, the EU felt the need to revisit the regulations. Accordingly, the revamped Payment Services Directive (PSD 2) was introduced in October 2015.

PSD 2 brings several important changes to payment regulations and aims to:

- Reduce the cost of transactions. This includes a ban on additional

card charges (surcharges) that many merchants used to levy on card transactions earlier.

- Provide added security to mobile payments. This includes requiring payment service providers to implement additional layers of authentication before executing each transaction. They will also be required to implement better risk assessment and classification of their processes.
- Increase customer confidence by improving consumer protection. Payment service providers will now have to implement a dispute resolution mechanism, where they will be required to respond to customer complaints within 15 days of receipt.
- Give additional market access to payment service providers through API and other technologies. This will encourage them to bring new and innovative payment solutions to the market, thereby making the payment solutions more attractive to customers.

CHINA

China has a highly advanced mobile payment industry that is taking the country closer towards its goal of going truly cashless.

Most of the mobile payment service providers in China rely on QR codes to process payments. Customers simply scan a QR code from their mobile phones to transfer money to the recipients' accounts.

Mobile payment systems Alipay, Tencent and WeChat are the dominant payment service providers using QR codes in China. The other payment method in vogue is the NFC technology, which is used mostly by the non-Chinese solutions providers like Apple (Apple Pay) and Google (Google Pay).

Over the years, it has been proven that QR codes are unsafe, since they can be duplicated very easily. This makes it highly susceptible to fraud. Thieves were using innovative methods, such as replacing genuine merchant QR codes with fake ones, to steal money. When customers made payments to falsified QR codes, the funds went to the accounts of fraudsters instead of the merchants.

Not surprisingly, there were multiple complaints of QR code falsifications reported in recent years, which resulted in losses totalling millions of

Yuan. The Southern Metropolis Daily recently reported a case where about RMB90 million (around USD13 million) were stolen via QR code scams in the Guangdong province of China.

Alarmed by the rise in the number of such complaints, China's central bank, the People's Bank of China (PBC), recently developed a set of stringent regulations, some of which include:

- Limiting the amount that can be paid through a static barcode to RMB500 (USD76).
- Fixing a daily mobile payment limit of RMB1,000, or RMB5,000 for those who have yet to be fully authenticated by the authorities.
- Disallowing individuals from carrying out mobile payment transactions in exchange for cash.
- Increasing the Reserve Fund Ratio of payment platforms from 20% to 50%. Consequently, payment service providers will have to deposit these additional funds — collected in the digital wallet of a customer — into the bank's escrow account. This will ultimately reduce the interest payment providers currently earn by holding these funds with them. It is also said that this ratio might be increased to 100% by the PBC over time.

While many deem these regulations to be detrimental to the growth of the mobile payment industry in China, experts agree that such regulations are necessary to discourage hackers from stealing information, which often results in huge losses due to fraud.

INDIA

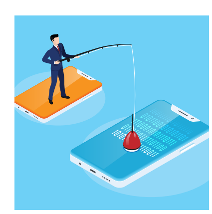
An interesting after-effect of the demonetisation that happened in India in 2016 is the significant increase in the number of mobile payment users. Service providers such as Paytm, Airtel Money, Freecharge, ICICI Pockets, HDFC PayZapp and the UPI initiative of the government have gained rapid popularity, and many of India's citizens are beginning to understand and appreciate the convenience that mobile payments offer. It is estimated that around 45% of all transactions are currently being

completed via mobile payments at present.

With the country's economy planning to go cashless in a few years and Credit Suisse predicting that the volume of transactions completed through digital and mobile payments will grow fivefold to USD1 trillion by 2023, the Indian government believes in the importance of regulating the industry with a strong hand.

Accordingly, the Reserve Bank of India (RBI) developed some comprehensive guidelines for the mobile payment industry as it tries to connect 1.2 billion Indians. Here are some of them:

- Customers using mobile payment services or e-wallets will be required to comply with the Know Your Customer (KYC) norms and abide by the provisions of the Prevention of Money Laundering Act 2002. Banks and third party or private mobile payment companies will be responsible for ensuring that their customers comply with these regulations.
- The government recommends mobile payment and e-wallet users to link their Aadhar numbers to their accounts. Aadhar is a biometric-based unique identification number issued by the government to all Indian citizens. This provision ensures that the mobile payment system cannot be used by anyone for fraudulent and anti-social purposes.
- Customers holding e-wallets with one service provider can make payments to recipients holding e-wallets with another service provider following the RBI's



As of now, the mobile payment story is still in its initial chapters, and it will be a space worth watching. As technology continues to advance, hackers will also be devising more methods to carry out fraud.

- authorisation of inter-operability between banks and mobile payment service providers. With this, customers no longer need to have multiple e-wallets for making mobile payments to different merchants.

SINGAPORE

The adoption of mobile payments in Singapore has grown significantly in the last five years, despite the absence of strong regulations for the industry. Over this period, a plethora of mobile payment apps such as Apple Pay, Samsung Pay and Singtel Dash were introduced, which not only offer e-wallet services but also P2P money transfers now.

In February 2018, the Monetary Authority of Singapore (MAS) released the draft of the ePayments User Protection Guidelines for public consultation. A set of proposed guidelines designed to protect users of e-payment systems, it sets out:

- The responsibilities of financial institutions and the uses of e-payment systems.
- The liabilities of related parties when an unauthorised transaction is made.
- What financial institutions and e-payment account holders should do to protect their accounts.
- The mechanism for resolving disputes arising from unauthorised transactions.
- The responsibilities and liabilities of related parties when a transfer is done but the payment is sent to the wrong recipient.

Through these regulations, MAS seeks to protect the interests of both the financial institutions and account holders by specifying the rights, responsibilities and liabilities of all parties involved. Once formally introduced, the guidelines are expected to boost the confidence of the general population in e-payment systems and make them more willing to go cashless.

THE UNITED STATES

Contrary to popular expectation, the adoption of mobile payment systems in the US has been growing at a much slower pace compared to many Asian and African countries. However, the number of fraud cases related to mobile payments are on the rise.

The Mobile Payments Industry Workgroup (MPIW), a committee formed by the Federal Reserve Bank of Boston, is working with various stakeholders such as regulators, banks, mobile service providers and customers to introduce uniform laws for mobile, retail and digital payments in the country. The steps taken so far to boost customer confidence include:

- Raising consumer awareness of privacy so that they do not end up sharing their personal details with all the apps downloaded onto their mobile phones. As it is unclear how apps use customer data, this lack of awareness is a grave cause for concern.
- Framing a dispute resolution mechanism to boost consumer confidence in mobile payments.

Additionally, there are regulations in the US that require financial institutions that partner with third party mobile payment providers to understand how customer data will be used and stored. Stringent due diligence must be done before entering into such partnerships.

MALAYSIA

Bank Negara Malaysia (BNM) states in its 'Financial Sector Blueprint 2011–2020' a plan to make Malaysia's economy completely cashless by 2020. Although the country had previously been cautious in promoting the use of mobiles for making payments, BNM recently announced that it is working on framing robust laws for the mobile payment industry. It will define the minimum safety and operational standards that service providers must accord users. This move is laudable as it will add transparency to the industry and consequently boost consumer confidence.

Former Governor of BNM Muhammad Bin Ibrahim clarified that mobile payment service providers must disclose certain key information relating to the security features of their services and how they are going to safeguard their customers from possible fraud. "This will make it easier for consumers to compare between different providers, thereby promoting greater consumer empowerment to make better-informed decisions," he said.

In March 2018, BNM introduced the 'Interoperable Credit Transfer Framework' (ICTF), which is being considered a giant step towards a cashless Malaysia. This framework seeks to create a secure and collaborative payment environment by ensuring interoperability between banks and non-bank payment providers such as Grabpay, Boost and TNG Digital. The framework requires operators to share information among themselves and work in a competitive but collaborative environment. The policy document of ICTF also outlines plans to create a 'Real-Time Retail Payment Platform' in future to make payment systems stronger and faster.

Enthused by BNM's measures, several global payment service providers have started considering Malaysia as an opportunity for expansion. China based Internet service provider Tencent Holdings Limited has already announced plans to roll out its WeChat Pay in Malaysia by next year. Once implemented, this will be Tencent's first foray into the global space.

The steps taken by BNM to foster a secure and competitive payment landscape in Malaysia are commendable. It is now up to the banks and service providers to follow the regulations with full conviction so that going forward, consumers will never have to worry when making mobile payments.

As of now, the mobile payment story is still in its initial chapters, and it will be a space worth watching. As technology continues to advance, hackers will also be devising more methods to carry out fraud. It will be interesting to see how regulators keep up with these changes to retain customer confidence and ensure transparency, thus driving economies towards their aims of becoming completely cashless. ✱

 | BY AMRITA KUNDU

FINANCIAL INCLUSION; WHERE ARE WE TODAY?

AN UPDATE ON THE CURRENT SITUATION OF **FINANCIAL INCLUSION** AROUND THE WORLD AND HOW MALAYSIA GOT IT RIGHT.

Financial inclusion allows people to save for family needs, borrow to support a business, or build a cushion against an emergency. Having access to financial services is a critical step towards reducing both poverty and inequality, and new data on mobile phone ownership and Internet access show unprecedented opportunities to use technology to achieve universal financial inclusion.

Jim Yong Kim,
President of the World Bank Group

Financial inclusion has been considered an integral part of a country's financial well-being for almost a decade now. Currently, more than half of the world's population are living and working in an informal economy. The figures are surprising. More than two billion people do not have a basic bank account - yet. Needless to say, they also do not have any insurance or lines of credit, or access to other forms of financial support. They earn their livelihood, save and spend — all in cash. When they need money, they borrow from family and friends or moneylenders — all in cash. Their choices are risky, expensive and often unpredictable. And herein lies the biggest challenge for governments — to ensure that the benefits of financial development are available to this segment of the population.

The current focus on financial inclusion began circa 2010 when countries began to understand the need to provide all their citizens with access to financial services, regardless of their location, income or education levels. In 2013, the World Bank asserted that having access to basic transaction services is an important milestone towards the complete financial inclusion of an economy.

Financial inclusion has far-reaching consequences. It affects both a country's economy and its citizens. A formal financial system can help facilitate daily transactions and be an ideal way to safeguard household savings. It also helps in managing cash flow. Being part of the financial system helps families manage unexpected situations such as medical emergencies, natural disasters and theft, among others. For small businesses, being included in the financial system helps owners manage their assets properly and grow their business.

"Financial inclusion allows people to save for family needs, borrow to support a business, or build a cushion against an emergency. Having access to financial services is a critical step towards reducing both poverty and inequality, and new data on mobile phone ownership and Internet access show unprecedented opportunities to use technology to achieve universal financial inclusion," opines Jim Yong Kim, President of the World Bank Group.

An April 2014 report by the Consultative

Group to Assist the Poor (CGAP) stated that from the macroeconomic side, the level of financial inclusion is positively correlated to an economy's growth and employment levels.

THE SITUATION TODAY

According to a recent publication by the World Bank, the rate of financial inclusion is increasing globally, thanks to the pervasiveness of mobile phones and the Internet. However, disparities remain among countries. This disparity is not only limited to the rate of financial inclusion, but also to its nature, based on gender, economic status and accessibility to the Internet or mobile phones.

To track the level of financial inclusion, the World Bank launched the Global Findex database with the help of funding from the Bill and Melinda Gates Foundation in 2011. The data, which covers 140 economies, is released at an interval of three years and collected in partnership with Gallup Inc.

According to the Global Findex 2017 data, 1.2 billion adults worldwide have obtained a bank account since 2011, a figure which includes 515 million since 2014. 69% of adults across the world now have a bank account. The same figure was at 62% in 2014 and 51% in 2011 (Refer **Table 1**).

A major part of this positive growth is contributed by mobile

TABLE 1: COUNTRY-WISE FINDEX DATA FROM THE LAST 3 SURVEYS

Country	2011	2014	2017
Japan	96.4%	96.6%	98.2%
Singapore	98.2%	96.4%	97.9%
Malaysia	66.2%	80.7%	85.3%
Thailand	72.7%	78.1%	81.6%
China	63.8%	78.9%	80.2%
India	35.2%	53.1%	79.9%
Sri Lanka	68.5%	82.7%	73.6%
Bangladesh	31.7%	31.0%	50.0%
Indonesia	19.6%	36.1%	48.9%
Philippines	26.6%	31.3%	34.5%
Vietnam	21.4%	31.0%	30.8%

SOURCE http://databank.worldbank.org

The World Bank also attributes Malaysia's success to BNM's efforts to "modernise, strengthen and expand the financial system". In this regard, a major initiative was implemented way before the concept of financial inclusion came into being. The consolidation of Malaysian banks after the Asian Financial Crisis in 1997 catalysed the country's economic transformation and contributed much to its financial wellbeing today.

money accounts. In the earlier surveys, East Africa was the hub of mobile money accounts. Now Sub-Saharan countries have caught up and the share of adult mobile money accounts have crossed 40% in Gabon and 20% in Cote d'Ivoire and Senegal. Closer to home, Bangladesh leads the way with a mobile money account share of more than 20%.

Since the number of people using mobile phones and the Internet is increasing, the number of digital payments has also increased considerably. The share of digital payments has risen from 67% in 2014 to 76% in 2017 globally, while in developing nations, it increased from 67% in 2014 to 70% in 2017.

In Malaysia and other Asian countries, the level of progress shown with regard to the financial inclusion of the population aged above 15 is quite encouraging. Among countries in Asia, Japan leads the pack with a 98.2% inclusion rate followed by Singapore (97.9%). Malaysia ranks third with an inclusion rate of 85.3% in 2017 and has shown considerable progress, especially when compared to the 2011 figures.

The Global Findex 2017 data reveals that usage of digital payments in countries in East Asia and the Pacific has increased considerably, with 71% of adults holding bank accounts currently. The highest rise in usage rates is seen in Indonesia, from 13% in 2014 to 49% in 2017. China, on the other hand, leads in the area of digital transactions, where 57% adults use the Internet to pay bills and make purchases. The World Bank opines that both men and women are equally likely to hold a bank account in countries like Cambodia, Indonesia, Myanmar and Vietnam where gender inequality is low.

In South Asia, the share of bank accounts rose to 70% in 2017. India has been identified as the primary country driving this growth, thanks to the Indian government's biometric identification card initiative. In Bangladesh, the number of women holding bank accounts has also risen considerably. According to the World Bank, digitising payments for agricultural products will be the driving force behind reducing the unbanked population.

THE MALAYSIAN STORY

The World Bank has named Malaysia a success story among Southeast Asian countries, in a publication titled 'Financial Inclusion in Malaysia — Distilling Lessons for Other Countries' dated 22 May 2017. This report was launched jointly by Bank Negara Malaysia (BNM) and the World Bank Group's Global Knowledge and Research Hub. Much of this success was achieved by expanding access to financial products through banking agents and the use of mobile phones. The 2017 Global Findex data shows that more than 85% of adult Malaysians hold a bank account, compared to the global figure of 69%.

If we dive a little deeper, we will find the data to be extremely inspiring. Malaysia's banking system has grown at the rate of 6.8% per annum in terms of assets since 2011. The World Bank expects this trend to continue, which should lead to universal access by 2020. Among ASEAN countries, Malaysia has the second-highest number of adults with a bank account, trailing Singapore. According to the report, this was achieved with the help of a "large eco-system of banking institutions providing a wide range of conventional and Islamic financial services to the population". The ease of opening a bank account, both in the conventional and Islamic banking space, is a major contributor to this success.

The World Bank also attributes Malaysia's success to BNM's efforts to "modernise, strengthen and expand the financial system". In this regard, a major initiative was implemented way before the concept of financial inclusion came into being. The consolidation of Malaysian banks after the Asian Financial Crisis in 1997 catalysed the country's economic transformation and contributed much to its financial wellbeing today.

Subsequently, the Central Bank of Malaysia Act 2009 is considered to be the starting point of the country's financial inclusion initiatives. In that Act, one of the primary functions of BNM was articulated as "Promoting a sound, progressive and inclusive financial sector". With this Act, BNM received a unique legal authority to promote financial inclusion.

Another notable contributor to this success story is BNM's Financial Sector Blueprint 2011–2020, (FSB) prepared with an intent to create "An inclusive financial system that best serves all members of the society, including the underserved, to have access to and usage of quality, affordable essential financial services to satisfy their needs towards shared prosperity". With fourfold desired outcomes, broad strategies and 10 action plans to achieve the desired results, BNM identified the Malaysian financial roadmap way ahead of other economies.

Among other things, the country's continued focus on reducing the use of cash and cheques and expansion of the national payment system infrastructure are major steps towards driving financial inclusion.

One of the remarkable initiatives in this regard has been the introduction of Agent Banking, which was launched in 2012 as a part of the FSB to reach out to the unbanked population in the rural areas. It has proved to be an effective vehicle for achieving a high financial inclusion rate. In 2011 — before the initiative began — only 46% of sub-districts in Malaysia had access to financial services. Today, the coverage stands at more than 97%.

Tracking progress is an integral part of any plan and helps in realigning and refocusing resources towards the right purposes. To track the progress of its financial inclusion efforts, BNM created its own Financial Inclusion Index, which consists of four dimensions with two monitoring scales each. The index ranges from 0 to 1, and the higher the number, the closer the country is towards reaching its financial inclusion goal. This index is computed regularly, and corrective measures are taken accordingly (Refer **Table 2**).

Unlike many countries across the world, Malaysia's financial inclusion success story has not been detrimental to its financial stability in any way. We have seen countries around the world such as Mexico, Turkey, Indonesia and Thailand face large-scale banking crises after a credit boom.

Experts have various opinions as to what led to Malaysia's success. They opine that the fact that financial inclusion was considered a national priority from the beginning, even before the world woke up to the concept, as one of the main reasons for this achievement. Malaysia has followed a unique path towards achieving its financial goals by "strengthening banks and DFIs, broadening financial markets (especially Islamic finance), developing new financial instruments and delivery channels to reach out to the poor, upgrading prudential regulations and modernising financial sector infrastructure, especially the national payment system".

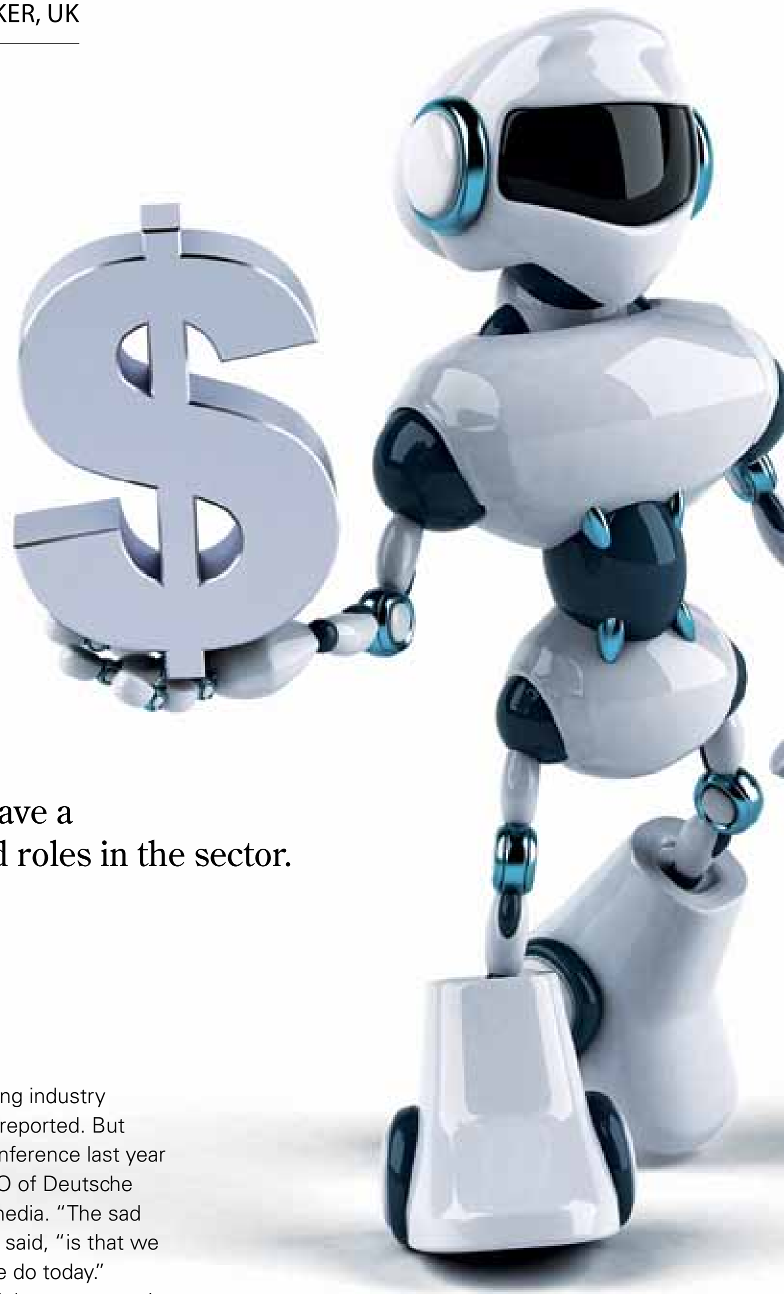
Challenges still remain in the form of walking the last mile to reach out to the rest of the unbanked population and ensuring that all citizens actually use the available financial services for their benefit instead of depending on other riskier modes. However, Malaysia's focus on reaching its financial inclusion goals is commendable and stands as an inspiration for other countries in drawing up their own financial inclusion strategies.✱

TABLE 2: PARAMETERS FOR FINANCIAL INCLUSION INDEX

Dimensions	Indicator
Convenient accessibility	% of sub-districts with at least 2,000 population with at least one access point
	% of the population living in sub-districts with at least one access point
Take up rate (% adults)	Deposit accounts
	Financing accounts
	Life insurance
Responsible usage (% of customers)	Active deposits
	Performing financing accounts
Satisfaction level (% of customers)	Satisfied with financial services

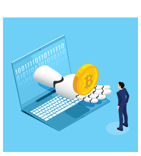
SOURCE Bank Negara Malaysia

■ *Amrita Kundu spent a decade in the banking industry before pursuing her passion for writing. She holds an MBA (Finance) and writes about various niche areas. Her work has been featured on several platforms worldwide.*



I, Robot – you, banker?

As NatWest tests artificial intelligence with a bot called Cora, promising lifelike customer experiences, there's a growing realisation that high-tech has an important role to play in banking services. This will have a significant impact on human jobs, skills and roles in the sector.



+ Today, many tasks previously too complex for automation can be done quickly without human intervention, driven by massive yet affordable processing power, endless cloud storage and strong encryption.

Profound comments by banking industry luminaries tend to be under-reported. But those by John Cryan at a conference last year in Frankfurt when he was still CEO of Deutsche Bank were jumped upon by the media. "The sad truth for the banking industry," he said, "is that we won't need as many people as we do today."

He was predicting a bonfire of jobs as automation tightens its grip. "In our bank we have people doing work like robots. Tomorrow we will have robots behaving like people," he explained. "It doesn't matter if we as a bank participate in these changes or not – it's still going to happen."

Banking used to be driven by the real-life judgement of a local bank manager. These face-to-face conversations were replaced in the 1990s by scripted call-centre interactions. Today, many tasks previously too complex for automation can be done quickly without human intervention, driven by massive yet affordable processing power, endless cloud storage and strong encryption. According to research from Fujitsu's Technology in a Transforming Britain report, two-fifths of the British public believe bank tellers will disappear within ten years.

"How we are using call centres is also changing due to new technology. There is a lot more options around self-service and chat bot technology which are starting to reduce the need for human-to-human call centre conversations," says Mark Curran, Director of Open Banking Strategy at CYBG, which owns Clydesdale and Yorkshire Banks. "AI is getting better. It's not tinkering at the edges. It is happening at the core."

REPLACING REPETITIVE, MUNDANE TASKS

Achieving efficiencies and meeting evolving customer demands are key drivers. To date, the most visible form of AI has been virtual assistants (now used by NatWest and Lloyds, for instance), or, as HSBC likes to call them, robo-advisers. Robotic processing automation has also proved invaluable in carrying out mundane, repetitive and uniform tasks, as well as in fighting fraud and financial crime.

"Banks are feeding machine-learning algorithms with unstructured data, such as social media activity, mobile use and text messages, to capture a more nuanced view of creditworthiness and improve the rating accuracy of loans," states Scott Vincent, CEO of consultancy Parker Fitzgerald.

Automation is certainly affecting working practices. However, there are no figures on the human jobs displaced. The fact is that new virtual assistants, such as the one from Lloyds, are still backed by real agents who can step in if necessary. PwC predicts the largest impact could be where algorithms lead to faster, more efficient assessments of financial services; this, it suggests, will come in waves, with routine and data tasks automated first.

"One fallacy is that machines are replacing people. The reality is that machines don't work without humans. A more accurate description is that a large number of people are being replaced by a smaller number of people using machines," explains Thomas Frey, Executive Director and Senior Futurist at the DaVinci Institute. "Automation is designed to make workers more efficient. For instance, roughly 65% of today's jobs in the US are information jobs that didn't exist 25 years ago."

A SHIFT IN HUMAN WORK

It is true that knowledge-based work is coming to the fore. Nevertheless, spotting anomalies and complex problem-solving cannot be fully automated yet. Creativity and lateral thinking by humans is still valued, as is ethics, good judgement and empathy. "There is no doubt that bank roles will evolve from repetitive administration tasks to exception-based monitoring and highly subjective cognitive processing," says Mark Higgins, Senior Managing Director at FTI Consulting.

New roles will also be very important, not least in the designing and training of advanced software, as will the need for data scientists, psychologists and security and risk specialists. "A more digitised industry will generate new ways of doing things, which will create new value for businesses and their customers," states Ian Bradbury, CTO Financial Services at Fujitsu.

Lessons can be learnt from other industries, such as retail and travel, where customers now do a lot more themselves, whether via self-service checkouts, checking in online or the use of price comparison websites. "There are similarities in banking," states Robert Churcher, FinTech investments specialist at PwC. "It's no longer necessary to go into a branch with your passport to open a bank account; simple business lending can be done entirely online without any site visits or manual data checking."

The banking industry, however, has yet to be thoroughly disrupted by automation, the way Airbnb has done for hotels, Uber has done for transport and Amazon has done for retail. Interestingly, the move by tech players such as Amazon into banking with tie-ups including Citibank in the US, or Orange in France muscling into mobile banking, is where disruption to the banking sector could lie.

A QUESTION OF TRUST

Trust is a big factor at play, according to Marc Lien, Director of Applied Sciences at Lloyds Banking Group. "Banking is a business founded on trust," he says. "It is paramount that the industry operates at the forefront of using these technologies in ways that avoid eroding trust."

Last year HSBC conducted a global survey on trust in technology and found that people are twice as likely to trust a humanoid robot for heart surgery (14%) as they are to trust one to open a savings account (7%). Just 11% said they would trust any type of robot to open a savings account for them or provide mortgage advice.

"Technology might be moving very quickly, but it often takes consumers more time to move with it en masse," explains Josh Bottomley, Global Head of Digital, Data and Development at HSBC. "HSBC and other consumer-facing businesses have a role to play in educating customers about the benefits of adopting technology."

In the decades ahead, a sweet spot may be reached where the agility and efficiency of our robotic banker melds with the creativity and judgement of its human counterparts. Only time will tell whether this hybrid customer experience will be trusted. "Going forward, we will certainly need to build human skills alongside those of AI; it is important for the human capability to step up as well," says Tanya Retter, Head of Learning, Personal and Business Banking at RBS.

By 2030 or 2050, when AI really comes into its own, the entire role of banks could be questioned, according to Tom Goodwin, author of Digital Darwinism and Head of Innovation at Zenith. "Bank customers are too important to outsource customer care to primate-like bots – at least not until they get good enough," he says.

Rest assured your job is probably safe for the next few years. Probably. ✱

■ *This article was previously published in the Chartered Banker Magazine, April/May 2018.*

One fallacy is that machines are replacing people. The reality is that machines don't work without humans. A more accurate description is that a large number of people are being replaced by a smaller number of people using machines.

BY DR. THUN THAMRONGNAWASAWAT

HOW TO WORK WITH AN AUTOCRATIC LEADER

AUTOCRATIC LEADERS MAKE CHANGES HAPPEN, BUT HOW CAN SUBORDINATES NAVIGATE THIS LEADERSHIP STYLE?

To be accurate, the book talks about leaders needing to become a 'Positive Autocrat', where there is a balance between compassion and mission. Specifically, a Positive Autocrat is clear and relentless on their leadership values and purpose, while retaining empathy and humility for everything else. Supporting skill sets include listening and reflecting, forgiving more often, earning the right to be autocratic, and giving people freedom within a framework.

In the Wall Street Journal Best-selling book 'Open Source Leadership' (2017, McGraw-Hill), Rajeev Peshawaria and The Iclif Leadership and Governance Centre make a convincing argument that the breakneck speed of the 21st Century requires a more autocratic style of leadership. An autocratic leadership style is characterised by the decision-making process, with choices being made by a single person. In contrast, a democratic style of leadership means members of a group take a more participative role in the decision-making process, often through consensus or majority.

To be accurate, the book talks about leaders needing to become a 'Positive Autocrat', where there is a balance between compassion and mission. Specifically, a Positive Autocrat is clear and relentless on their leadership values and purpose, while retaining empathy and humility for everything else. Supporting skill sets include listening and reflecting, forgiving more often, earning the right to be autocratic, and giving people freedom within a framework.

While I agree wholeheartedly that this is the style of leadership that makes change happen, the term 'positive autocracy' still contains the word 'autocrat'. And, positive or not, you would agree that working for someone described as an autocrat has its challenges. Autocrats have often been described as stubborn and unyielding in their view of the world. If you have ever worked with one, most of the time, they seem — through your lens anyway — to fixate on their agenda; ploughing through anything that blocks the way. When someone else has an idea, it is never good enough. Ultimately, you grow tired of explaining, to the point where it doesn't seem worth it. But the dilemma is, if you resort to shutting up and following orders, then you come across as lacking innovation and not thinking out-of-the-box.

So, what to do? How do you work with such leadership behaviours, especially with someone who has a position of power and authority over you? Even if your leader is well on his/her way to becoming a positive autocrat, you must still learn to navigate this new leadership style. Because in the current era where innovative workers are replacing knowledge ones, your survival may depend on it.

Here are my proposed solutions. Or, at least something for you to think about.

+ **Be autocratic.** Many subordinates think that when you have a 'bossy' leader, the best choice is to shut up and follow orders. Gonzague Dufour, the author of the book 'Managing Your Manager: How to Get Ahead with Any Type of Boss' (2011, McGraw-Hill), says that "this is a huge mistake". Based on my own conversations with executives, autocratic leaders told me they prefer people who 'challenge them' instead of those who simply comply. A colleague of mine retells a story he heard at Tesla of the CEO Elon Musk ejecting people who were not contributing from the meeting room. So, the first step towards paving your way with an autocratic-style leader is to convince yourself to speak up, not shut up.

+ **Earn the right to be heard.** But there is a reason why you wanted to shut up

Even if your leader is well on his/her way to becoming a positive autocrat, you must still learn to navigate this new leadership style. Because in the current era where innovative workers are replacing knowledge ones, your survival may depend on it.

You will not win many arguments with an autocratic leader, even a positive one. In fact, you will lose most of them. The important thing is to know which are your battles and which are your wars. Battles are not important; the wars are — it isn't a zero-sum game. Many subordinates fail to work effectively with an autocratic leader because they have unrealistic — and frankly, unproductive — expectations to win on all points.

in the first place, right? Because you still remember what it felt like the last time you said something to your boss. You nearly got your head bit off — or at least it felt that way. My advice is to examine whether you have earned your right to be heard. The brain is not always fact-based. When, how and who says things often mean as much as what is said. For instance, if this is your first year at the firm, a radical idea on client strategy may not be welcomed with open arms. Or if you failed utterly to deliver on a previous promise, your proposal to start a new project will probably be received with much scepticism. Work your way up the ladder. A friend of mine who works at Apple told me about their culture: before you can make a Category 3 suggestion, you need to have proven your worthiness at Category 1 and 2.

+ Build your psychological security. Laura Delizonna wrote in *Harvard Business Review* about a concept called Psychological Safety (24 August 2017). It is the common factor identified among the highest-performing teams. Psychological safety is the belief that you won't be punished when you make a mistake. Personally, I am not keen on the term. I just think the word 'safety' is the opposite to 'risk-taking', which is key to voicing your thoughts. Instead, I'm choosing to think of the concept as psychological security. But linguistic nitpicking aside, I agree that for you to stand up for your idea, you must have a degree of confidence in the worst-case scenario. Ask yourself: "What is the worst that can happen by speaking up?". You will be surprised to find that the worst is not as bad as you think, once you have the courage to confront it.

+ Know the trigger. When working with autocratic leaders, you must know where NOT to challenge. Positive autocrats are taught to be adamant about their values and purpose. Thus, to work for one you must be mindful of what those are — otherwise, you will learn it the hard way. For instance, I work with a boss who values hard work and earned respect. Once, I made the mistake of overstepping my boundary along those lines, I needed my colleagues to shovel me out of the ground! While it may seem that everything sets off your leader, I challenge you to pause and observe your experiences. You will find that only certain things are actually triggers. And if you dig a little deeper, your leader's values and purpose lie beneath. Familiarise yourself with what they are, and you can minimise the chances of having your psychological security zone busted.

+ Lose the battles but win the war. You will not win many arguments with an autocratic leader, even a positive one. In fact, you will lose most of them. The important thing is to know which are your battles and which are your wars. Battles are not important; the wars are — it isn't a zero-sum game. Many subordinates fail to work effectively with an autocratic leader because they have unrealistic — and frankly, unproductive — expectations to win on all points. For example, if your objective is to present your idea to the CEO, then having him/her agree to the idea is just a battle. Having your idea heard is the war. Be happy that you managed to get an uninterrupted 15 minutes to showcase your thoughts, and stop blaming your boss for not having the foresight to see the point. You won your war today. Live to fight the next battle.

+ Value alignment. For a team to function well in the 21st Century, it comes down to this. People work well together when their values are aligned — or at least, overlapped. The Open Source Leadership research shows that professionals today are more intrinsically driven than extrinsic. That means people work for their own reasons, not others'. And since the brain likes to align its BASE: Belief, Action, Social and Environment, we gravitate towards those who share our values. For example, if I believe in helping people to become a better version of themselves and my boss has a similar belief, then we will find common ground despite our different ideas and approaches. On the other hand, if he believes in winning at all costs irrespective of others, then it doesn't matter whether he is a positive autocrat or not. Our values simply do not match.

So, before you say that your relationship with your boss is a lost cause, examine closely the real reason you are not working well with him/her. Is it simply about techniques and skills? Or is it an intrinsic misalignment of values? Because it's too convenient to simply brand your boss an autocrat! ✱

■ *Dr. Thun Thamrongnawasawat is Director of Research & Curriculum at the Iclif Leadership and Governance Centre.*

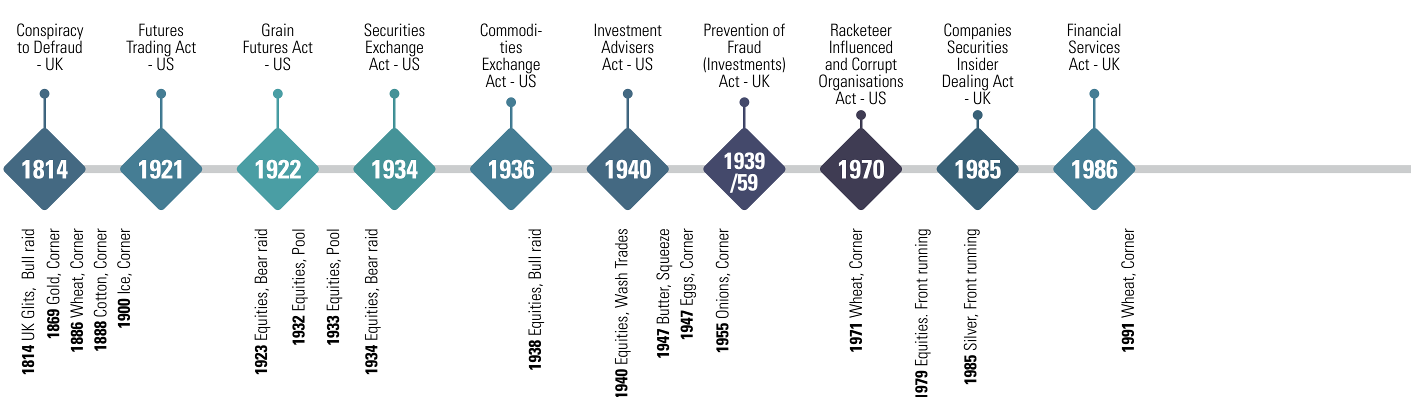
MARKET BEHAVIOURS
ANALYSIS AND CONTROLS

IN A SEQUEL TO THE EARLIER ARTICLE ON MARKET BEHAVIOURS, GERRY HARVEY AND CRAIG BEEVERS SPEAK ABOUT BEHAVIOUR ANALYSIS, REGULATION AND LEGAL FRAMEWORK.

Existing regulatory approaches to conduct have tended to fall into two camps: principles-based and rules-based. High-level principles provide regulatory flexibility and make broad statements about the direction of regulatory guidance but provide insufficient practical detail to guide practice in the actual marketplace. Detailed legalistic rules risk being incomprehensible to individual traders and cannot possibly cover all of the detailed scenarios that arise in dynamic wholesale markets. It is rare that the answer to the question "Can I do this deal?" can be found by reference to a statute or rulebook.

In examining the drivers behind recent conduct failures, the UK Fair and Effective Markets Review (FEMR) noted that "…there has often been a lack of market-wide agreement on the standards of market practice implied by regulations and market codes" and that "…the style and structure of current

FIGURE 1 Sample Market Legislation and the Incidents of Misconduct 1814-2016 **SOURCE** FMSB



regulatory and other standards sometimes make it difficult for market practitioners to understand how the standards apply to specific market practices." What is acceptable and unacceptable in daily conduct and practice is implied by, but is not listed in, rules. Rules may mean that certain practices are permissible (or not), but they do not describe what those practices are.

Good regulation and a strong legal framework are necessary prerequisites, but something more is needed to deliver fair and effective market outcomes. Regulations and the law cannot provide the detailed, granular guidance required by market practitioners to eliminate ambiguity as to acceptable conduct in live operating markets. This needs to be determined by the senior market and technical experts from all sides of the wholesale markets debating and agreeing best practice standards which balance the different interests of market makers, market users and market infrastructure providers. This is a key objective of the FICC Markets Standards Board (FMSB), a market-led organisation constituted following the recommendations of the FEMR, and indeed, how it develops new standards in practice.

Conduct regulators have adjusted their approach to the management of conduct issues, emphasising the importance of the interaction between behaviour, conduct, governance and culture. The development of this approach requires a focus on market conduct and not just upon process and 'rules'. Firms operating in wholesale markets are also developing new methodologies for managing conduct risk.

HISTORY AND DIAGNOSIS

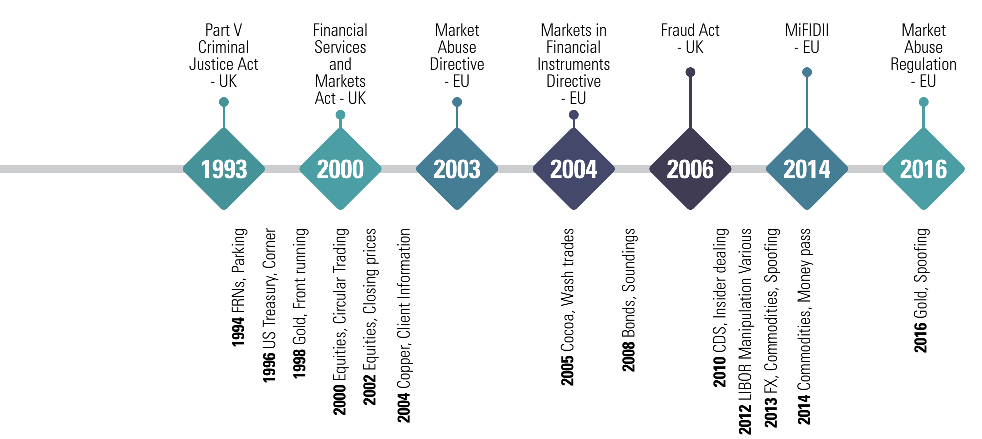
Today there is clear recognition that conduct risk is a systemic risk. In the past five years, banks globally have paid some USD375 billion in conduct fines, about 80% of which were related to wholesale markets. If that money had been retained as capital it would have supported over USD5 trillion of bank lending to the global economy. How did this happen? The reasons are complex, but there are contributing factors, which we have learned from about how we have approached and managed conduct risk in the past.

What is acceptable and unacceptable in daily conduct and practice is implied by, but is not listed in, rules. Rules may mean that certain practices are permissible (or not), but they do not describe what those practices are.

It is often assumed that the horizon of potential malpractice behaviours in markets is limitless; in the words of the Judges in a now famous US enforcement case:

"The methods and techniques of manipulation are limited only by the ingenuity of man." *Cargill, Incorporated v. Hardin (1971)*.

Whilst laws and regulations have been introduced and adapted to seek to deal with market misconduct, conduct issues have continued to occur. This is evident in charting legal and regulatory development against conduct cases. We set out an example in **Figure 1**.



It is evident that the promulgation of laws and regulations on their own do not forestall conduct issues. If they did, we would not see the same types of market failure repeated with only minor variations again and again. However, it is striking that not only do issues occur – they also recur. Analysis undertaken by the FMSB, which we call Behavioural Cluster Analysis or BCA, indicates not only that issues continue to occur, but that the same aberrant market behaviour falls into patterns which repeat over time.

FIGURE 2 Repeat Behavioural Patterns (1792–Present)

Price Manipulation
- Spoofing/Layering
- New Issue/ M&A Support
- Ramping
- Squeeze/Corner
- Bull/Bear Raids

Inside Information
- Insider Dealing
- Soundings
- Research

Circular Trading
- Wash Trades
- Matched Trades
- Money Pass & Compensation Trades
- Parking/ Warehousing

Reference Price Influence
- Benchmarks
- Closing Prices
- Reference Prices
- Portfolio Trades
- Barriers

Collusion & Information Sharing
- Pools
- Information Disclosure

Improper Order Handling
- Front Running
- Cherry Picking and Partial Fills
- Stop Losses & Limits

Misleading Customers
- Guarantees
- Window Dressing
- Misrepresentation Price

SOURCE FMSB

BEHAVIOURAL CLUSTER ANALYSIS

Our work shows that the spectrum of observed malpractice behaviours is not, in fact, limitless. Instead, there is a much more limited horizon of behaviours which can be identified and further grouped into broad categories.

The BCA methodology is simple. Importantly, it is evidence-based: BCA does not rely on any form of anecdotal input.

Enforcement cases and similar source materials (e.g. legal actions) describing actual adverse conduct are reviewed to ascertain the pattern of behaviour indicated in each case. These are compared with those in other cases to determine whether the same behaviours repeat or whether the underlying behaviours are unique or different in each case. The outcomes are then compared to those in other jurisdictions to establish if similarities exist.

The BCA review comprises behavioural patterns in some 400 cases from 26 countries over an extended period (235 years) and for multiple asset classes. This analysis establishes that a core group of some 25 behavioural patterns repeat and recur over time. These behavioural clusters are set out in **Figure 2**.

The analysis does not focus on particular markets or asset classes but all markets and asset classes to which the source materials relate (**Figure 3).**

OBJECTIVE AND PURPOSE

The objective of BCA is not academic. It is entirely practical and is designed to be a tool for market practitioners. BCA provides a methodology to identify the core group of misconduct techniques which have repeatedly formed the basis of misconduct across multiple jurisdictions. Identifying malpractice techniques is an essential step to forestalling them. BCA will, therefore, assist market participants working on the design and enhancement of systems for oversight and control.

MARKETS IN TRANSITION

Since the 1990s, and particularly in the past decade, electronic trading of Fixed Income Clearing Corporation (FICC) products and new post-trade protocols (e.g. central clearing) have grown very significantly. A further consideration in relation to conduct is the growing impact which technology is having on market

FIGURE 3 Markets and Asset Classes **SOURCE** FMSB

American Depositary Receipts	Equity Index Futures	Non-fat Dry Milk
Asset Backed Securities	Equity Options	Onion Futures
Bitcoin Non-deliverable Forwards	Equity Warrants	Orange juice Futures
Brent Oil	Ethanol Futures	Palladium
Cheese Futures	Eurodollar Derivatives	Platinum
Cocoa Futures	Eurozone Government Bonds	Potato Futures
Coffee Futures	Floating Rate Notes	Property Futures
Collateralised Debt Obligations	FX Futures	Repurchase Agreements
Contracts for Difference	FX Options	Rice Futures
Convertible Bonds	Gas Oil	Silver
Copper	Gilts	Soybean Meal
Corn	Global Depository Receipts	Soybean Oil
Corporate Bonds	Gold	Soybeans
Credit Default Swaps	Japanese Government Bond futures	Spot FX
Eggs	Lead	Sunflower Seed Futures
Electricity	LIBOR	US Treasuries
Emerging Market Bonds	Mortgage Backed Securities	Volatility Index Futures
Emerging Market Warrants	Municipal Bonds	Wheat
Equity	Natural Gas	WTJ Oil

BCA: Summary of Thematic Findings. BCA has yielded a number of thematic findings.

FINDING 1
There are a limited number of repeat behavioural patterns.
Review of source materials indicates that there are some 25 behavioural patterns evident in market misconduct cases. These patterns repeat and recur.

FINDING 2
These behavioural patterns are jurisdictionally and geographically neutral.
These behavioural patterns do not respect national or jurisdictional boundaries. They are evident internationally.

FINDING 3
The same behavioural patterns occur in different asset classes.
These behavioural patterns are not specific to particular asset classes. The same patterns are evident in different asset classes. This is rational: asset classes do not generate conduct risks – people do.

FINDING 4
Behaviours adapt to new technologies and market structures.
Technology is not new – it has been a feature for markets for years, and as such, there is the corresponding body of evidence of conduct malpractice in the screen based trading environment. These behaviours are not new – they are known behaviours that have adapted to new media.

structures and practice. Patterns of malpractice repeat, but they also adapt to new market structures.

It has been suggested that moving trading markets to electronic platforms addresses conduct risk, that computers are substitutes for humans and misconduct can be "coded out". Care needs to be taken with what is meant by electronic trading, and we need to distinguish between human initiated trading on an electronic platform that has rules designed to stop some types of malpractice written into the software the trader uses, and algorithmic trading where humans are removed from the initiation of the trade. In both cases, there is a major difficulty with the hypothesis that bad conduct can be coded out. Electronic trading platforms have been operating for some time — and so we already have a corresponding body of enforcement cases relating to misconduct in the electronic trading environment. Electronic trading does not automatically eliminate market abuse and misconduct. Some types of long-established manipulation techniques evident in voice markets have simply migrated to electronic markets. There are enforcement cases on record involving wash trades, spoofing and layering, the use of algorithms to manipulate closing and reference prices, circular trading, front running and the use of social media to pass inside information and to conduct bull and bear raids. These behaviours are not new — they are known behaviours that have adapted to new media. Similarly, any of these patterns of behaviour can be coded into an algorithm that then commits abusive trading on behalf of its operator.

EMERGING VULNERABILITIES

One of the strategic goals of FMSB is to analyse and report on emerging vulnerabilities in FICC markets.

Just as old techniques have adapted to changes in market structures, new structures may give rise to the potential for new vulnerabilities. Here, we are considering possibilities, but given the pace of change, these and similar topics represent a major strand of FMSB work over the next two to three years. Some examples include the following:

- **Invoice markets.** Participants have, over time, developed extensive controls governing the approval, development and introduction of new products. In electronic markets, the equivalent controls may be less well established. Further, electronic market controls need to cover novel types of risk, for example, relating to the age and quality of computer code, the documentation, change management and testing of that code in development and live environments, and safe repositories for source copies of the code.
- **Concerns that algorithmic trading engines** can malfunction (e.g. by creating 'flash' and 'splash' crashes) have led to the deployment of a variety of controls intended to mitigate such problems, for example, 'kill switches' and 'speed bumps'.
- **Algorithmic, and particularly high-frequency** trading is an increasingly important category of electronic trading and source of pricing and liquidity in electronic FICC markets. Controls over the development and deployment of algorithmic engines are therefore particularly critical to effective market functioning and the fairness of pricing and liquidity provision by market makers
- **Electronic markets generate very significant volumes of market data.** Issues ranging from the accuracy of timestamps to the visibility (or lack) of market depth, the latency of reporting of executed orders and the quality and capability of market data infrastructure can all have a potential impact on the fairness and effectiveness of electronic markets for their users.

Considerations such as these arise against a backdrop of a rapidly changing regulatory environment which can itself generate uncertainties and the potential for unforeseen consequences. These topics represent a major strand of FMSB work over the next two to three years. ✱

■ *Gerry Harvey is Chief Executive Officer of the FMSB with over 30 years of experience in wholesale financial markets and extensive experience in the regulatory field.*

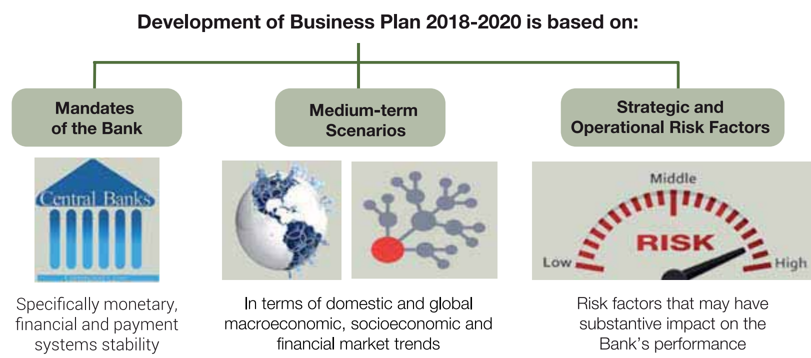
Craig Beevers has over 25 years of experience in financial markets, on both the buy side and the wholesale sell side. He spent over a decade of his career in risk management, including as Head of Global Risk for Nikko Europe (now part of Citigroup), and provided advisory and consultancy services.

BY KALAISELVI SOMASUNDARAM AND A. KANAGALINGAM

Business Plan 2018-2020

FRAMING THE FUTURE WITH TALENT AND TECHNOLOGY

DIAGRAM 1 Development of Business Plan 2018-2020



SOURCE Bank Negara Malaysia

The Bank Negara Malaysia's Business Plan 2018-2020 (BP) with the tag line 'Framing the Future with Talent and Technology' provides the lens in setting future priorities. The combination of talent and technology has given rise to several common themes that will have a profound impact on the 21st century organisation. These themes include innovation, productivity, agility and accountability. The themes reflect the new performance attributes required in today's organisation to cope with the rapid changes constantly reshaping the environment in which businesses operate.

The Bank's medium-term BP is designed as an integrated forward planning tool. It articulates the Bank's priorities in terms of measurable outcomes. These outcomes guide the effective implementation of policy, and align organisational capabilities with business imperatives.

The objective of the BP is to ensure the Bank continues as a strategically-focused, outcome-driven and sustainable organisation. Renewal of the organisation's DNA becomes a pre-requisite for success in terms of new processes, technologies and solutions in the areas the Bank can make the most impact on the nation's socio-economic development, in line with the mandate and objectives of the Bank.

BUSINESS PLAN IN A CHANGING ECONOMIC AND FINANCIAL SYSTEMS ENVIRONMENT

The Bank's medium-term Business Plan is anchored to four focus areas, as highlighted in **Diagram 3**.

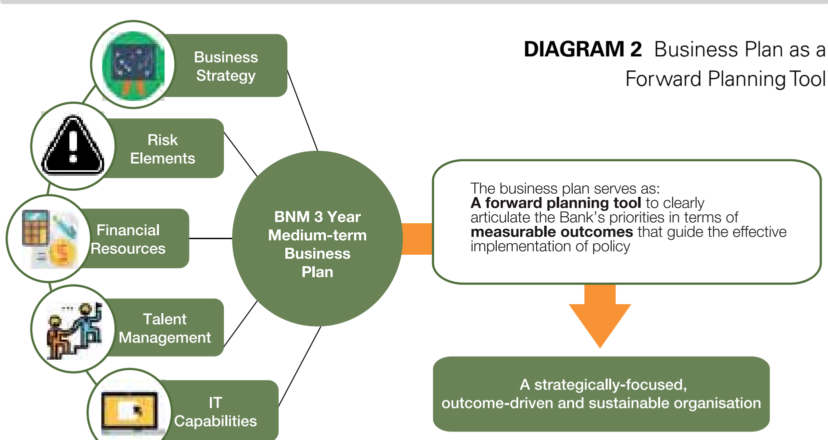
The four focus areas address the Bank's legislated mandates and developmental priorities to nurture a progressive financial system that will be a catalyst for sustainable economic growth. The four focus areas are supported by Strategic Objectives that give greater clarity to the outcomes the Bank seeks to achieve over the medium to long-term.

The Strategic Objectives also aim to develop stepping stones for continuous structural reforms and innovations for the economy of tomorrow, and the next generation of financial sector players.

The key strategic objectives and strategies that support game changing outcomes for the Malaysian economy, financial system and society are highlighted in **Diagram 4**. These strategies focus the Bank's policies on areas that offer significant opportunities for job and wealth creation, or to contain vulnerabilities that may hamper the country's socio-economic progress.

The focus on developing a culture that embraces innovation, agility, productivity and accountability is part of transforming

DIAGRAM 2 Business Plan as a Forward Planning Tool



SOURCE Bank Negara Malaysia

the way the Bank operates in the new environment. New competencies and behaviours must be learnt quickly to adjust and capitalise on the pace of technological development, and to mitigate new risks. Ultimately, the business plan is to deliver results in terms of economic growth, financial stability and broad-based job and business opportunities that meet the expectations of the public, businesses and all stakeholders with a vested interest in the economic and social well-being of the nation.

As with any good plan, performance is reviewed and communicated through the Bank's broad range of publications and communication channels, with appropriate course corrections when necessary.

As the country continues to progress towards becoming a more developed nation, the financial sector and other economic structures must remain supportive of growth and be resilient to risks. The business plan aims to strike the right balance between regulation and allowing technological innovations to take place in our financial system. ✱

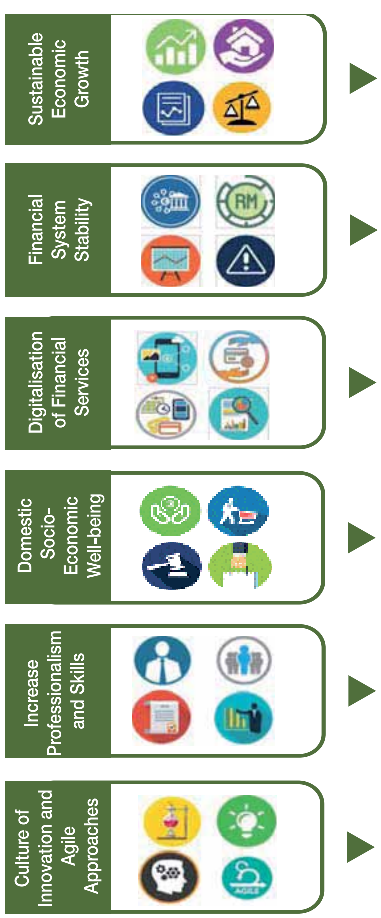
DIAGRAM 3 Business Plan Focus Areas

SOURCE Bank Negara Malaysia

■ *This article was originally published in Bank Negara Malaysia Annual Report 2017 and is reproduced here under permission.*

The article is available at bnm.my/ar2017enbox6.

DIAGRAM 4 Strategic Outcomes



Sustainable Economic Growth
- Ensure macroeconomic environment conducive for **sustainable growth**
- Ensure a sustainable and balanced **housing market**
- Address pre-emptively the emergence of **risks of imbalances**

Financial System Stability
- Strengthen the **resilience and integrity** of the financial system
- Enhance **financial market capacity** to better intermediate risks
- Ensure **cost-effective supply** of quality and secure banknotes and coins

Digitalisation of Financial Services
- Greater **diffusion of technology** in financial services
- Accelerate **migration to e-payments** by displacing cash and cheques
- **Maximise network effects** through open and interoperable standards, and future-proofing public infrastructure

Domestic Socio-Economic Well-being
- Implement **sustainable social financing** to increase income generating activities and advance socioeconomic mobility for communities
- Ensure financial service providers are **fair in their dealings** with financial consumers
- Enact a **Consumer Credit Act** to impose consistent consumer protection requirements on banks and non-bank credit providers

Increase Professionalism and Skills
- **Professionalise** financial sector workforce including their intermediaries
- Strengthen **recruitment practises** and introduce **accountability framework** for the financial industry
- Develop the **"Financial Education Hub"** as a focal point for international learning and research to nurture a sustainable pool of local talents

Culture of Innovation and Agile Approaches
- Leadership that actively promotes continuous strategic renewal by encouraging **innovation and creative thinking**
- Adopt **agile approaches** to enable rapid deployment of solutions, including development for the necessary new skillsets
- **Digitalisation of workplace** to enable enhanced mobility, efficient information management and seamless collaboration

SOURCE Bank Negara Malaysia

SOCIAL FINANCE 101

INVESTORS ARE CASHING IN ON A BURGEONING SECTOR THAT MERGES SOCIAL GOALS WITH FINANCIAL RETURNS.

Once relegated to the fringe of banking, social finance is increasingly gaining credence on *Wall Street*, with some of the largest institutional investors already on the bandwagon.

A broad term used to describe investments that prioritise social or environmental impact together with financial return, its philosophy is that returns and social impact are not mutually exclusive goals.

EVOLUTION

How is social finance different from philanthropy?

Beyond putting money into 'social projects' or channelling credit into more 'socially impactful' work, social finance is a new paradigm that weaves the regulatory-driven nature of financial services — measurability, accountability, reporting and compliance — into the non-profit sector. The end game is twofold: a sustainable way to finance ideas or businesses that will solve some of the world's most urgent global issues, as well as returns that fulfil the 'triple bottom line' for investors.

The European Commission, one of the first movers of social finance in the late 1990s, outlined that social investment must fulfil the following criteria:

+ Is at least nominally repayable.
+ Pursues an accountable social, cultural or environmental purpose.
+ Is autonomous of the state.
+ Has the mission of the investee as the principle beneficiary of any investment.
+ Is transparent about assessing, measuring and reporting the social impact it seeks to create.
+ Is structured to create financial value or organisational or community capacity over time, e.g. by helping the investee invest in growth, acquire an asset, strengthen management, generate income and/or make savings, and by providing wider non-financial support.
+ Is inclusive.

The spectrum of social innovations is vast. Whether it is improved access to education, income generation for the disenfranchised, affordable medical care and alternatives, urban development and regeneration, or environmental protection, the goal is to leverage on the modern capital market infrastructure to create real impact in society.

Its drivers are two-fold:

First, transformative change requires a new paradigm in how socially-driven goals are achieved. The responsibilities for some of the world's most urgent issues require not only public-private partnerships but also new sources of capital, a comprehensive approach to risk management and methodical use of data.

Social finance has become the stimulus for innovative partnerships between government, philanthropy and the private sector, with its chief objectives outlined in the United Nations Sustainable Development Goals.

Second, the sector has grown in response to

+The end game is twofold: a sustainable way to finance ideas or businesses that will solve some of the world's most urgent global issues, as well as returns that fulfil the 'triple bottom line' for investors.

the litany of grouses and bad practices that continue to plague the philanthropic or non-profit sector, which includes unsustainable operating models, unaccountable practices and lack of technical expertise to achieve impact.

As terms such as social impact reporting and social return on investment increasingly become embedded in banking terminology, the USD22-trillion sector looks set to grow further.

Independently, research by Barclays Bank, Morgan Stanley and others indicate between 50% and 85% of investors are interested in putting their money to use in projects that have a positive net impact on society, with interest peaking amongst millennials.

But such interest falls short of conversion. Barclays reports that only 9% of investors in the UK have actually initiated social impact investments as most perceive it to be 'substandard' to traditional investment products and generate less-than-optimal returns.

However, early-stage investors are beginning to see significant returns in what was once considered a 'risky' investment. *Forbes'* recent feature, 'How Social Impact Investment Delivers Superior Returns', quotes independent research firm All Street that the internal rate of return of social capital funds clocked an impressive 33.5% average, outstripping the broader venture capital sector's 9.5%.

TOOLS

The strategies and/or mechanisms of social finance have evolved in both number and sophistication. Broadly, they are classified as either impact investing, innovation funds or social impact bonds, which we take in turn as follows:

> **Forbes' recent feature, 'How Social Impact Investment Delivers Superior Returns', quotes independent research firm All Street that the internal rate of return of social capital funds clocked an impressive 33.5% average, outstripping the broader venture capital sector's 9.5%.**

Impact Investing

Since its inception, impact investing funds total more than USD108 billion in assets under management (AUM) as estimated by the New York-based Global Impact Investing Network (GIIN), which defines it as "investments made into companies, organisations and funds with the intention to generate social and environmental impact alongside a financial return".

Today, impact investing has attracted a steady stream of institutional and individual investors, each with varying motivations and levels of commitment:

+ Banks, pension funds, financial advisors and wealth managers cater to a growing segment of clients who want to see investments channelled sustainably and responsibly to innovations that have values embedded.
+ Institutional, religious and family foundations can leverage their assets and pursue their core social and/or environmental missions whilst growing their overall endowment.
+ Government investors and development finance institutions provide proof of financial viability for private-sector investors in pursuit of their social and/or environmental goals.
+ Already, investment managers Bain Capital, BlackRock, Credit Suisse,

The model differs from the norm of philanthropy where foundations are the first movers to inject growth capital to fund an organisation, replicating only when the work reaches scale. It also differs from the strings-attached model imposed of foundation grants by pegging returns to a more sustainable outcomes-based model.

Goldman Sachs and J. P. Morgan Chase offer impact products as part of their portfolios.

+ Highlights from GIIN's Annual Impact Investor Survey 2017 give a bird's eye view of the landscape, and risks and challenges of impact investing:
+ In 2016, respondents saw progress in key indicators of industry growth, such as the availability of qualified professionals, data on products and performance, and high-quality investment opportunities. The overwhelming majority of respondents reported that their investments have either met or exceeded their expectations for both impact (98%) and financial performance (91%).
+ They also continued to face challenges related to the availability of appropriate capital of different types and a lack of shared vocabulary to define and segment the industry.
+ Nearly universally, respondents measure their social and/or environmental performance using a mix of proprietary metrics, qualitative information and IRIS-aligned metrics. IRIS — IFRS or GAAP — is a set of standardised metrics to measure and describe the social, environmental and financial performance of an organisation or business and can be freely integrated into most approaches to impact reporting and data management platforms.
+ While two out of three respondents principally target risk-adjusted, market rates of return, there is a widespread acknowledgement of the important role played by below-market-rate-seeking capital in the market.
+ The majority of respondents believe the entry of large-scale financial firms into impact investing will professionalise the market and bring in much-needed capital.
+ However, most also believe there is a risk of mission drift or impact dilution associated with this trend, similar to what has already occurred in microfinance.

Innovation Funds

Most social innovation funds are government backed, providing million-dollar growth capital to scale up work in the sector and also trigger matching dollars in private philanthropic funds.

Aside from dollars and cents, government participation lends credibility to early-stage social innovations or innovators, similar to what a bank guarantee proffers borrowers. This 'seal of approval' or guarantee entices other foundations or grant-making entities to jump aboard and initiate/incubate.

The model differs from the norm of philanthropy where foundations are the first movers to inject growth capital to fund an organisation, replicating only when the work reaches scale. It also differs from the strings-attached model imposed of foundation grants by pegging returns to a more sustainable outcomes-based model.

Europe inspired countless spinoffs in the Americas and Asia. For instance, in 2012, the UK government set up the landmark Big Society Capital, an independent social investment institution providing finance to organisations that bring to market social solutions with potential for scale and growth. Using unclaimed assets and investments from global banks, it capitalised and established the world's first social finance wholesaler.

The European Union Structural Fund was also the blueprint for and capitalised Portugal's 'Inovação Social', a financing wholesaler that also supports capacity building, matching to philanthropic and private investments, and knowledge transfer such as outcomes budgeting.

Recently, the impact investing bug made its way to Asia with Japan, Malaysia, Singapore, Indonesia all working on versions of their own social finance wholesaler.

Social Impact Bond

Social Impact Bonds (SIBs) remain the newest and most controversial strategy pioneered, not least due to the cost and expertise required to structure and operate the bonds, which makes it a barrier to entry.

However, the term 'bond' is a misnomer for SIB as it bears no resemblance to even the 'plain vanilla' bonds we are accustomed to in the financial market. The more accurate description for SIBs is a future contract upon achievement of pre-determined social outcomes. A bond-issuing organisation raises funds from investors to cover the operating costs of a

TABLE 1: SOCIAL FINANCE ROADMAP

SHORT-TERM
2016

- Replicating IIX's Humanity Bond, focused on healthcare and preventive programmes.
- Structuring an Islamic bond focused on financial inclusion and targeted at B40 households with access to credit and finance.

MEDIUM-TERM
2017–2018

- Structuring of the USD20 million Women's Livelihood Bond, a financial instrument modelled after the IIX Sustainability Bond (ISB) to address gender equality issues for women and sustainable livelihoods.
- Establishing an impact enterprise-dedicated crowdfunding platform, which can combine the elements of both equity crowdfunding platforms and impact enterprise (IE) private placement platforms from across the region with key sectors comprising healthcare, education, clean energy and water.
- Introduction of green bonds to address climate change issues, offering acceptable returns while contributing towards a low-carbon and climate-resilient future.

LONG-TERM
2019–2020

- Establishing a social stock exchange, a buffer fund for accidents and a Resilience Bond.

SOURCE http://www.theedgemarkets.com/article/social-finance-roadmap-recommends-innovative-financial-solutions-develop-sector

social service. If the pre-agreed outcomes are met, the government will pay the bond-issuing organisation or investors.

Countries give this mechanism or instrument various names. In the US, SIBs are known as Payment-for-Success bonds; in Australia, as Pay-for-Benefits bonds.

To illustrate how SIBs work: BNP Paribas recently raised USD11.2 million via private and philanthropic investors to be distributed to 'clients' or organisations working in various social sectors of the city of Connecticut in order to achieve certain pre-determined and quantifiable social goals such as cleaner drug screens, lower reports of child abuse and fewer foster care placements. All metrics were benchmarked against a pre-existing control group in order to compare the effectiveness of the programme.

The return on investment to BNP Paribas' clients will correlate with the success of beneficiaries meeting their targets: the better the achievements, the greater the returns. However, investors risk 100% of their capital and may not recoup at all if beneficiaries fail to achieve their outcomes.

The upsides: If the goals are met, the city of Connecticut would have saved money through cheaper mobilisation and more efficient allocation of public funds and only repay the initial capital fund with interest to investors at the agreed deadline. For the social sector, the SIB mechanism — when designed and implemented correctly — can potentially push it to adopt the rigorous culture of monitoring and evaluation that regulators impose on the financial sector.

The downside: Policymakers claim that the government is transferring all its risk to the private sector.

Though the jury is still out on SIB as an effective policy intervention, it is seen as a scalable way to mobilise private investment capital for cheaper continuity of social service delivery to vulnerable groups.

THE ASIAN UPSIDE

On all fronts, Asia is a late adopter whose star is on the rise.

In impact investing alone, emerging markets are fast becoming a focus for international investors. GIIN reports the bulk of AUM rests in the US and Canada (40%); Western, Northern, Southern Europe (14%); and Sub-Saharan Africa (10%), with Southeast Asia comprising a mere 3%, illustrating the scope of growth as investors continue to seek new pastures for greater returns.

Global investment dollars are currently concentrated in key areas such as housing (22%), microfinance (21%), energy (16%) and finance (10%), all of which are priority sectors in the region. However, if Southeast Asia wants in on the action, it first needs to bridge its biggest gaps in the social finance sector: technological know-how, monitoring and compliance.

Partnerships are the way to go. Already, the governments of Malaysia, Singapore and Indonesia have operational social finance blueprints and work hand-in-hand to build innovative programmes that create a win-win for all. ✱

National Innovation Agency Malaysia

The National Innovation Agency Malaysia, a statutory body under the Prime Minister's Department, collaborated with Impact Investment Exchange (IIX) to develop its Social Finance Roadmap (Table 1) to expedite the nation's sustainable development agenda.

Launched in June 2016, it seeks "to unlock upfront capital to fund high-impact initiatives today that will save larger outlays of government expenditure in the long-term; and to make the social finance space more attractive to other stakeholders by enhancing liquidity and aligning with existing investor values".

Company Current Account/-i

Enjoy higher daily profit

Sign up now and enjoy higher profit up to 2.80% p.a.

Benefits

- **HIGHER Profit on Daily Balance**
- **FREE Standing Instructions on Payments/Transactions**
- **FREE eStatement via Internet Banking**
- **Internet Banking available 24/7**

Eligibility

- ✔ Low initial deposit of RM500 to open an account
- ✔ No introducer is required

Visit **ambank.com.my** or call SME Contact Centre at **03-2178 3188** for more information.

A PIDM Member. Eligible for protection by PIDM.

AmBank (M) Berhad (8515-D) I AmBank Islamic Berhad (295576-U)

AmBank | AmBank Islamic

Data IN THE Dark

WHEN ASKED WHAT THEY UNDERSTOOD ABOUT THE NEW OPEN BANKING REGIME, MANY RETAIL BANKING CUSTOMERS DREW A BLANK. WHAT DOES THIS LACK OF AWARENESS MEAN FOR THE BANKING SECTOR? AND HOW ARE THE CHANGES OPENING THE DOOR FOR A NEW ERA OF PERSONAL FINANCE TOOLS?

It's a topic garnering much coverage in the trade press, but given that recent figures put the proportion of the public unaware of Open Banking at 60%, much of it makes for uneasy reading. As part of the EU's PSD2 directive, banking across the European community has seen top-level intervention to try to stimulate competition among payment account providers. By providing the legal framework within which third-party access to account data is enabled, PSD2 has paved the way for Open Banking.

This allows retail customers to safely share their bank details with other providers through APIs. It is hoped that the extended connectivity will give customers greater banking freedom and choice, heralding new services such as aggregated price-comparison websites.

CUSTOMERS 'NOT EXCITED'

On the domestic front, the Competition and Markets Authority (CMA) announced its proposals for the new competitive landscape back in 2016. It included a requirement for the nine largest current account providers in the UK – eight banks and one building society – to collaboratively implement an open API standard by January 2018.

While there has been compliance, figures from a YouGov survey of almost 4,500 retail banking customers suggests that little will change, for now at least. With more than 75% of respondents saying they are 'unlikely' to use Open Banking services, and 81% 'not excited' about the scheme, banks clearly have more work to do.

With relatively high levels of consumer anxiety around security (cited by 31%) and privacy issues (19%), a strong focus on education is s likely to be necessary. Individual banks will each need their own action plan, but the greatest benefit will come from a co-ordinated, sector-wide approach.

MAKING MAGIC

For Jonathan Williams, financial services consultant and member of the Advisory Board for MLROs (the leading industryled forum for financial crime), the challenges of Open Banking for service providers are complex.

"One of the main challenges is that Open Banking hasn't been created as a brand that has built customer trust over the years through advertising, like the Current Account Switch Service," he says. "It's claimed that many consumers don't know what Open Banking is. But if they trust the way it works, they don't necessarily need to know what

"Customers were automatically asked for international bank account numbers, for example, when they had previously been using a domestic number. They then lacked a certain amount of trust and confidence that it was going to work. We're in a similar position with Open Banking. No one has told customers what it is and why they can trust it."

Jonathan Williams, *Member of the Advisory Board for MLROs*

it is – only that it's the magic by which everything else happens.

"It's the magic by which a personal financial management app, for example, can access a customer's data, assess it and say, 'Did you know that you probably spend too much on coffee in Costa every week?' or 'Are you paying too much for your car insurance?' That's the sort of insight these providers could be able to give."

THE EDUCATION QUESTION

Williams believes that successfully communicating the benefits – and mitigating the security concerns – of Open Banking requires the sector to learn hard lessons from previous shifts in the financial landscape. "I would argue that we're missing an important education piece," he says. "When we migrated to the Single Euro Payments Area, we didn't do a particularly good job as an industry of communicating what those changes would look like to our consumer, SME or corporate clients.

"Customers were automatically asked for international bank account numbers, for example, when they had previously been using a domestic number. They then lacked a certain amount of trust and confidence that it was going to work. We're in a similar position with Open Banking. No one has told customers what it is and why they can trust it."

A REAL RISK?

But can they trust it? According to Williams, one of the key risks for a bank is in dealing with third-party providers it doesn't necessarily know. "How can a bank be sure it can trust these companies?" he asks. "They are authorised by the appropriate regulator that they should be abiding by data-protection laws, but often a bank won't know how good or bad these organisations really are."

Another pertinent issue is around customer authentication, specifically how banks relying on two-factor authentication should respond if one of the steps fails. "If you're relying on twofactor authentication – a user name and password, for example – then what are the other things you might want to use if one of those fails?" he asks. "Would a voice biometric recognise your voice if you have a cold? Banks must ask themselves what happens if something goes wrong."

DRIVING THE CHANGES

One of the main drivers behind the latest wave of banking change is the Open Banking Implementation Entity (OBIE). Set up by the CMA and funded by the mandated nine providers, its remit is to develop the common standards and associated security to enable financial services providers and developers to offer the best, most personalised services and products through Open Banking.

"This is giving new providers in the digital space the opportunity to look at the financial behaviour and performance of an individual so that consumers can get a better deal," explains Emma Byrne of the OBIE.

"If one person is a spender and another is a saver, it's very unlikely those two people would require the same current account. A spender needs flexibility around overdraft facilities, but if you're a saver you're going to want some form of return on the money you're not spending."

THE UBER OF BANKING?

Some call it the Uber moment – the moment technology, infrastructure and financial services align in the creation of a fast, seamless and secure user experience. For Byrne, banking's Uber moment hasn't happened yet. But, with the opportunities offered through Open Banking, it may not be far off.

"What we're likely to see coming down the line fairly quickly," she says, "will be budgeting tools and financial management tools – essentially applications through which you can see and manage your entire financial portfolio in one place." ✱

■ *This article was previously published in the Chartered Banker Magazine, April/May 2018.*

LEVERAGING AI TO **Combat Fraud**

AI AND MACHINE LEARNING CAN ARM BANKS EFFECTIVELY AGAINST THE **RISING TIDE OF RISK** IN THE DIGITAL AGE.

The rise of digital banking is fuelling an escalating arms race. The challenge for banks is to keep up with the exponential explosion of fraud risk.

The answer to staying ahead of rising digital fraud risk lies in fighting smarter — tapping the fast-growing artificial intelligence (AI) space for solutions. Here's why.

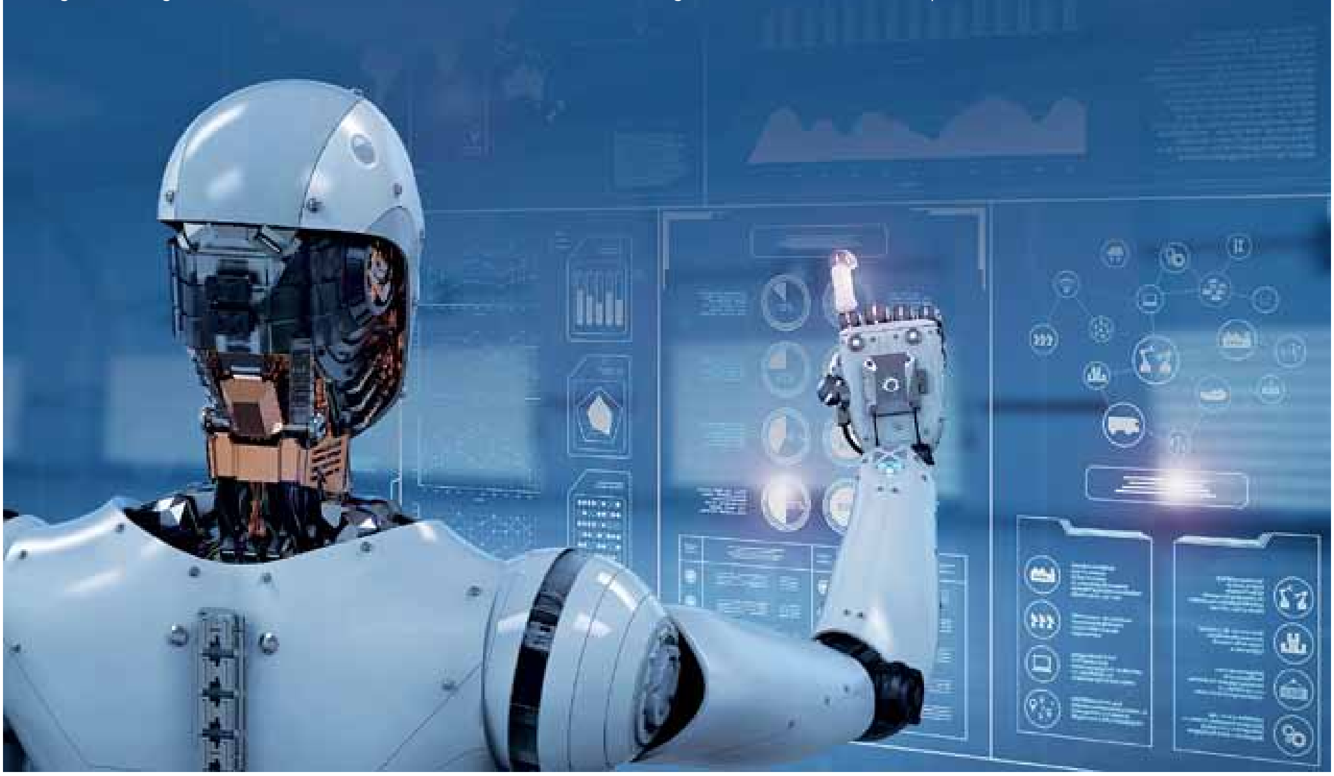
A report by digital market research specialist Juniper Research titled 'Retail Banking: Digital Transformation — Disruptor Opportunities 2018–2022' states that by 2021, there will be three billion digital banking users worldwide.

That comes to approximately one in every two adults accessing financial services via a smartphone, tablet, personal computer or even a smartwatch.

Digital banking — which equates to faster and easier transactions — will mean consumers transact more and generate significant volume growth. The money will flow faster than ever before. The precedent is there when Internet banking first came into the picture — the next digital leap will likely see volumes skyrocket further.

But this also means that two significant risks for banks would grow faster than ever before. Firstly, can banks retain consumer trust in an age where a single incident could be broadcast widely almost instantaneously, eroding trust faster than it can be regained? And secondly, how do banks safeguard against the looming surge in fraud cases that is statistically speaking, inevitable as transaction volumes increase?

"With the digitisation of banking products has come a surge in fraud, whether in e-payments or online applications. Obviously, as attacks on our digital channels increase, we need an improved detection rate," said Nadeem



Gulzar, Head of Advanced Analytics and Architecture at Danske Bank Group.

"In addition, fraudsters are becoming more tech-savvy, so we need to use machine learning, and even deep learning, to stay one step ahead of them," he added.

These two issues require urgent responses. The first is perhaps more straightforward — it is not just a matter of identity authentication from the user side, but also what the consumer can expect behaviourally from the bank's side. In other words, building and protecting trust comes back to defending ethical orientation and safeguarding consumer data against external threats and internal abuses.

The second issue, however, is not as simple to address. It is, in a nutshell, a running battle that will never end.

The 10th edition of the 'Kroll Global Fraud & Risk Report' released in January 2018 found that cybersecurity and fraud risks are now at an all-time high.

Polling 540 respondents across various industries, including the financial services, the survey found that in 2017, 84% of companies had fallen prey to fraud at least once. That is a two-percentage-point increase on an annual basis and represents a continuing upward trajectory. Back in 2012, the reported occurrence of fraud was much lower at 61%.

The report also identified major fraud, cyber and security risks as prevalent in emerging markets such as Indonesia, Malaysia and Vietnam. That, in turn, threatens the reputation of banks in the region should they too fall victim to fraud.

"In our experience, the private banking industry relies on a secure and stable environment to attract both investors and talent. The industry requires physical and data security, both of which can be threatened by fraud and cyber risks like data breaches that the Kroll Report discusses," said Reshmi Khurana, Managing Director and Head of South Asia in Kroll's Investigations and Disputes practice, in a report by the Citywire Asia.

"Similarly, any geopolitical risks or other security threats will adversely affect the attractiveness of a market or country as a private banking destination," Khurana added.

A GAME CHANGER

Using AI to detect financial services fraud isn't that new. Banks have used it in the past, but the application then was more simplistic.

The limitation had been computing power. That means the use of AI had mainly been rule-based and rigid, a form of automating human judgement through a scoring-based evaluation. And the weakness had been that the AI algorithms in the past were incapable of learning from past evaluations to improve its performance.

That is, of course, changing fast. AI is no longer the stuff of science fiction but an area already being developed by fintechs to transform financial services.

"The application of AI in financial services could be particularly game-changing," said Barclays Bank in its June 2017 report, 'AI: A New Age of Intelligent Banking'.

Among them is Feedzai, a machine learning start-up focusing on real-time fraud prevention in e-commerce and banking. Citibank, via its investment unit Citi Ventures, is among its investors. In simple terms, Feedzai's machine learning platform scans through humongous troves of data and other real-time inputs as transactions occur. The platform then uses the collective data to create hyper-granular risk profiles, all in a matter of milliseconds. It is primed to immediately identify evolving threats as they emerge — and even potential ones. This enables users to warn their consumers of threats as the actual fraud incident unfolds, rather than after any such incident. In other words, AI solutions such as Feedzai's give banks the reaction speed and vigilance against potential fraud that is unmatchable by any human staffer.

Another growing application of AI and machine learning is in credit risk modelling, which evaluates whether a borrower would likely default on repayments or not. In July 2017, rating firm Moody's Investors Service compared the reliability of a traditional statistical model against a machine learning-driven assessment in evaluating credit risk. It found that the machine learning approach can identify risk where the traditional approach is blindsided by potentially non-linear relationships between seemingly unrelated data points.

"A machine learning model, unconstrained by some of the assumptions of classical statistical models, can yield much better insights that a human analyst could not infer from the data," Moody's reported in its paper.

These greater insights into credit risk not only help banks avoid fraudulent borrowers and those with poor credit, but also strengthen confidence in lending to those that pass the machine learning risk assessment process.

On that note, the greater reliability of AI and machine learning-driven systems also indirectly help with consumer acquisition retention.

In a report titled 'The Future of Risk Management in the Digital Era' published in October 2017, McKinsey & Company reported that 50% of risk managers surveyed expect credit decision times to fall by as much as 50%, thanks to AI and machine learning technology. This also suggests that credit losses are expected to drop by up to 10%, McKinsey added.

The point is speed. Traditional fraud checks, especially those done by human staff, are slower. It can also raise false positives due to biases, fatigue and other human failings, all of which add friction to the entire experience, increasing dissatisfaction amongst consumers, who these days expect immediacy in every transaction.

On the other hand, AI applications reduce speed bumps, bypass human shortcomings and provide a seamless experience for the consumer. This also helps to acquire new customers who want to conclude their banking transactions without any hitches.

There are many more potential uses of AI in banking and the list is too lengthy to explore in a single article. In any case, incorporating AI into banking operations in this digital age is critical.

URGENCY AHEAD

But it is imperative that banks do not dawdle in leveraging AI to combat fraud, because digital transactions are already surging — and with it, fraud risk.

The World Payments Report 2017 by Capgemini states that in 2014-2015, global non-cash transactions grew 11.2% year-on-year, demonstrating the fastest growth in the past decade.

In Southeast Asia, a big boom is already underway for mobile payments — as in non-cash and non-credit card transactions. By 2021, mobile payments through technologies such as e-wallets are expected to account for as much as 43% of digital transactions in the region.

Naturally, fraud risk will only grow alongside these volume increases. In 2016, approximately USD16 billion was reportedly pilfered from either stolen debit or credit cards, up almost USD1 billion from the previous year.

Note that for Southeast Asia, there is a heightened risk which stems from its status as a developing market, with much room for further industry growth.

A March 2015 McKinsey study on digital banking in ASEAN found that Singapore aside, banking consumers in ASEAN countries generally hold, on average, less than three banking products. And banks in the region are going digital to accelerate the penetration.

Take Malaysian banks, for example. CIMB Bank Berhad hit a historical landmark in November 2017 when it became the first Malaysian bank to receive the regulatory sandbox go-ahead for electronic Know-Your-Customer (e-KYC) processes. This essentially means the bank can use various electronic, paperless ways to verify the identity of its consumers. Put simply, the bank can operate on a fully-digital basis, which cuts costs as it seeks regional expansion.

Malaysia's largest bank, Malayan Banking Berhad (Maybank), is also putting in more work towards becoming 'The Digital Bank of Choice' after launching the nation's first online banking platform back in 2000.

One way to accelerate the blending of AI into digital banking strategy is to tap into the burgeoning fintech space, as Singapore's OCBC bank did. In July last year, OCBC partnered with start-ups BlackSwan Technologies and Silent Eight; BlackSwan uses AI to find red flags and review suspicious transactions, while Silent Eight can compile a detailed file of information on an identified suspicious individual within minutes to help the review process.

OCBC's head of transaction surveillance Alex Ng believes that using AI will double – or even triple – productivity in terms of transaction monitoring.

"The AI solutions will automate many of these processes and make them much quicker so that more time can be spent analysing real cases," Ng said.

CHALLENGES REMAIN

However, adopting AI comes with multiple hurdles yet. Digital banking strategies need to recognise several key challenges that, if addressed properly, could become opportunities.

Among them is creating an explainable AI system *vis-à-vis* fraud detection: an AI system whose actions and decision-making logic can be easily understood by humans.

Coupled with machine learning, that creates an AI system that continuously teaches itself to improve, some key questions arise.

One of them is avoiding bias. Can humans verify that the AI system, due to any possible shortcomings across various data points, had not learned a flawed view or developed an unintended bias in its evaluations of fraud risk?

Another concern may revolve around transparency and fairness. How can the fairness of an assessment carried out with AI be reviewed and double-checked accurately, and what will the process be for consumers who want to appeal the AI decisions?

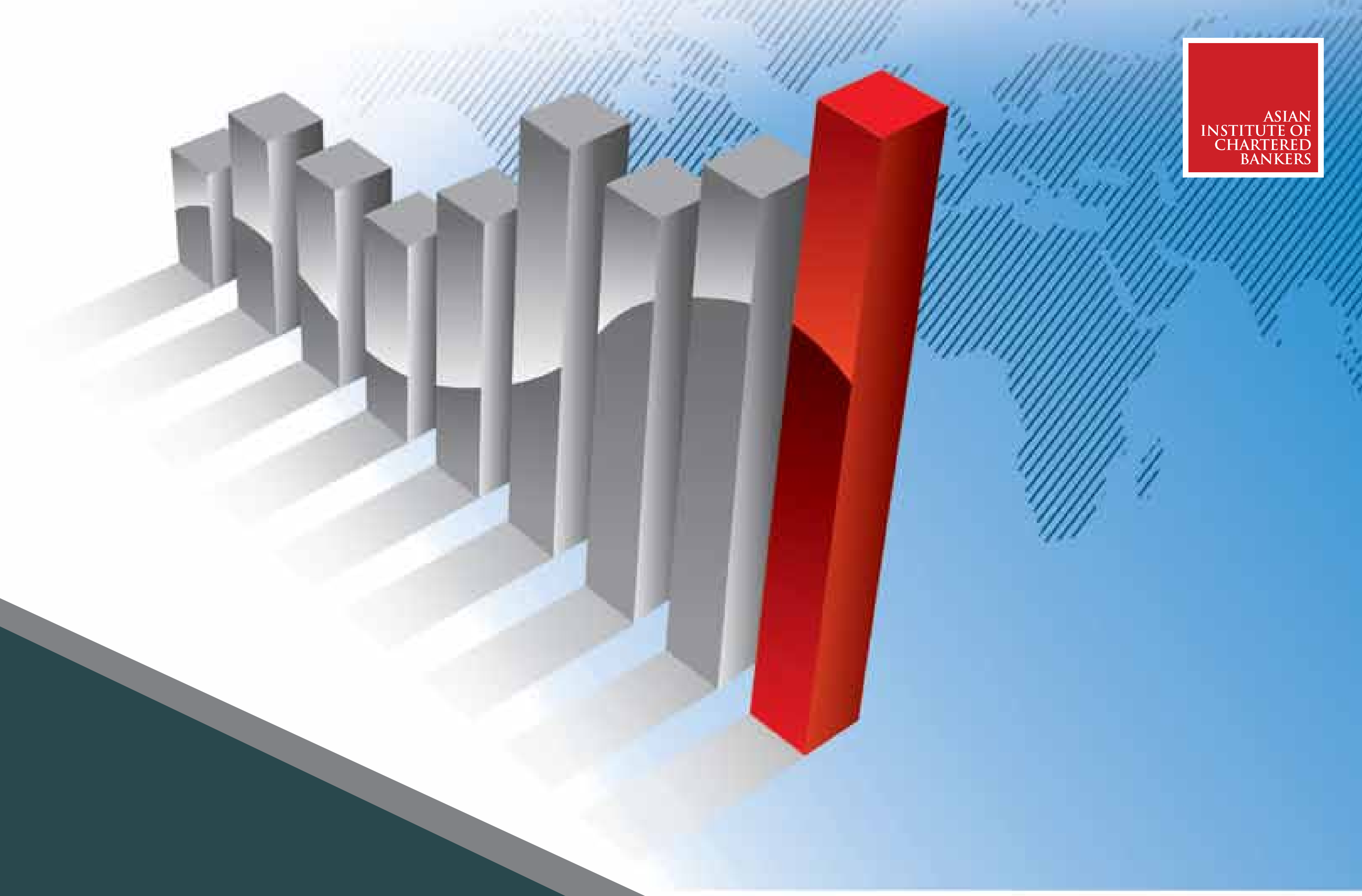
These two concerns barely scratch the surface. Deeper issues include possible legal matters, which alone present a mammoth challenge.

In a nutshell, liability questions in legal matters concerning banking and fraud traditionally centre around fault attribution. But with self-learning algorithms, the decisions and findings of an AI system will, over time, be farther from its direct programming. This means identifying that specific defect or flaw on which to place blame will become increasingly complex, and someday, may even be impossible.

That said, overcoming challenges are part and parcel of adopting new technologies and AI *vis-à-vis* fraud detection is no exception. And banks in Southeast Asia are in a unique position to tap into one of the fastest-growing start-up markets in the world, underpinned by strong technology and fintech segments.

With that in mind, digital banks that face these challenges head-on early in the game and successfully tackle them in a meaningful way will have the first-mover advantage. ✱

■ *Hisyam Ali is a business writer and freelancer whose works, which cover corporate finance, property and urban mobility, have been featured in various national media over the past eight years.*


ASIAN
INSTITUTE OF
CHARTERED
BANKERS