

## Hong Kong Banking Outlook 2019

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Paul McSheaffrey
Partner, Head of Banking &
Capital Markets, Hong Kong
KPMG China

### New challenges call for a renewed focus on conduct and the customer, enabled by technology

Welcome to our outlook for 2019, where we forecast the key developments and trends that will impact and shape Hong Kong's banking industry over the next 12 months.

The banking industry has gone through some fundamental changes in the ten years since the GFC, largely driven by regulation to strengthen banks' balance sheets and the overall resilience of the sector. However, the pace of change in the next few years will be as significant – if not more so – than that seen over the past decade.

Regulation will continue to be a key driver, although we expect to see less prudential regulation and a greater focus on culture and conduct, and how banks treat their customers. We predict the regulators in Hong Kong will fine and pursue enforcement action against banks that do not adequately address the overall culture of their organisations. Culture represents a key opportunity for banks to set themselves apart from their competitors in the year ahead.

The successful banks in the coming years will be the ones that truly put their customers front and centre of their business strategy, and harness the power of data to achieve this. This is accentuated by the emergence of virtual banks in Hong Kong, which will disrupt traditional business models and how customer experience is delivered in the city. While the leading banks will seek to become data-driven enterprises, this also increases risks and the impact around data protection and information security. Could 2019 be the year of the first major data breach of a Hong Kong bank?

Technology will be a key enabler for banks to realise value from their data and become more customer-centric, as well as to improve how they deal with regulation and compliance issues. The successful use of the right technology – not just any technology – will allow banks to operate in a more profitable manner.

Ten years on from the GFC, the market landscape will continue to evolve at a rapid pace. While we acknowledge that Hong Kong's banking sector is more resilient due to the strengthening of regulations over the past decade, the level of change, disruption and competition in the industry means that there are new challenges that could cause a bank to fail in the future. In this outlook, we share our views on some of these issues, as well as on a number of opportunities for banks to grow and succeed.

I hope you enjoy our 2019 predictions for the sector, and would welcome the opportunity to discuss the current and future market landscape. In the meantime, we at KPMG wish you all a prosperous 2019.





Paul McSheaffrey
Partner, Head of Banking &
Capital Markets, Hong Kong
KPMG China



**Simon Topping**Partner, Regulatory Advisory
KPMG China

### Ten years on from the GFC – could a bank fail today?

In the 10 years since the GFC, regulators have enacted a number of measures to strengthen balance sheets and the resilience of the banking sector, which is currently in good shape in Hong Kong. However, the changing socioeconomic environment also means that there are new challenges that banks will need to address in the year ahead in order to succeed. We set out below our view on five areas that may cause a bank to fail in the future, although we are not predicting a failure in 2019!

- 1) While regulators have worked over the past decade to strengthen balance sheets, improve capital and liquidity and increase resilience against financial shocks, regulators in Asia have until recently not focused as much on conduct. While poor conduct is unlikely to cause a bank to fail in the short-term, banks that do not properly integrate conduct risk into their overall risk management framework could get embroiled in a vicious cycle of the erosion of customer trust and declining profitability.
- 2) With the rollback of quantitative easing and higher interest rates expected to continue, balance sheet and liquidity risk management will become increasingly important for banks. We have all become used to a benign and low interest rate environment over the last decade, which raises a question around whether borrowers and banks themselves still have appropriate skills internally to effectively manage credit and liquidity risk in a more challenging environment.

While many Hong Kong banks are expected to grow their assets and loan books, increased competition in the market could lead to some lower quality loans entering the banking system. This issue could be amplified if banks do not have employees with the right expertise to effectively manage and mitigate liquidity and credit risk.

- 3) A new challenge in liquidity is that it is now much easier to transfer and withdraw money from banks, especially with the launch of the Faster Payment System in Hong Kong. This means that in the event of a loss of market confidence, the impact of a run on the bank could be immediate and more devastating.
- 4) There is also a trend towards lowering the barriers to entry in the banking industry to promote competition and financial inclusion. With the market now open to fintech firms and other non-financial services companies, there is more disruption and competition in the banking sector than ever before. Traditional banks will need to truly embrace technology and transform their business models or risk losing market share to the new entrants.
- 5) We are also seeing the banking sector opening up and different providers becoming part of the banking ecosystem – for example, through the Open Application Programming Interface Framework. While this is a welcome development that should provide significant benefits to consumers, it also creates cybersecurity challenges by increasing the number of points of entry for cyber criminals.





Vivian Chui
Partner, Head of Securities
& Asset Management, Hong
Kong
KPMG China



James Harte
Director, Global Strategy Group
KPMG China

### Laying the foundations for continued strong private wealth management growth

With assets under management expected to double to USD 2 trillion by 2022,¹ the growth outlook for the private wealth management (PWM) sector in Hong Kong remains strong. Opportunities in mainland China and the rise of family offices are expected to be the primary drivers of growth, with the next generation and other Asian markets also key.

Each of these opportunities will have far-reaching impacts on the business and operating models of private wealth management firms. To capitalise on the mainland China opportunity in 2019, wealth management companies will have to conduct a holistic assessment of what these customers need and how to win them. This will include tailoring their propositions (including updating product shelves), customising their advice to account for differing investment objectives and levels of customer understanding, revamping digital propositions, and setting up appropriate cross-border infrastructure to attract and serve these clients.

Governance, risks and controls will also be key considerations – for example, onboarding to account for sources of wealth, suitability to account for the relative sophistication of investors, compliance with the Common Reporting Standards, and the impact of social media (WeChat in particular). Forward-looking organisations will lay the groundwork to transform their organisations in 2019.

Industry-wide opportunities to transform and grow are highlighted in a recent joint KPMG and Hong Kong Private Wealth Management Association white paper.<sup>2</sup> We have already seen significant progress and collaboration between the government, regulators and the PWM industry on some of the recommendations in the white paper, and in 2019 we expect the groundwork to be laid to achieve many of them.

In particular, there continues to be significant interest from the government and the business community in how the Greater Bay Area (GBA) can drive growth in the PWM sector. In 2019, we expect to see further discussion on how to capitalise on these opportunities on Hong Kong's doorstep, and possibly some developments around implementing a new mutual wealth management scheme in the GBA.

Hong Kong is also considering a range of tax policy options to make the city more competitive as a wealth management hub. With the right tax environment, Hong Kong will have a more compelling offering to attract family offices.

The growth of the industry is also creating greater demand for PWM professionals. Coupled with the increasing focus on technology and digital solutions, the PWM industry is expected to use the year ahead to work towards hiring the right talent to effectively innovate, transform and grow.

2019 will be a year of evolution rather than revolution, but we hope to see continued collaboration between the government, regulators and the business community to lay the foundations to transform and achieve the PWM industry's five-year growth objectives.

<sup>&</sup>lt;sup>1</sup> 'Hong Kong Private Wealth Management Report 2018', KPMG China and Private Wealth Management Association, September 2018, https://home.kpmg.com/cn/en/home/insights/2018/09/hong-kong-private-wealth-management-report-2018.html
<sup>2</sup> 'Hong Kong: A leading global wealth management hub of the future', KPMG China and Private Wealth Management

<sup>&#</sup>x27;Hong Kong: A leading global wealth management hub of the future', KPMG China and Private Wealth Management Association, September 2018, https://home.kpmg.com/cn/en/home/insights/2018/09/hong-kong-a-leading-global-wealthmanagement-hub-of-the-future.html

### Customer experience





**Isabel Zisselsberger**Partner, Head of Customer and Operations, Hong Kong
KPMG China



**Jessica Hong**Associate Director, Customer and Operations
KPMG China

### Improving customer experience

The banking sector in Hong Kong is perceived by consumers as lagging behind other sectors in terms of customer experience. With the Hong Kong Monetary Authority ushering in a new era of Smart Banking, coupled with the rise of virtual banks and mobile payment platforms, the gap will widen further for the traditional banks that do not adopt a truly customer-centric approach.

Virtual banks, mobile payment and other fintech companies are raising the bar for customer experience in Hong Kong by building their platforms and products around the customer. Understanding the changing expectations of customers' needs and preferences, and what a customer values will be a critical enabler in helping banks determine where best to invest their transformation efforts.

While all banks have undergone some degree of digital transformation, we believe that not all have put the customer at the core of their digital strategy. Traditional banks tend to follow the opposite approach by seeking to improve processes or product offerings first before examining customer touchpoints. We expect this mindset to change in 2019, and the successful banks will be the ones that put their customers at the centre of their strategy and take an 'outside-in' customer approach to deliver quicker, easier and more personalised experiences across banking.

However, more technology does not necessarily imply "digital". KPMG China's recent *Customer Experience Excellence Survey*<sup>3</sup> finds that customers, particularly in Hong Kong, still value human interaction. For traditional banks, a key area of focus will be to deliver a consistent and seamless experience across physical and online channels. This is also one area where traditional banks can maintain a competitive advantage over their new virtual bank peers.

Of particular importance for the financial services sector is the concept of integrity – building and maintaining trust beyond traditional customer privacy and cybersecurity measures. Our research shows that placing customers' best interests at the core of a bank's business strategy cannot be underestimated – organisations that deliver on integrity and demonstrate shared values with their customers are known to drive brand loyalty.

With the spending power and influence of millennials growing exponentially, we expect banks to adapt their customer strategy to provide a more efficient and personalised service and improve engagement with this customer segment. Not only are millennials digitally savvy, they are also much more connected and willing to share their thoughts on products and services that they use. Banks will monitor and manage this carefully, as the sharing of a negative customer experience on social media platforms can cause significant reputational damage.

Leading banks will also focus on their employees and enabling relationship managers to be successful. There is a lot of truth in the saying that "happy employees equal happy customers", and banks that truly embrace this will see more commercial success in 2019.

<sup>3 &#</sup>x27;Customer first – Building a trusted and connected customer experience in China', KPMG China, October 2018, https://home.kpmg.com/cn/en/home/insights/2018/08/customer-first-building-a-trusted-and-connected-customer-experience.html

# Conduct and culture



Paul McSheaffrey
Partner, Head of Banking &
Capital Markets, Hong Kong
KPMG China



Peter Outridge
Partner, Head of People &
Change Advisory
KPMG China

### Managing conduct risk is no longer a tick-box exercise

With many banks still treating the management of conduct risk as a tick-box exercise and regulators increasing their focus on culture, 2019 could be the first year that a bank in Hong Kong is reprimanded for a poor culture.

Although poor conduct, including poor culture, is unlikely to cause a bank to collapse overnight, it can lead to its gradual demise through the loss of customer trust, market integrity and ultimately profitability. It is therefore critical that conduct risk moves up the agenda for Hong Kong financial institutions in 2019. We expect to see more banks integrate conduct risk into their overall risk management framework and manage it as a separate risk type, with greater oversight from senior management.

Essential to implementing and effectively managing this conduct risk framework is the use of six critical enablers: culture, governance and oversight, individual accountability, incentive systems, data and technology and assurance.

Culture will continue to be a major factor – some would argue *the* major factor – for banks to manage conduct risk in the year ahead, and it will also be a key differentiator for banks to set themselves apart from their competitors. We also expect to see more regulatory focus on culture going forward, on the back of the Hong Kong Monetary Authority's 2017 circular on Bank Culture Reform.

Investing in data and technology to build up management information (MI) will also make a demonstrable difference to improving a bank's management of conduct risk. While much of this information has traditionally centred around lagging indicators, we expect more banks to identify and define leading behavioural indicators such as trading patterns, sales spikes and certain complaint trends. The development of these leading indicators will require enhanced processes and solutions to improve the availability, collection and analysis of quality data.

Banks will also seek to invest in technologies such as cognitive computing and predictive analytics to improve how conduct is measured and detected, for example, by monitoring transactions to identify possible misconduct as it occurs.

Building and maintaining trust with customers and the market remains key to a bank's survival, as well as for its conduct risk management framework to be effective. The ability to efficiently manage conduct risk – as a highly visible representation of the banks' culture – while maintaining a customer-centric approach will be crucial to banks' success in Hong Kong in 2019, especially with the emergence of virtual banks set to redefine customer experience in the city.





**Tony Cheung**Partner, Head of Advisory,
Financial Services
KPMG China



**Howhow Zhang**Partner, Global Strategy Group
KPMG China

### Redefining international banks' China strategy

With China's financial services sector continuing to open up to foreign investment following a November 2017 announcement to liberalise the industry, we expect international financial institutions to make significant strides to expand their presence in the mainland in 2019.

International banks – including those in Hong Kong – will use the year ahead to revisit their China strategy as the financial services sector continues to open up. The strategic implications of this development are long-term in nature, and the success of international banks in mainland China 10 years from now will be defined by the decisions made today.

The opening up of mainland China's financial services sector will have a knock-on effect on financial institutions in Hong Kong, providing them with significant opportunities to leverage their operations in the city to expand into mainland China, and to approach their regional business more holistically. This involves the greater integration and sharing of business intelligence, systems, data and KPIs between entities to enhance overall synergies within mainland China and globally. In addition, international banks will have to effectively leverage fintech and other emerging technology solutions as part of their China strategy.

Financial institutions in Hong Kong will also consider the potential synergies that can be achieved from their plans for the Greater Bay Area (GBA) – which encompasses Hong Kong, Macau and nine cities in Guangdong – and their overall China strategy. In 2019, establishing and expanding their presence in the GBA will be a key objective for many financial institutions in Hong Kong, and is likely to be a strategy that commands more attention in the short term.

However, financial institutions should not treat the GBA as a substitute for their China strategy, and will need to consider if they want to capture the opportunities present in Beijing, Shanghai and other key cities outside of the GBA.

When deciding on their strategy for mainland China, international financial institutions are expected to carefully assess whether having full 100 percent ownership is the best option for their growth objectives. In some cases, we expect international financial institutions to partner with local Chinese players that can bring in the right resources, talent, capabilities and knowledge on the ground.

More broadly, we will also see positive momentum and increased capital flows into and out of mainland China via the Shanghai-London Stock Connect and the ETF Connect between the stock exchanges in Hong Kong, Shanghai and Shenzhen. On the other hand, it is increasingly likely that geopolitical and trade tensions will continue into at least the beginning of 2019, which could have a downward impact on investment appetite in China. Coupled with foreign exchange fluctuations and the depreciation of the yuan, these trends may also cause some international banks to reassess their China strategy, but they should focus on the longer term.





**James Carter** Partner, Global Strategy Group **KPMG** China

### Trade volatility is here to stay – how might this impact banks?

With a shifting political landscape and ongoing trade and economic uncertainty worldwide, we expect trade volatility to continue for the foreseeable future. This will have repercussions across all sectors, but in particular the banking industry in Hong Kong.

In 2019, banks in Hong Kong will become a lot more agile in the way that they anticipate, measure and understand the various consequences of the ongoing trade volatility, as well as the subsequent impact on their customers and their business portfolios with those customers.

Building up these capabilities entails a large data-driven exercise, where a large amount of external, internal, structured and unstructured data will need to be collected and analysed. Banks need to first understand what data is required to analyse and measure the impact of trade volatility in the region, and then leverage data analytics solutions to automate the process and generate real-time insights.

Building up the agility and capabilities to anticipate the impact of trade volatility is an essential exercise, especially given Hong Kong's position as a pivotal financial and trading hub for capital and goods flowing into and out of mainland China, as well as the ASEAN region.

One sector that draws attention is electronics, China's biggest source of exports to the world. Hong Kong enterprises have historically been very active both as producers and as traders in this sector, as the top global trader for integrated circuits (towards mainland China), and the second biggest exporter of mobile phones (in transit from mainland China). Indeed, at HKD2.6 trillion in 2017, electronics represent 66 percent of the value of Hong Kong's total exports.

Much of this activity is focussed in the Greater Bay Area (GBA), where Hong Kong entrepreneurs have established production bases since the 1980s. However, a global economic slowdown, rising labour costs in mainland China and ongoing trade volatility are causing many Hong Kong-based companies to reassess their production, supply chains and business strategies. The ASEAN region has already won share for lower value-add production, but will now increase share as supply chains impacted by ongoing trade volatility shift part or all of their volume to this region.

With many international banks seeking to expand their presence in the GBA, it will therefore be increasingly important for them to closely monitor how trade volatility in the year ahead will impact electronics manufacturers and enterprises in the region, and to ensure that they are agile enough to adapt to the changing needs, objectives and business strategies of their customers.

As a result, Hong Kong enterprises will be open to new approaches from the banks that can support them to realign their supply chains, and to enter or expand their presence in new markets. Consequently, more innovative banks in Hong Kong (and the GBA) could find an uptick in commercial banking and markets services in 2019, despite concerns around trade volatility and a potential slowdown in global economies.





**Tom Jenkins**Partner, Head of Financial Risk
Management
KPMG China

### Virtual banks set to go live in Hong Kong – will traditional banks adapt to survive?

As part of the Hong Kong Monetary Authority's (HKMA) initiative to usher in a new era of Smart Banking, the next 12 months will see the first batch of virtual banks receive licences and commence operations in the city, with traditional banks using this window to consolidate their own position in the market.

Since the finalisation of revisions to the *Guideline on Authorization of Virtual Banks* in May, the HKMA has received 29 applications, with the first set of licences expected to be issued in the first quarter of 2019. This means that the first virtual banks – which deliver retail banking services through the internet or other electronic channels instead of physical branches – in Hong Kong will be up and running by the end of 2019.

The year ahead will therefore be essential for successful virtual bank applicants to operationalise and put the necessary systems, processes and controls in place in order to go live. This will in turn help broaden the selection of banking options for customers, promote financial inclusion, foster innovation and enhance customer experience.

While the advent of virtual banks will further increase competition in Hong Kong, it also provides a timely shot in the arm for the traditional banking industry. With the first batch of virtual banks expected to commence operations at the end of 2019, it is essential for existing banks to use this 12 month window to invest in new technology and upgrade their digital platforms to effectively compete with the new market entrants. For example, we will continue to see more banks implement the Faster Payment System, introduce electronic onboarding and enhance and customise their digital banking user experience.

We may also see more partnerships between traditional and virtual banks, combining and leveraging the former's experience, regulatory knowledge and managerial capabilities with the innovative technologies of the new entrants.

Some traditional banks might adopt a different approach by applying for a virtual bank licence on their own, while others could choose to upgrade and refresh their existing digital banking platforms without creating a new entity and applying for a licence

As interest in the virtual banking initiative increases in 2019, we will continue to see a wide range of applicants apply for – and receive – licences from the HKMA. Importantly, those selected from the first batch may offer insight into the HKMA's expectations for future applicants, and will also impact how existing banks adapt their digital business models to remain competitive.





**Adam Stuckert** Partner, Head of CIO Advisory, Hong Kong **KPMG** China



**Marcos Chow** Partner, Head of Technology Enablement, Hong Kong **KPMG** China

### The next generation of AI and blockchain will transform business models

With the Hong Kong Monetary Authority (HKMA) ushering in a new era of Smart Banking through the greater use of technology, banks in the city will use the year ahead to rethink their digital strategy to stay ahead of the competition. We are seeing a fundamental shift in the adoption and mindset around emerging technology that will truly impact the financial services industry, and banks need to respond quickly and effectively or risk having their business models further disrupted and their market share diminish.

In 2019, we expect to see an increase in the use of automation – for example in finance processes and regulatory reporting – and the application of artificial intelligence (AI) on top of those automation platforms. We are also seeing the maturation of conversational user interfaces, and therefore expect banks to start rolling out next generation technology, transitioning from cognitive chatbots to virtual assistants. We may also see Hong Kong banks continue to experiment with facial recognition technology - a phenomenon that is already commonplace across sectors in mainland China.

Al, machine learning and data analytics will be game changers, as progressive banks adopt new credit risk management techniques. Banks can expedite the approval process for customers to receive unsecured lending on loans - such as income tax and business loans - shrinking the time for entire processes from several days to a few hours. Of course, taking advantages of these new capabilities requires a mature integration platform, allowing banks to seamlessly tie their processes and systems to the wider banking ecosystem.

There will be further developments in blockchain, following the HKMA's launch of a blockchain-based trade finance platform (eTradeConnect) at the end of October this year. This will be transformative for trade finance by harnessing blockchain technology to digitise trade documents and automate trade finance processes, and 2019 will be a test for the new platform.

The influence of technology currently being used by banks in mainland China will have an impact on Hong Kong in the coming year, which will spur local and international banks in the city to focus more on enhancing their digital strategy and solutions. This trend is also leading to evolving customer expectations in Hong Kong, and banks will need to adapt their digital channels to attract clients and offer them a seamless customer experience.

Financial institutions, their employees and their customers will all need to know how to effectively use and navigate new technologies that are being adopted, which will see banks increase their focus on the user experience as a key business strategy in 2019.





Henry Shek
Partner, Head of IT Advisory
Risk Consulting
KPMG China



**Bhagya Perera**Director, IT Advisory
KPMG China

### More technology adoption could mean more cyberattacks in 2019

Supported by recent initiatives unveiled by the Hong Kong Monetary Authority – such as Banking Made Easy – we continue to see financial institutions embrace and adopt emerging technology to make banking easier and more accessible to the public. In the past 12 months, we have seen notable developments around FinTech, virtual banks, electronic onboarding and the new Faster Payment System (FPS), as well as the greater use of biometric authentication and chatbots.

In the year ahead we expect to see the first virtual banks launch in Hong Kong, as well as the ongoing development of FPS and the implementation of the Open Application Programming Interface Framework. In addition, the traditional banking model continues to evolve into one that encompasses a combination of robotics, artificial intelligence (AI), blockchain enablement and real-time data analytics.

As banks adopt these emerging technologies, this comes with added cyber risks. We expect to see more cyber-attacks and breach attempts in the year ahead as banks continue along their digital transformation journey. For virtual banking in particular, some platforms will be in the cloud and many are likely to use automation and Al-related technology for onboarding and customer management, which is a positive from a technology adoption and customer experience perspective.

However, both banks and consumers need to be mindful that we currently may not fully understand all cyber threat scenarios impacting these emerging technologies. At the same time, cyber criminals are already using new and advanced methods to manipulate security weaknesses. This means that the traditional security and protection mechanisms that banks have in place may not be sufficient to deal with Al and advanced technology-enabled attacks.

This therefore requires a new approach to cybersecurity. In the year ahead we expect to see more banks rethink their approach and embed cybersecurity into the core of their digital and overall business strategy. This includes investing in cybersecurity as part of the bank's innovation budget, creating a holistic and agile process to become more resilient to the evolving nature of the cyber threat landscape, and ensuring that cybersecurity and resilience become part of every digital adoption.

We also predict that the customer of the future will be more accepting of certain risks associated with embracing new technology in digital banking than the customer of today. However, they will be less forgiving if banks lack a robust process to deal with a breach and learn from it to ensure that it does not happen again. As banks increase their investment in cybersecurity, it is important that they continue to focus not just on protection, but also on the ability to detect, respond and recover from cyber incidents in an effective and timely manner.





James O'Callaghan Partner, Head of Technology Consulting, Hong Kong **KPMG** China



**Stanley Sum** Director, CIO Advisory **KPMG** China

### Open API Framework will drive innovation and enhance customer experience in Hong Kong

The introduction of an Open Application Programming Interface (API) Framework by the Hong Kong Monetary Authority (HKMA) in July, together with the advent of virtual banks and the Faster Payment System, is rapidly accelerating the development of the city's digital financial services industry.

Open APIs will redefine and improve the customer experience for both retail and corporate banking clients in 2019 and beyond. Through the aggregation of pricing and product information on a single platform, consumers will be able to easily compare products and services, which will help customers get to the right product and the right price. Further, with the application of artificial intelligence (AI) across these data, we will see tailored customer-specific products being offered, helping customers get to the right banking interaction based on lifestyle or the current market climate.

The introduction of Open APIs will help to enhance financial inclusion in Hong Kong, providing consumers with greater access to financial products and services than in the past. We expect virtual banking, faster payments and Open APIs to shift Hong Kong towards a more cashless society, making physical bank branches and ATM infrastructure less relevant in the future.

Banks will also need to address the risks associated with this new development. While the technical implementation of Open APIs should be relatively simple for banks, the governance of the whole process is a key area of focus. With third party service providers (TSPs) now part of the ecosystem, the HKMA guidelines state that banks have a fiduciary duty to onboard the TSPs to ensure that they have the right capabilities and relevant internal procedures to manage the Open APIs and to ensure consumer protection. This could slow the process down or impact the level of adoption unless addressed in the right way.

Banks will also need to focus on establishing an effective and robust operational governance mechanism to manage the day-to-day communication around the availability of services, changes to the API and the downstream impact of the changes. Having the right support infrastructure in place for this - such as call centres or chatbots to address questions raised - will be key, especially to enhance customer experience. Cybersecurity is a major consideration here, and as banks continue to build an Open API ecosystem in the year ahead, they will need to take necessary steps to ensure that their networks are secure and that cyber risks are properly managed.





**Edwin Hui**Director, Data & Analytics,
Management Consulting
KPMG China

### Big data is the foundation for technology enablement

While big data has been a key topic of discussion for banks in Hong Kong for several years, it is fast being replaced by a greater focus on emerging technologies such as artificial intelligence, automation and blockchain. However, creating a comprehensive data platform is the key foundation for enabling and supporting these technologies, and banks continue to overlook how they manage their data. We expect Hong Kong banks to use the next 12 months to modernise their data platforms and develop a holistic data strategy – one that is linked to business objectives – to support their digital initiatives and become a more data-driven enterprise.

In order to successfully achieve this, banks will seek to improve their capabilities around the 'three Vs' of big data: volume, velocity and variety. This means leveraging both structured and unstructured data efficiently, scaling up data storage capabilities to collect an ever-increasing amount of data, and enhancing the speed of data processing to enable real-time decision making.

Enhancing big data capabilities in these areas poses a challenge to the traditional setup of data infrastructure for banks. Instead of storing data traditionally in spreadsheet or database tables, we expect more banks to experiment with modern data technologies like cloud and Hadoop in the year ahead, providing them with real-time analytics and greater scalability and flexibility.

This modernisation of data platforms – as part of a broader data strategy – will lead to a transformation of the data supply chain, making processes faster, cheaper and more efficient.

In 2019, as part of their data strategy Hong Kong banks will experiment with smaller innovative projects to effectively adopt and deploy their new technologies and digital solutions. They will also focus on finding the right talent with big data skills to manage the new information and data supply chain. Talent in this area is limited in Hong Kong, and banks will need to invest carefully and work with suitable partners to effectively manage their data strategy and modernise their data platforms.

Harnessing big data is not just essential to enabling technology. Hong Kong's regulators are expecting more granular data in the regulatory reports of financial institutions, while fast-changing customer expectations and an increasing volume and variety of data are putting added pressure on banks to get their data strategy right. In addition, the growth of mainland Chinese banks and multinationals in Hong Kong – many of which already have tried and tested data platforms and technologies in place – is creating a more competitive banking landscape. These will continue to be major drivers for banks to use the next 12 months to implement a comprehensive data strategy and modernise their data platforms to support their digital transformation.





Julian Vella ASPAC Regional Head - Global Infrastructure Advisory **KPMG** China



**Anson Bailey** Partner, Head of Consumer and Retail, ASPAC Head of Technology, Hong Kong **KPMG** China

### Banks' crucial role in Hong Kong's smart city development

In 2019, Hong Kong will continue to make strides towards its smart city development, connecting government, businesses and citizens - and using technology as an enabler - to drive economic growth, foster innovation and improve the overall quality of life. Banks are a key link to all of these stakeholders, and will have an increasingly important role to play in achieving Hong Kong's smart city ambitions.

We expect to see more private sector involvement and support for Hong Kong's smart city development, presenting an opportunity for banks to finance and invest in smart city initiatives in areas such as energy, technology and innovation, transport and mobility and infrastructure.

There is also a need to nurture a culture that encourages entrepreneurship and technological innovation - including in the financial services sector - and banks will play a greater role in providing financial support and collaborating with startups and entrepreneurs.

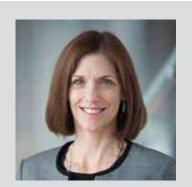
However, banks should not be viewed simply as the financiers of Hong Kong's smart city development. Together with the government and regulators, they continue to drive initiatives to usher in a new era of Smart Banking. For example, the launch of virtual banks, the Faster Payment System and the Open Application Programming Interface Framework are making online and mobile banking faster and easier, and providing a broader and more innovative product and service offering for banking customers in Hong Kong. Many of these initiatives, which were highlighted in the Hong Kong Government's Smart City Blueprint in December 2017, are now being realised. We expect that in the year ahead, regulations will continue to move towards a more open and flexible environment to encourage new innovation, technology and competition in the banking industry.

Entering a new era of Smart Banking means that banks will change the way they operate and interact with their customers, especially as the influence of mainland China's tech-savvy banks and mobile payment platforms are creating a more competitive landscape in Hong Kong. In the year ahead, the successful banks will be the ones that break free from legacy systems and the traditional approach to banking, and instead drive holistic digital transformation to become key contributors to Hong Kong's smart city ecosystem.

As part of this, banks will leverage data analytics and emerging technology such as artificial intelligence and machine learning to better understand customers and predict behaviour, tailor more personalised products and services, and offer an enhanced and seamless customer experience.

With an increasing focus on technological innovation, banks will prioritise recruiting and retaining the right talent to effectively function in the new era of Smart Banking.

# Regulatory repor and data



**Catherine Young** Partner, Risk Consulting **KPMG** China

### Data as the backbone of enhanced regulatory reporting

The pressure is on for banks to meet increasing regulatory expectations around the breadth and depth of data required for regulatory reporting. Going forward, the focus on regulatory reporting will move away from the slicing and dicing of data, and towards providing data in a 'raw' form - for example, transaction level data with a greater number of fields and product sets.

We have seen evidence of this trend globally through MiFID II in Europe, as well as the new MAS Notice 610 in Singapore. The concern for banks is that poor quality data may be exposed and there will be a lack of visibility over the way the data will be used.

At the same time, regulators are developing their own data and analytics capabilities to examine regulatory reporting data on a more dynamic basis. The challenge for market participants in 2019 will therefore be to try and stay ahead of the curve in terms of the volume and variety of data that regulators may demand.

We expect banks to build on their investments in data warehouses and data lakes by focusing on improving the scope and quality of the data that is stored within them. Banks will then able to evolve their data and analytics, produce MI, make more accurate predictions and become more forward-looking.

Another area receiving greater focus is data security, especially where data spans jurisdictions. Some regulators in the region require data to be held onshore, which creates a particular challenge for international banks around how to build an efficient way of managing global data to meet these specific requirements.

While banks need to be able to provide more holistic data to regulators, this could also create a win-win opportunity for them. We expect to see an increasing number of banks leverage the data that is required by the regulators for internal reporting purposes as well - for example, managing liquidity, capital and risk.

Hong Kong's first virtual banks look set to launch in the city next year. Virtual banks do not have legacy systems, and are able to design and build their data architecture from scratch in a more efficient manner leveraging the latest technology. This has the potential to be a disruptor in the market and new models for satisfying regulatory reporting requirements are likely to emerge.

## Compliance transformat





Susanne Stevn Director, Risk Consulting **KPMG** China

### Technology enabling compliance

The successful banks in Hong Kong in the year ahead will be the ones that leverage technology and data analytics to achieve regulatory compliance and create a more forward-looking view of regulatory risk.

While many banks better understand the regulatory and compliance expectations from regulators, some continue to struggle with achieving the reach and consistency that is necessary in order to meet these expectations. Regulators want to see broad and deep coverage by the compliance function, and technology is a key enabler in order to achieve this.

While we have seen positive signs in 2018, in the year ahead we expect more banks in Hong Kong to leverage disruptive technologies and data analytics solutions to reduce compliance costs, offer a real-time identification of risk and provide actionable insights to senior management.

One area where this will help banks is in the management and mitigation of conduct risk. Through data analytics, artificial intelligence (AI) and other digital solutions, banks will continue to broaden their knowledge base around leading indicators to predict instances of misconduct. With the identification of these leading indicators – which include complaint trends and trading patterns – banks can ensure that their conduct risk framework is more effective and deeply embedded across the organisation.

Another area where there are significant opportunities for AI and robotics is in alerts clearance. We expect banks to use more tools and solutions to reduce costs and improve the effectiveness of the process of sanctions alert clearance.

We also expect to see greater interest among Hong Kong banks in governance, risk management and compliance technology solutions, to enable a risk framework that is completely integrated across all three lines of defence. This means that all three lines of defence will have a view of the same risk, operational incident and remediation data, enabling far greater efficiency and consistency in mitigating risk across the organisation.

For banks seeking more strategic technology solutions, the process of aligning frameworks and processes within such a rapidly changing environment can be challenging. We expect to see more banks seeking to work with the growing number of fintech firms in the market on discrete and specific problems. More banks will also engage with advisory partners to help screen and conduct due diligence on fintech firms to minimise third-party risk, and to create a structured process where proofs of concept can be created faster than average, and with little investment required.





**Tom Jenkins**Partner, Head of Financial Risk
Management
KPMG China



**Catherine Young**Partner, Risk Consulting
KPMG China

### The end of LIBOR approaches

With the UK's Financial Conduct Authority no longer requiring banks to submit London Interbank Offered Rate (LIBOR) data to the rate administrator after 2021, banks in Hong Kong will use the year ahead to start creating and implementing an enterprise-wide programme to transition away from LIBOR and towards alternative risk-free rates.

The impact on the banking industry is significant – an estimated USD 200 trillion of assets reference LIBOR globally as at the end of 2016,<sup>4</sup> and the exposure for market participants in Hong Kong is material. In 2019, large global banks will start reassessing their LIBOR-linked contracts for derivatives and other financial instruments as these will require repapering and associated client outreach. In addition, banks will rebook and re-hedge exposure downstream and ensure that their models do not include references to LIBOR.

While the regional and local banks may, to a certain extent, be able to rely on the large global banks to remediate contracts which they enter into with them, they will in many cases be using these contracts with global banks to hedge exposure with their clients. The regional and local banks will need to remediate these client facing contracts.

We expect the regulators in Hong Kong to begin asking financial institutions in the city about the preparations and actions they are taking to manage the transition from LIBOR to alternative interest rate benchmarks. Banks will therefore use the coming months to plan and implement multi-year programmes across business lines and support functions, which include sales and trading, finance, operations, risk, compliance and legal.

This begins with a risk and impact assessment to better understand the scale of work involved. A key element of this is identifying all LIBOR contracts, assessing the related fallback options and understanding the potential impact across products, processes and systems.

Given the significant size and scale of the remediation exercise, we believe that financial institutions should not approach this as a manual and labour-intensive task involving hundreds of people. Instead, the successful banks will be the ones that leverage technology such as artificial intelligence, machine learning, natural language processing and optical character recognition. Not only will technology solutions help banks understand and manage the impact in terms of the number of contracts to be remediated, but it will also facilitate a better customer outreach process and a more comprehensive view about the progress that is being made.

<sup>&</sup>lt;sup>4</sup> Second Report, Federal Reserve Bank Alternate Rates Reference Committee, March 2018, https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2018/ARRC-Second-report





**Kyran McCarthy** Partner, Asia-Pacific Head of **AML & Sanctions Services KPMG** China

### A data-driven, intelligence-led approach to combat financial crime

Banks in Hong Kong will evolve their approach to combat financial crime in 2019 by investing more in machine learning, robotics, artificial intelligence (AI) and data analytics to improve the efficiency and effectiveness of financial crime compliance. Importantly, the Hong Kong Monetary Authority (HKMA) continues to be supportive of the use of technology in this space, and in fact expects banks to increasingly harness appropriate digital solutions to enhance their AML surveillance.

There is also a need to evolve current automated rule-based and scenario-based transaction monitoring systems into an intelligence-led approach to identify financial crime, with data analytics at its core.

To that extent, we expect to see more banks adopt an intelligence-led approach by developing global client data lakes - which include global customer and transactional data - and then applying data analytics to identify hotspots of financial crime risk. Concerns around where databases should be located and how the data is collected and used for onboarding should also be addressed.

In 2019, we expect more discussion in the financial services sector, as well as with regulators and the government, on how information can be shared among banks to better identify and report potential instances of financial crime.

Another significant development on the horizon is the launch of virtual banks in Hong Kong. The advent of virtual banks will change and streamline the approach towards identifying and verifying customers without face-to-face interaction. This will have a disruptive impact on how traditional banks approach the onboarding of clients, as well as on the controls that the HKMA expects banks to have in place.

The Financial Action Task Force's mutual evaluation of Hong Kong is also complete, with the mutual evaluation assessors reaching out to certain financial crime executives at global, regional and local banks for feedback. We expect some key themes of the evaluation to focus on how effectively Hong Kong manages both internal and external money laundering risks including the sharing of information, international cooperation, cross-border issues, trade-based money laundering and tax evasion.

The number of suspicious transaction reports (STRs) being filed continues to increase, but the discussion is increasingly focusing on the quality rather than the quantity of STRs. In the year ahead, we expect banks to increase their use of machine learning to improve the overall effectiveness of transaction monitoring, enabling them to focus on investigating high-risk alerts.





Wilson Pang Partner, Head of Turnaround, Restructuring Services, KPMG Head of Portfolio Solutions Group, KPMG China & ASPAC

### NPLs in China may increase, but more demand from external capital to purchase them

Stricter domestic regulatory policies on bad loan recognition, tighter liquidity and trade and economic uncertainty could cause the number of non-performing loans (NPLs) in mainland China to increase in 2019. This is going to have some knock-on effects on the Hong Kong banking industry.

We expect banks in Hong Kong to carefully monitor and manage their exposure in mainland China, and assess the direct and indirect impact of the market developments set out below on their business. Given the ongoing global trade and economic uncertainty, banks will conduct more holistic and sophisticated credit and risk modelling, factoring in the potential chain reaction of external political and economic issues.

We also expect banks to examine early warning indicators to predict which sectors and Chinese cities/provinces might be impacted the most by these developments. In 2019, we could therefore see more Hong Kong banks leverage historical big data about mainland Chinese bank NPL disposals to better predict which borrowers, sectors and geographies are likely to have more NPLs across a range of scenarios, and develop suitable solutions to minimise potential losses.

There are a number of new factors affecting the supply and demand of NPLs. To improve bank credit quality and the transparency of bank books, the China Banking and Insurance Regulatory Commission (CBIRC) introduced new regulation on 1 July this year, which makes lenders reclassify all loans overdue for more than 90 days as NPLs. This has resulted in an increase in NPLs, with non-tier 1 and 2 cities and rural commercial banks bearing the brunt of the impact.

There are signs of increasing demand from international investors to absorb the NPL supply, especially with Chinese banks and Asset Management Companies (AMCs) under more pressure to offload their NPL inventory faster and at a greater discount. In addition, in May 2018, the State Administration of Foreign Exchange announced enhancements to its existing pilot programme in Shenzhen, which allows foreign investors to buy NPLs through the Shenzhen Qianhai Financial Assets Exchange. An approval was also granted for a similar programme in Guangdong, known as the Guangdong Financial Assets Exchange. The pilot programmes for the two Exchanges simplify and shorten the process for foreign investors to buy NPLs from mainland Chinese banks and AMCs, which could increase the demand for NPLs in the year ahead.

As part of the Central Government's debt-for-equity swap programme, the CBIRC launched new rules in June to enable Asset Investment Companies (AICs) to conduct debt-for-equity swaps more efficiently, which could help to decrease the supply of NPLs in the market. The rules also allow the AICs to sell debt that cannot be converted into equity.

# Banking in China -the impact of Individual Income Tax reform



**Murray Sarelius** Partner, Head of People Services, China **KPMG** China



**David Siew** Partner, People Services **KPMG** China

### The tax net widens in China

On 31 August 2018, the National People's Congress passed the amendment to the PRC Individual Income Tax (IIT) Law, setting in motion landmark reforms that will have a far-reaching impact on the payroll and finance operations of all companies in China, including financial institutions. Among the key amendments, which will take full effect from 1 January 2019, are changes to the residency rules for foreigners and new measures to combat tax avoidance. Banking executives and their employers will use the coming months to actively revisit their structures and people strategies to ensure that they are compliant.

The amended IIT law lowers the tax residency threshold from one year to 183 days. Although this initially raised issues around the cost of employing expatriates, the draft implementation regulations issued on 20 October suggest there is less immediate cause for concern. This Guidance retains the concession that nondomiciles (foreigners) need to have been tax resident in China for five years before they are taxable on worldwide income from the sixth year onwards. Non-domiciles can continue to "reset" the counting of the five years by spending more than 30 days consecutively outside mainland China. Foreign executives at banks therefore will continue to manage their time in mainland China to qualify for the concession.

However, the regulations introduce a put-on-record filing requirement for nondomiciles to claim the concession on their worldwide income. This will likely involve the disclosure of personal information and, potentially, financial information. As a result, tax authorities will have more information readily available, and could challenge taxpayers' domicile position in the year ahead. Banks will therefore focus on assessing their people strategies and working with foreign employees to plan ahead to minimise disruption to their China business.

The amended law also introduces general anti-avoidance rules for individuals, which will empower the tax authorities to increase enforcement of IIT obligations. These anti-avoidance provisions also bring into focus the investment structures that private banks, wealth managers, personal investors and high net worth individuals (regarded domiciled in China for IIT purposes) currently have in place to hold offshore investments, and whether such structures will still be compliant after 1 January.

Introducing an anti-avoidance rule for IIT gives a clear indication of China's changing approach towards compliance and enforcement. Coupled with the automatic exchange of financial account information under the Common Reporting Standards (CRS), the amended IIT law gives the authorities more tools to identify and pursue tax avoiders.

In the year ahead, we foresee the anti-avoidance provisions being disruptive to the wealth management industry and investors with assets overseas. Wealth managers and investors will need to revisit their arrangements to ensure they remain compliant, and advice will become more tailored as standard "template" advice will no longer be fit-for-purpose. We expect to see more guidance being issued on these provisions and greater scrutiny of investment arrangements, particularly offshore trusts and companies that hold investments.

### Contact us

### **Paul McSheaffrey**

Partner, Head of Banking & Capital Markets, Hong Kong KPMG China +852 2978 8236 paul.mcsheaffrey@kpmg.com

### **Vivian Chui**

Partner, Head of Securities & Asset Management, Hong Kong KPMG China +852 2978 8128 vivian.chui@kpmg.com

### **Tony Cheung**

Partner, Head of Advisory, Financial Services KPMG China +86 (21) 2212 2705 tony.cheung@kpmg.com

### **Henry Shek**

Partner, Head of IT Advisory Risk Consulting KPMG China +852 2143 8799 henry.shek@kpmg.com

### **Simon Topping**

Partner, Regulatory Advisory KPMG China +852 2826 7283 simon.topping@kpmg.com

### James O'Callaghan

Partner, Head of Technology Consulting, Hong Kong KPMG China +852 2143 8866 james.ocallaghan@kpmg.com

### **Kyran McCarthy**

Partner, Asia-Pacific Head of AML & Sanctions Services
KPMG China
+852 2140 2286
kyran.mccarthy@kpmg.com

### Wilson Pang

Partner, Head of Turnaround, Restructuring Services, KPMG China Head of Portfolio Solutions Group, KPMG China & ASPAC +86 (20) 3813 8802 wilson.pang@kpmg.com

### Isabel Zisselsberger

Partner, Head of Customer and Operations, Hong Kong KPMG China +852 2826 8033 isabel.zisselsberger@kpmg.com

### **Peter Outridge**

Partner, Head of People & Change Advisory KPMG China +852 2847 5159 peter.outridge@kpmg.com

### **Tom Jenkins**

Partner, Head of Financial Risk Management KPMG China +852 2143 8570 tom.jenkins@kpmg.com

### Julian Vella

ASPAC Regional Head – Global Infrastructure Advisory KPMG China +852 2140 2309 julian.vella@kpmg.com

### **Adam Stuckert**

Partner, Head of CIO Advisory, Hong Kong KPMG China +852 2847 5163 adam.stuckert@kpmg.com

### **Marcos Chow**

Partner, Head of Technology Enablement, Hong Kong KPMG China +852 3927 5628 marcos.chow@kpmg.com

### **Anson Bailey**

Partner, Head of Consumer and Retail, ASPAC Head of Technology, Hong Kong KPMG China +852 2978 8969 anson.bailey@kpmg.com

### **Catherine Young**

Partner, Risk Consulting KPMG China +852 2847 5199 catherine.young@kpmg.com

### **Murray Sarelius**

Partner, Head of People Services, China KPMG China +852 3927 5671 murray.sarelius@kpmg.com

### **David Siew**

Partner, People Services KPMG China +852 2143 8785 david.siew@kpmg.com

### **James Carter**

Partner, Global Strategy Group KPMG China +852 3927 5663 jcarter@kpmg.com

### **Howhow Zhang**

Partner, Global Strategy Group KPMG China +852 2140 2209 howhow.zhang@kpmg.com

### **Susanne Steyn**

Director, Risk Consulting KPMG China +852 2140 2317 susanne.steyn@kpmg.com

### **James Harte**

Director, Global Strategy Group KPMG China +852 2140 2876 james.harte@kpmg.com

### **Stanley Sum**

Director, CIO Advisory KPMG China +852 2143 8808 stanley.sum@kpmg.com

### **Bhagya Perera**

Director, IT Advisory KPMG China +852 2140 2825 bhagya.perera@kpmg.com

### **Edwin Hui**

Director, Data & Analytics, Management Consulting KPMG China +852 2847 5009 edwin.hui@kpmg.com

### Jessica Hong

Associate Director, Customer and Operations KPMG China +852 2847 5066 jessica.hong@kpmg.com

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