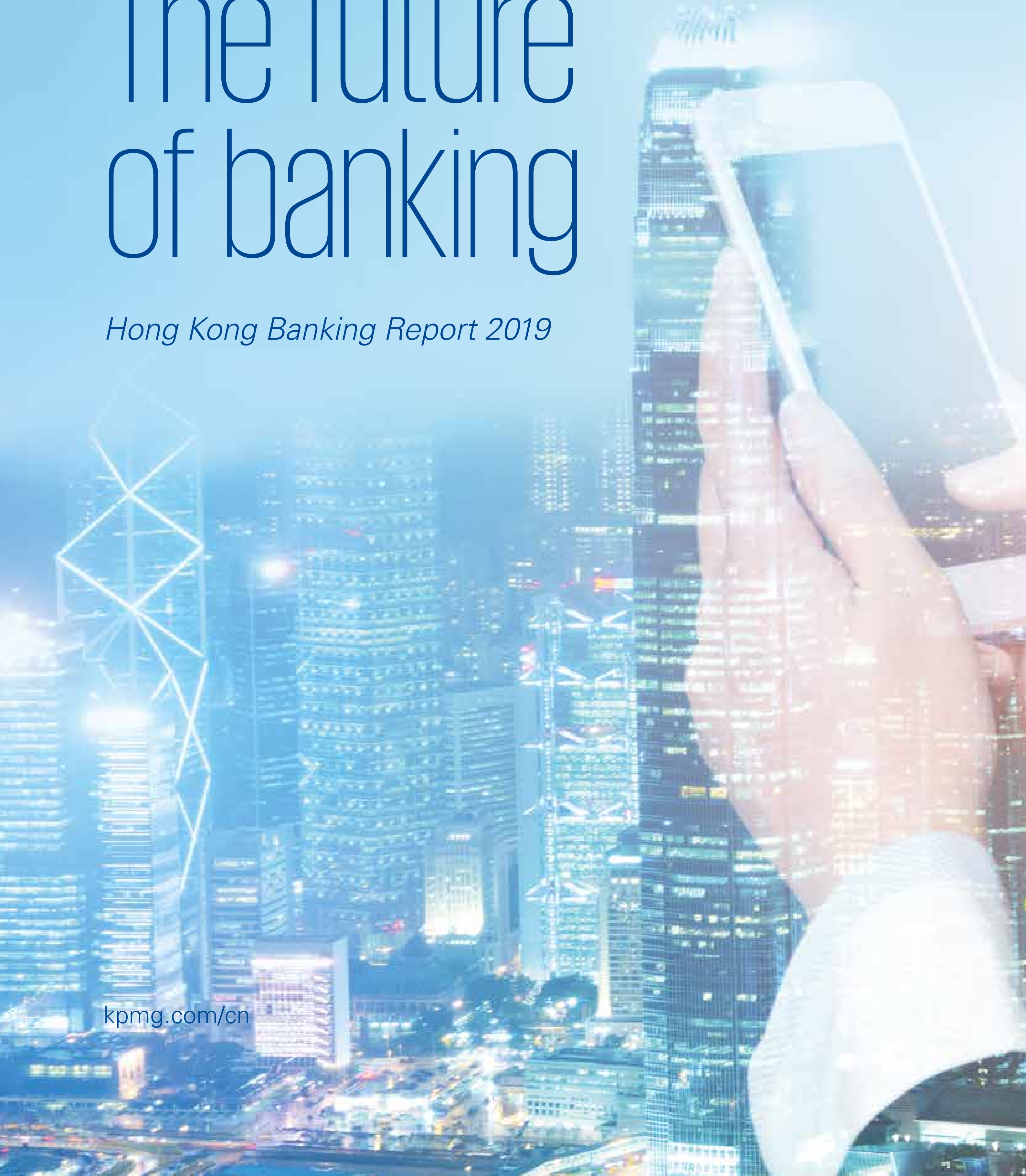
# The future of banking

*Hong Kong Banking Report 2019*



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# Introduction

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In this year's annual Banking Report we take our traditional look back at the results of banks in 2018, but also take some time to look forward and set out our thinking on the Future of Banking. We believe the focus for banks in Hong Kong now should firmly be on what the Future of Banking looks like and how they can position themselves to be successful in a rapidly changing environment. The speed of change in the sector is being shaped by four key factors.

Firstly, the underlying performance of banks – margins are being squeezed and costs continue to be a focus – means that banks need to think about different business and operating models if they want to be successful in the future. In addition to this, changing customer expectations, the increasing volume and importance of data and the rise of technology as an enabler to transform business models are also changing the sector.

In 2018, banks in the city generally benefited from increasing margins which drove profitability. After several years of reducing or stagnant margins, in 2018 we saw an increase as banks benefited from interest rate rises in the US. However, global uncertainty has changed market sentiment and further rate hikes are unlikely. In fact, we may even see rate cutes before the end of 2019, which could cause margins to shrink again.

We have also seen costs slightly increase across the sector with increasing investment in technology. This was offset by the credit quality of banks remaining stable, indicating that banks could perhaps take more sensible risks.

We believe that banks need to look more closely at how they operate and interact with their customers to achieve more profitable growth. With consumer expectations continuing to rapidly evolve, customer experience remains absolutely critical for the long-term success of banks. Service providers in other sectors continue to raise the bar for customer experience, leading consumers to increasingly demand a similar user experience when it comes to banking. If banks do not provide this experience then customers may be more open to using new entrants to the sector, such as the new virtual banks.

Many banks have traditionally designed processes and procedures around meeting regulatory obligations and/or risk management outcomes, rather than around how to best serve the customer. We believe that the banks that can redesign their existing processes and operating model with the desired customer interaction and experience at the heart of it all will be successful.

Part of this improved customer experience will be how banks use data. The volume and velocity of data continues to increase exponentially. Data is a crucial asset for banks and a key driver of the future of banking. Financial institutions therefore need to seek to improve how they use and monetise their data to better serve their customers, as well as how to utilise data to better manage risk. We believe that it is now more important than ever for banks to embed a 'data culture' throughout their organisation in order to unlock the true value of their technologies and meet customer expectations.

However, in order to fully harness their data and improve the effectiveness of their digital strategy, banks need to first ensure that they implement robust and appropriate governance and infrastructure. This is an area where we continue to see banks struggle due to legacy systems. Importantly, it is not just about getting it right once. Banks need to have a sustainable platform, governance and associated processes to ensure that their data is maintained at a high level to enable them to better serve their customers.

The last force shaping the Future of Banking is the enabling use of technology. Technologies such as artificial intelligence (AI) and automation are becoming increasingly available to help enable some of the customer-driven changes to banks' business and operating models and to improve profitability. While many institutions view technology and automation as a way to reduce costs and improve quality, we believe the real value is in helping to deliver services faster and better, a key demand from consumers.

Looking forward to 2019, we expect to see greater pressure on margins, and uncertainty and geopolitical tensions contributing to more muted growth of balance sheets as corporates become more cautious in their outlook. Coupled with increasing costs, 2019 could be a challenging year for banks in Hong Kong. Nonetheless, there continues to be a number of opportunities for growth. The ongoing development of the Greater Bay Area for example provides an avenue of growth for Hong Kong banks in the coming years.

Clearly the industry is going through significant change, and we expect to see the factors discussed above shape the Future of Banking in Hong Kong. It is no coincidence that at the same time we have seen virtual bank licences recently being issued in Hong Kong, with these new players preparing to launch later this year. Time will tell as to how successful the new virtual banks will be in Hong Kong. However, what is clear is that they will be a major driver of change and improve competition in the sector, forcing traditional banks to innovate and improve their service offering. This will all be for the benefit of the customer, who stand to be the real winners.

I hope you enjoy our perspective on the sector in 2019, and would welcome the opportunity to discuss the banking results and the current industry landscape.

# Overview

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Hong Kong's banking sector showed resilience in 2018, with stable capital and liquidity performance and strengthening profitability. Subsequent to the strong global economic environment which brought growth to Hong Kong's banking sector in 2017, the pace of global economic growth in 2018 moderated as challenges arising from international trade tensions created uncertainty. In 2018 the Hong Kong economy grew by 3 percent, compared to 3.8 percent growth in 2017. Despite the slight deceleration in macro-economic indicators, Hong Kong's banking sector managed to maintain its strength which is reflected in the overall performance by licensed banks. The total assets of all licensed banks grew by 3.6 percent compared to growth of 8.1 percent in 2017. The operating profit before impairment charges of all licensed banks increased by 15 percent to HK$268 billion from HK$234 billion in 2017.

After many years of reducing or stagnant interest margins, 2018 was the year when US interest rates started to rise which flowed through to stronger income for Hong Kong banks. However, global uncertainty has changed sentiment and further rises are unlikely, and we may see some of the improved net interest margin (NIM) reverse in 2019.

In Hong Kong, digital innovation has become a new focus for the sector. Following the virtual bank licenses granted by the Hong Kong Monetary Authority (HKMA) in the first half of 2019, it is expected that a new banking experience will be brought to customers in Hong Kong. This will initially focus on retail customers and small and medium enterprises, offering basic banking services. However, we expect that the services provided will quickly become more sophisticated and that traditional banks will respond. This will increase the quality of services in Hong Kong and foster a much more competitive and innovative environment.

In this report we present an analysis[1] of some key metrics for the top 10 locally incorporated licensed banks[2] in Hong Kong. Please note we have conducted this analysis on a legal entity basis and where banks have a dual entity structure in Hong Kong (e.g. a branch and an incorporated authorised institution), we have not combined the results.

[1] The analysis is based on financial institutions registered with the Hong Kong Monetary Authority.

[2] The top 10 locally incorporated licensed banks mentioned in this article are the 10 banks with the highest total assets among all locally incorporated banks as at 31 December 2018.

# Net interest margin

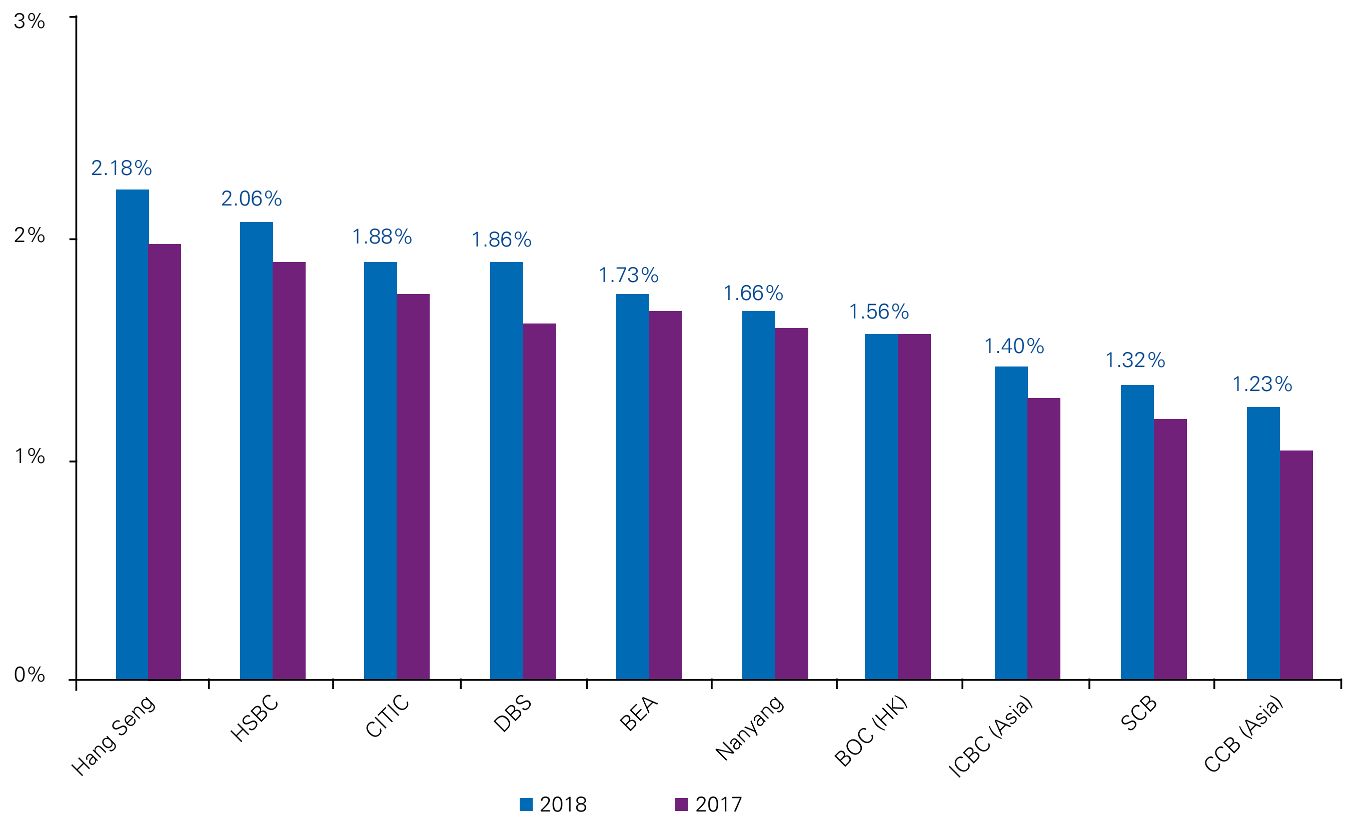
With four interest rate hikes by the US Federal Reserve in March, June, September and December 2018 increasing the US benchmark interest rate by 1 percent in 2018, the HKMA Base Rate was also adjusted upward from 1.75 percent in 2017 to 2.75 percent. However, retail deposit rates in Hong Kong remained relatively low and adjusted upward during the second half of 2018 resulting in a slower pace in the upward trend of the funding costs. This contributed to the improved NIM[3] and profitability of the surveyed banks.

The average NIM across the surveyed licensed banks increased by 11 basis points compared to 2017. The average NIM for the top 10 licensed banks for 2018 increased to 1.69 percent compared to 1.54 percent for 2017. Nine out of the top 10 banks posted an increase in NIM. Hang Seng Bank Limited (Hang Seng) and The Hongkong and Shanghai Banking Corporation Limited (HSBC)[4] continued to post the highest NIM among the top 10 locally licensed banks as at 31 December 2018.

Hang Seng's NIM improved to 2.18 percent (increase of 24 basis points compared with 2017) which was largely due to the improvement in deposit spreads as a result of rises in Hong Kong dollar and US dollar interest rates. HSBC's NIM increased to 2.06 percent (an increase of 18 basis points compared with 2017), mainly due to higher margins from Hong Kong and mainland China activities. For HSBC, an improvement was noted in Hong Kong activities with an increase of 0.25 percent in the related NIM mainly driven by the widened customer deposit spreads, the change in asset portfolio composite due to customer lending growth, and higher re-investment yields brought by higher interest rates. The NIM in HSBC's mainland China activities also increased, contributed by higher yields from portfolio mix changes and improved lending spreads and customer deposit spreads.[5]

[3] NIM is either quoted from public announcements of financial statements, or calculated based on annualised net interest income and interest-bearing assets or total assets, depending on the availability of information.
[4] HSBC consolidated results include Hang Seng and its other Asia operations.
[5] HSBC 2018 Annual Report and Accounts - p.10 https://www.hsbc.com.hk/content/dam/hsbc/hk/docs/legal/regulatory-disclosures/annual-report-and-accounts-2018.pdf

## Net interest margin




Source: Extracted from individual banks' financial and public statements

Among the top 10 locally incorporated banks, DBS Bank (Hong Kong) Limited (DBS) recorded the largest increase in NIM (27 basis points) due to higher interest yields as they booked financial assets with longer tenor. The NIM of Bank of China (Hong Kong) Limited (BOC (HK)) remained flat in 2018 compared to 2017. We noted a slight increase in the proportion of short-term financial assets which may have offset any NIM benefit from rising rates. None of the top 10 locally incorporated banks experienced a drop in NIM.

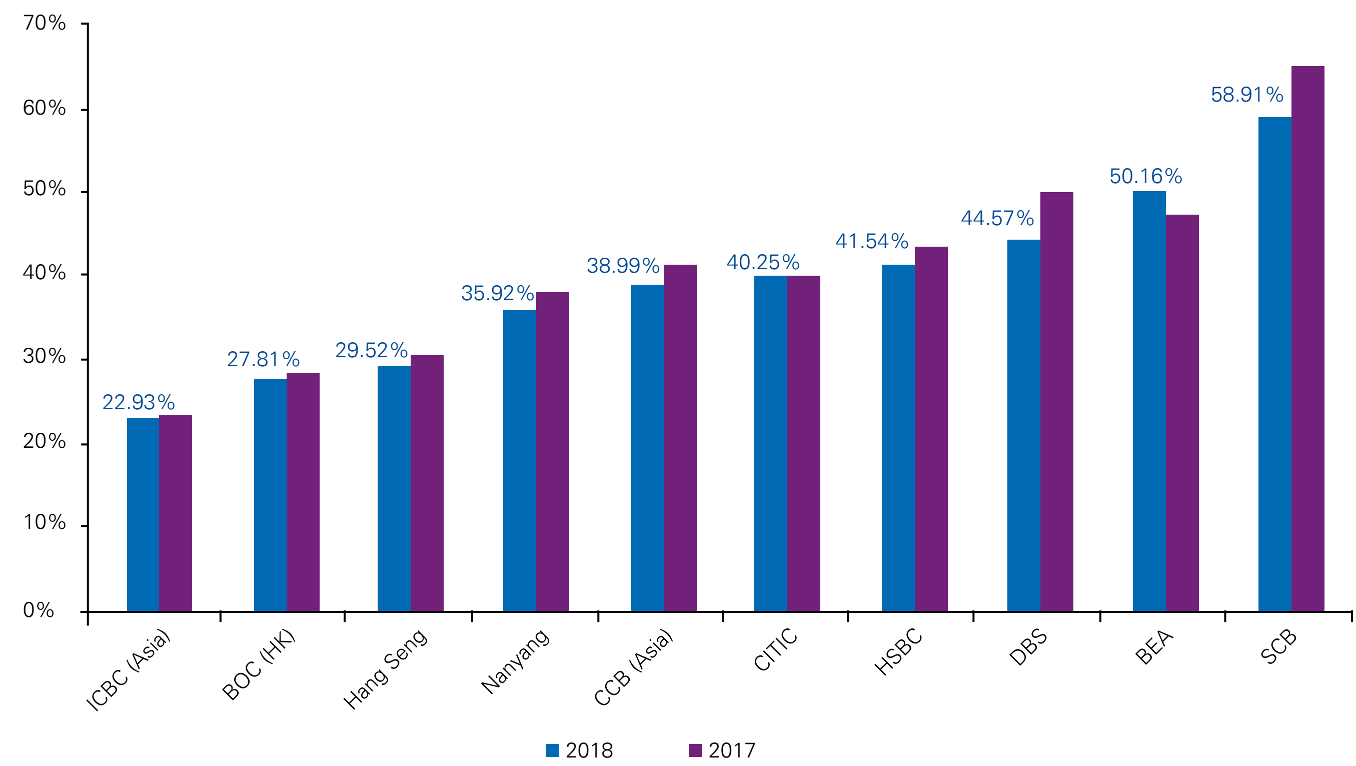
Looking forward to 2019, sentiment has shifted from the expectation of further rate increases in the US to the likelihood of no rate increases and potentially a reduction in 2019. Coupled with the effect of the newly licensed virtual banks, which could lead to price competition for deposits later in the year, 2019 could be a year of renewed pressure on NIM in Hong Kong.

## Costs

In recent years, operating cost management has become a critical focus for banks in Hong Kong in monitoring and improving profitability as revenue growth has been challenging in recent years. In 2018 there was an increase in the overall operating expense for banks in Hong Kong, with an increase of 7 percent in the total operating cost of the surveyed licensed banks. The average cost-to-income ratio of the surveyed banks for the year ended 2018 stood at 44 percent, increasing from 42.5 percent in 2017.

The top 10 surveyed banks showed an increase in total operating income of 12.8 percent, partly off-set by a 7.63 percent increase in the total operating expense. The average cost-to-income ratio of these top 10 licensed banks for the year ended 2018 improved to 39.06 percent from 40.86 percent in 2017.

## Cost-to-income ratios




Source: Extracted from individual banks' financial and public statements

Nanyang Commercial Bank Limited (Nanyang) recorded the largest increase in operating costs of 13.64 percent in 2018, which was mainly due to an increase in staff costs.[6] DBS also recorded a large increase in operating costs of 13.18 percent in 2018. The increase is driven by the increase in staff costs and costs related to premises and equipment. Nevertheless, DBS's cost-to-income ratio fell by 5.6 percent to 44.6 percent due to robust growth in income.[7] Among the top 10 surveyed banks, Standard Chartered Bank (Hong Kong) Limited (SCB) remained the only bank recording a slight decrease in operating costs of 0.1 percent and decrease in cost-to-income ratio of 6.4 percent during 2018, indicating improved operating cost management.

Hang Seng recorded an increase of 13 percent in operating costs, related to staff costs and investment in technology.[8]

Among the top 10 locally incorporated banks, The Bank of East Asia Limited (BEA) was the only bank with an increase in cost-to-income ratio in 2018. The cost-to-income ratio of BEA increased by 2.75 percent, from 47.4 percent to 50.2 percent, mainly attributed by a 0.3 percent increase in operating income, versus a 6.15 percent increase in operating expenses, mainly attributed by the increase in staff costs and expenses incurred for new business initiatives.[9] ICBC (Asia) continued to have the lowest cost-to-income ratio of 22.9 percent in 2018, with a decrease in cost-to-income ratio by 0.5 percent compared with 2017.

We forecast increases in technology spend in 2019 to drive growth through innovation and to sustainably reduce operating costs in the longer term. Given increasing competition for customers, we believe that targeted spending on innovation and improving customer experience is necessary to drive income growth. Banks that think about this holistically and adopt and automate processes around improved customer experience are more likely to reduce costs sustainably in the longer run.

## Loans and advances

In view of the strong improvement in gross loans and advances in 2017, total loans and advances managed stable growth amid the global economic uncertainties of 2018. As at the end of 2018, the total loans and advances of the surveyed banks increased by 3.5 percent compared to 2017. Compared to prior years the growth has decelerated compared to the growth of 14.9 percent in 2017.

Total loans and advances reached HK$9,028 billion as at 31 December 2018, up from last year's total of HK$8,725 billion. Commercial loans, mortgage lending and loans for use outside Hong Kong continue to represent 88 percent of total loans, consistent with 2017.

Loans for use outside Hong Kong represent the largest portion of total loans and advances, taking up 35.9 percent of total loans and advances, a slight increase from 32.4 percent in 2017. The second largest portion is commercial loans with 34.3 percent of total loans and advances, a slight decrease from 37.4 percent in 2017. There was an increase in the proportion of mortgages from 17.6 percent in 2017 to 17.9 percent in 2018. Credit card, other personal loans and trade finance accounted for 1.9 percent, 4.9 percent, and 5.2 percent respectively at the end of 2018.

HSBC and BOC (HK) continue to be the dominant players in the lending market, constituting 53.5 percent of the total loans outstanding as at 31 December 2018.

[6] Nanyang 2018 Annual report – p. 206
https://vpr.hkma.gov.hk/doc/100060/ar_18/ar_18.pdf

[7] DBS 2018 Annual Report - p.6
https://www.dbs.com/iwov-resources/pdf/hongkong/2018AnnualReport_en.pdf

[8] Hang Seng 2018 Annual Report - p.9, 33
https://www.hangseng.com/cms/fin/file/statement/ar_2018_full_en.pdf

[9] BEA 2018 Annual report – p.22
https://www.hkbea.com/pdf/en/about-bea/investor-communication/annual-and-interim-reports/2018/E_2018%20Annual%20Report.pdf

Among the top 10 surveyed banks, the gross loans and advances increased from HK$7,644 billion to HK$8,068 billion, a growth of 5.55 percent compared to 2017. Apart from China Construction Bank (Asia) Corporation Limited (CCB), which experienced a drop of 11.29 percent in gross loans and advances in 2018, all the other top 10 surveyed banks recorded an increase in gross loans and advances.

HSBC's gross loans and advances increased by 6.08 percent to HK$3,545 billion, largely driven by an increase in corporate lending and mortgages, together with a growth in loans and advances to customers in mainland China, Australia, Singapore, Taiwan and Malaysia.[10]

BOC (HK)'s gross loans and advances increased by 8.23 percent to HK$1,283 billion in 2018. The bank continued to capture the opportunities from the Belt and Road Initiative and other development plans.[11]

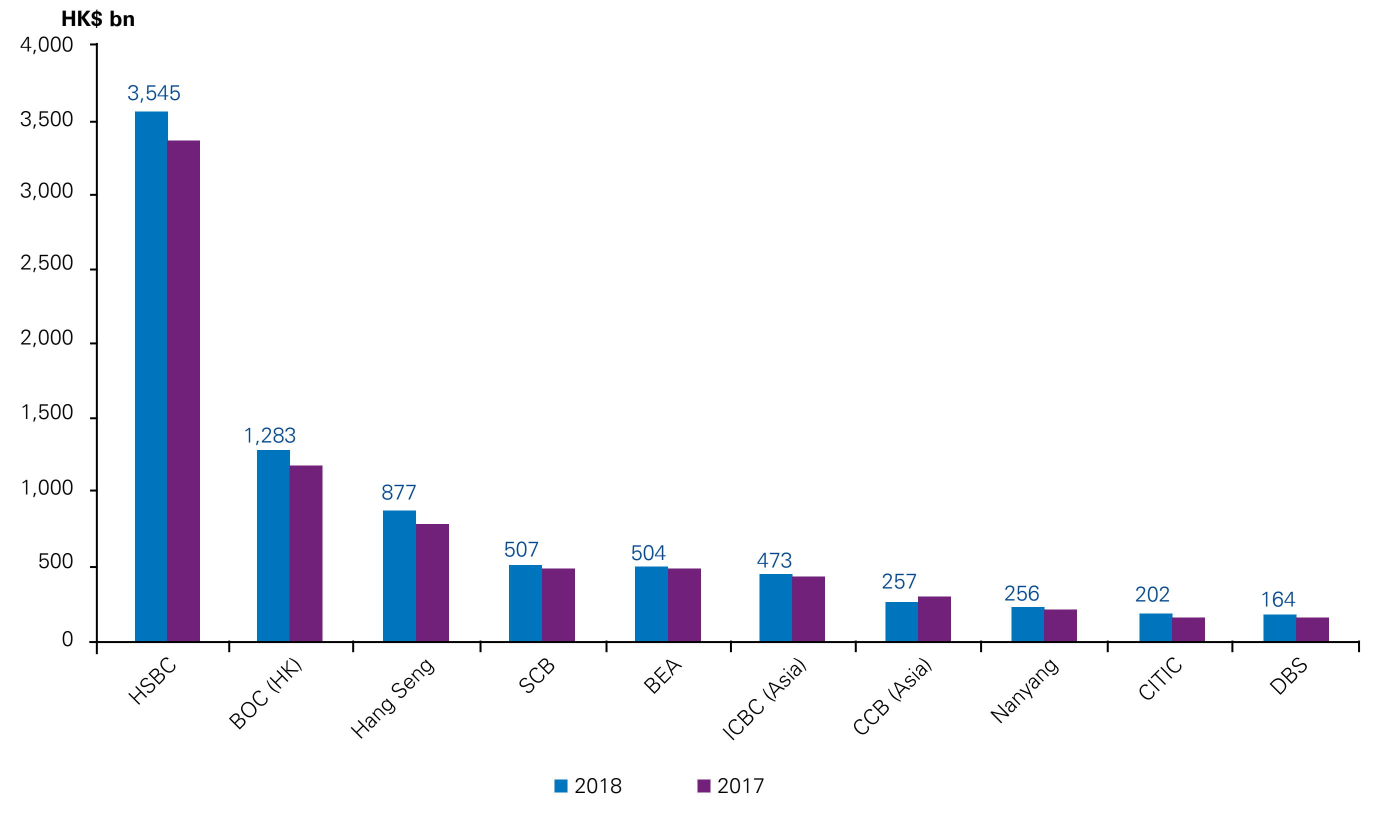
CCB experienced a drop of 11.29 percent in gross loans and advances, mainly contributed by a contraction of loans to the Hong Kong subsidiaries of mainland China corporates, and some reclassification of customer loans under new HKFRS 9 requirements to financial assets at fair value through profit or loss.[12]

Among the top 10 surveyed banks, Hang Seng achieved the most significant increase in gross loans and advances of 8.53 percent as at 31 December 2018. The increase of HK$69 billion, from HK$808 billion in 2017 to HK$877 billion in 2018 was mainly contributed by growth in both commercial and retail lending.[13]

ICBC (Asia) experienced the lowest growth in its loan portfolio, with an increase in gross loans and advances of 2.54 percent in 2018. The bank's gross loans and advances balance increased from HK$461 billion at the end of 2017 to HK$473 billion as at the end of 2018.

[10] HSBC Annual Report 2018 - p.10 https://www.hsbc.com.hk/content/dam/hsbc/hk/docs/legal/regulatory-disclosures/annual-report-and-accounts-2018.pdf
[11] BOC (HK) 2018 Annual report – p.29 https://www.bochk.com/dam/bochk/desktop/top/aboutus/ir/docs/finreport/bochkholdings/2018ar/e_Annual_Report_2018.pdf
[12] CCB (Asia) 2018 Announcement – p.2 http://www.asia.ccb.com/hongkong/doc/about_us/newsroom/20180430-financial-results.pdf
[13] Hang Seng 2018 Annual report – p.20 https://www.hangseng.com/cms/fin/file/statement/ar_2018_full_en.pdf

## Loans




Source: Extracted from individual banks' financial and public statements

# Credit quality

In spite of the global economic and political uncertainties, credit quality remained stable in 2018 among surveyed banks. On the whole, the impaired loan ratio[14] for banks in Hong Kong remained stable in 2018 and the credit quality of banks remained sound. The average impaired ratio of the surveyed banks improved from 0.51 percent in 2017 to 0.50 percent as at the end of 2018.

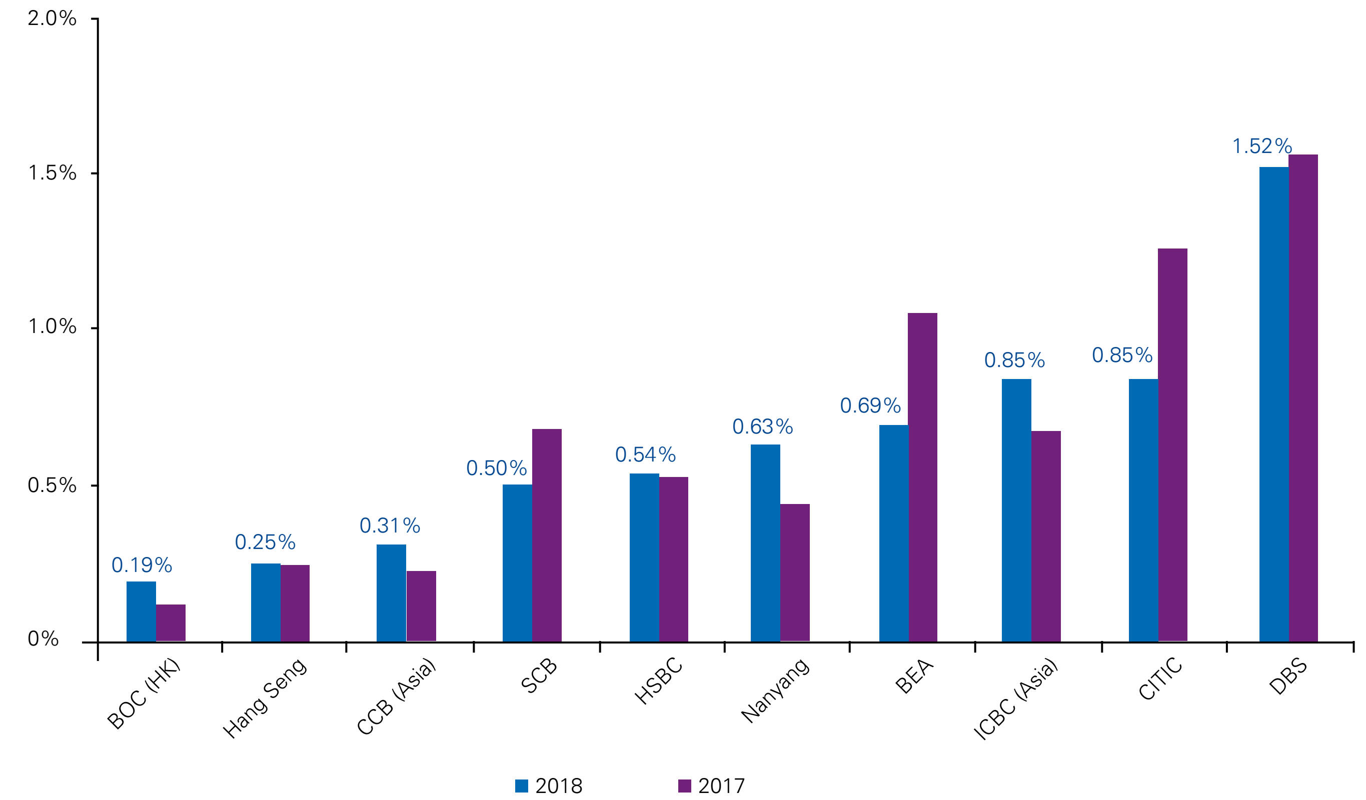
For the top 10 surveyed banks, the average impaired loan ratio stood at 0.63 percent for 2018, remaining stable with a slight decrease from 0.68 percent in 2017. Among the top 10 surveyed banks, China CITIC Bank International Limited (CITIC) showed the most significant improvement, from 1.26 percent in 2017 to 0.85 percent in 2018. This resulted from continuous prudent management in the bank's loan portfolio and replacement of higher risk loans with more secured asset-backed loans.[15]

DBS has been showing continuous steady improvement in credit quality, reflected by a further decrease of 0.05 percent in the impaired loan ratio from 1.57 percent in 2017 to 1.52 percent in 2018. This was attributed to the improvement in the building and construction sector (2018: 0.36%; 2017: 0.88%), the general commerce sector (2018: 2.9%; 2017: 3.41%), and the manufacturing sector (2018: 3.32%; 2017: 3.76%).[16]

BEA also showed a significant improvement in credit quality with an improvement of 0.37 percent in its impaired loan ratio from 1.06 percent in 2017 to 0.69 percent in 2018. Under the bank's initiative to reduce stressed loan exposures and prioritise asset quality over quantity, steady improvement has been reflected by the decrease in the impaired loan ratio.[17]

[14] Impaired loan ratio is calculated as impaired loans and advances divided by gross loans and advances to customers.
[15] CITIC 2018 Annual report – p.20 https://www.cncbinternational.com/_document/about-us/interim-and-annual-reports/en/2018/annual_report.pdf
[16] DBS 2018 Annual report – p.48 https://www.dbs.com/iwov-resources/pdf/hongkong/2018AnnualReport_en.pdf
[17] BEA 2018 Annual report – p. 20 https://www.hkbea.com/pdf/en/about-bea/investor-communication/annual-and-interim-reports/2018/E_2018%20Annual%20Report.pdf

## Impaired loan ratio




Source: Extracted from individual banks' financial and public statements

# Non-bank mainland China exposure

The exposure to non-bank mainland China-related business of the surveyed banks increased by 4 percent as at the end of 2018, which reflected a decelerated growth in the current year compared to 15 percent growth in 2017.

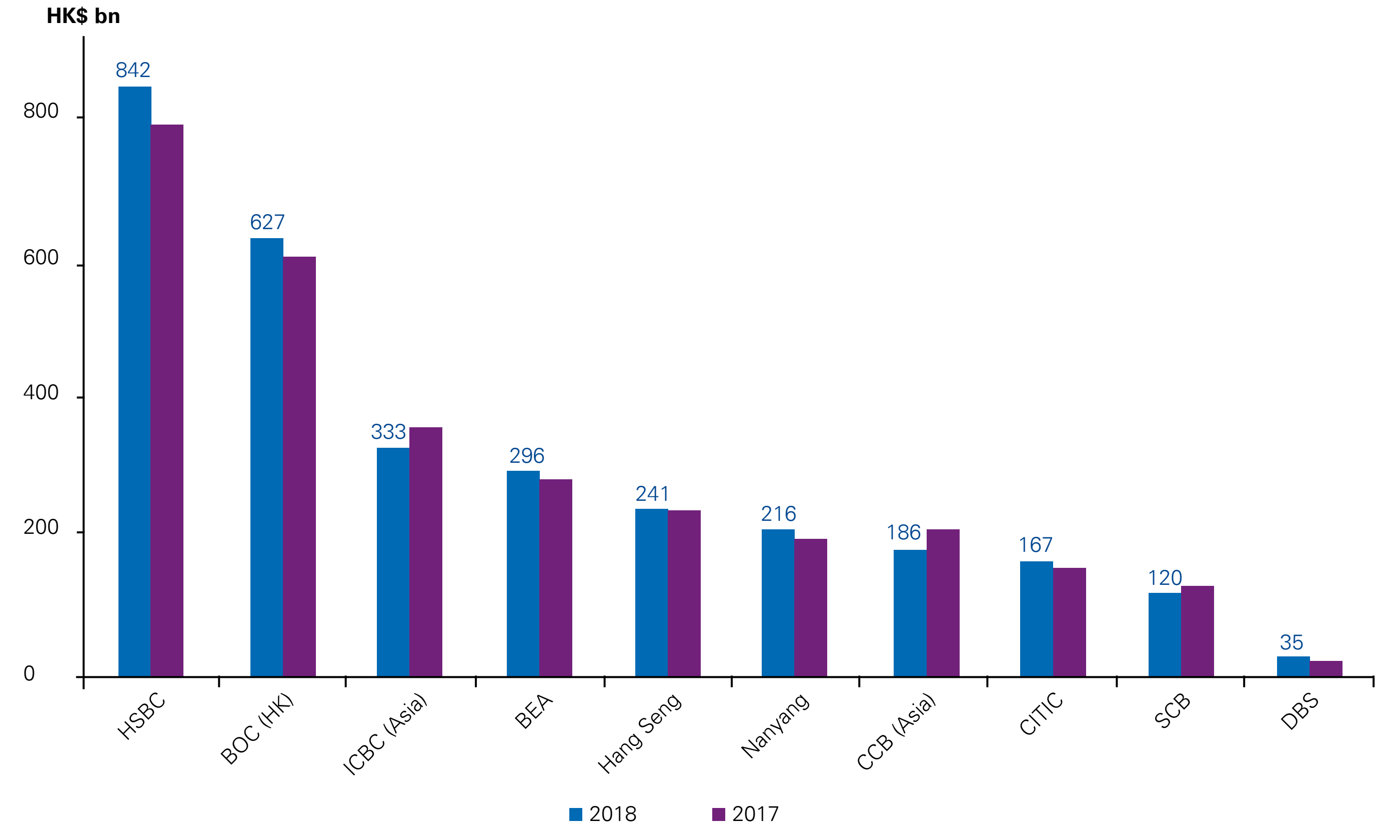
In aggregate, non-bank mainland China exposure for the top 10 surveyed banks grew by 2 percent in 2018. Most of the top 10 banks recorded growth in non-bank mainland China exposure. This growth was primarily attributed to the double-digit growth of HSBC, BOC (HK), BEA and DBS. This trend has been consistent since 2017.

Among the top 10 surveyed banks, HSBC reported the highest growth in the amount of non-bank mainland China exposure which showed an increase of 6.53 percent amounting to HK$52 billion, to HK$842 billion in 2018. DBS reported the highest growth percentage in non-bank mainland China business with the exposure increasing by 35.87 percent to HK$35 billion in 2018. Of the top 10 surveyed banks, seven of them maintained growth in non-bank mainland China exposures, while CCB, ICBC (Asia) and SCB experienced decreases of 13.7 percent, 7 percent and 8.72 percent, respectively.

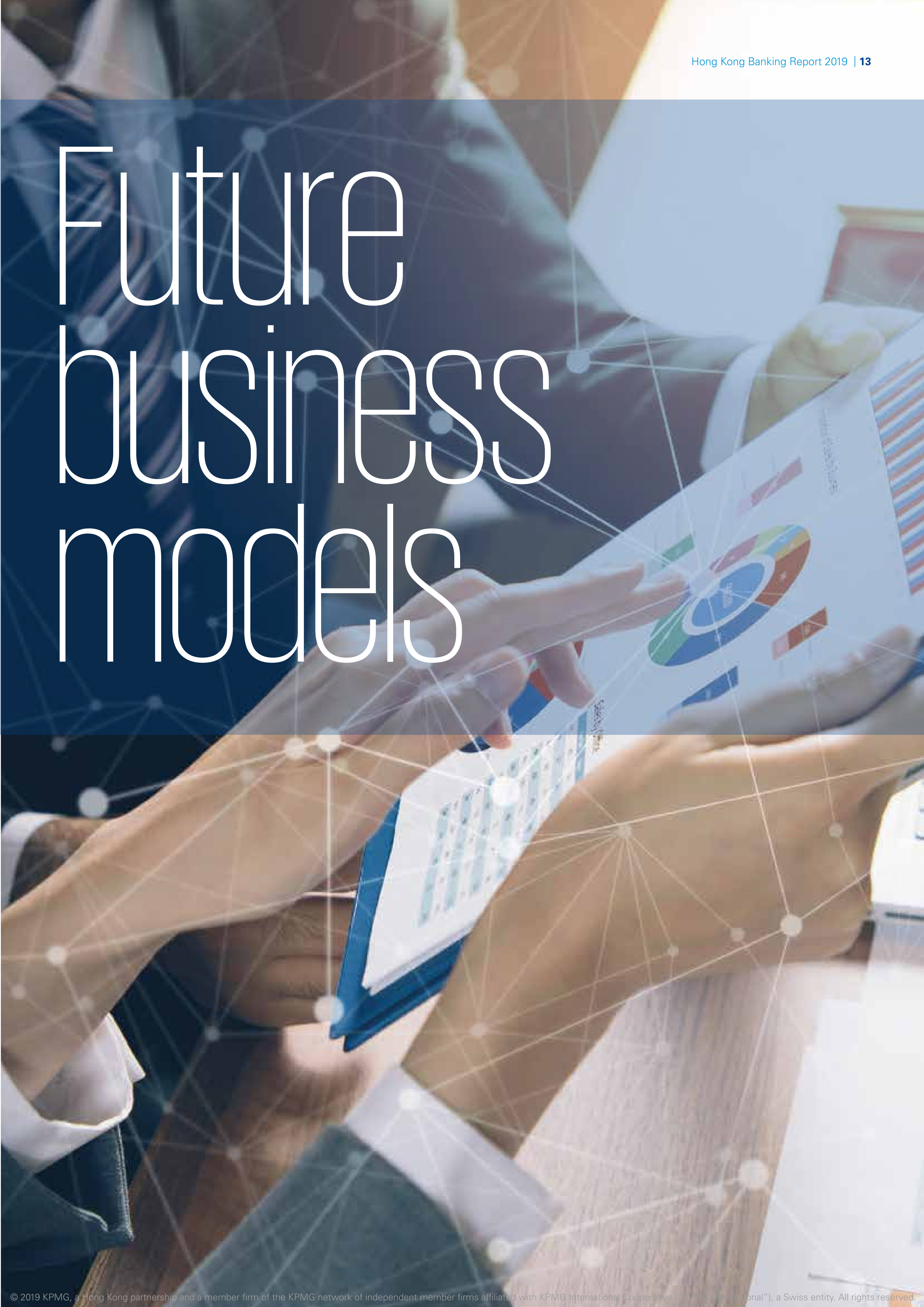
In view of the cautious monitoring and management of mainland China exposures by banks in Hong Kong, the growth in non-bank mainland China exposures is following a trend of deceleration.

In 2019 we may see this reverse, particularly with increasingly closer links between Hong Kong and the rest of the Greater Bay Area which would increase non-bank mainland China exposure.

## Non-bank mainland China exposure




Source: Extracted from individual banks' financial and public statements



# Future business models

# Digital Banking

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## What will it take to win in the age of digital banking?

Hong Kong is set to witness the launch of its first virtual banks following the recent issuance of eight licences by the Hong Kong Monetary Authority (HKMA). These new players are expected to broaden the selection of banking options, foster innovation and enhance customer experience in the city. Moreover, the new entrants will be vying to increase their market share and customer base, while the incumbent traditional banks will seek to maintain their standing in the market. Navigating this competitive landscape will require new ways of thinking and new strategies to enhance the overall banking experience and to win over customers.

### The unbundling and rebundling of banking services

In the longer term, the development of virtual banking in Hong Kong forms part of a larger 'unbundling' story in the banking sector. Many new fintech firms – and now the virtual banks – focus on discrete functions and services along the value chain that traditional banks offer, for example in payments, lending or money transfers. Focussing on an individual segment enables them to exploit the pricing and customer experience gaps left by the traditional banks.

Our view is that this unbundling will eventually lead to a 'rebundling' of services in new and innovative ways as customers will ultimately prefer to use a single efficient interface for all of their banking needs. This rebundling will lead to a smaller number of winners in the market, likely comprising the few traditional banks that are able to adapt to digital technologies and open banking, new virtual banks and fintechs that are able to knit together seamless services through APIs and other technologies, or some form of hybrid.

> *The unbundling and then rebundling of banking services in new and innovative ways will lead to a smaller number of winners in the market, likely comprising the few traditional banks that are able to adapt to digital technologies and open banking, new virtual banks and fintechs that are able to knit together seamless services through APIs and other technologies, or some form of hybrid.*

From a medium-term perspective, the outlook for the new virtual entrants could move in two directions. The first could see the widespread adoption of virtual banks as secondary banks, where they take a large share of payments and other non-balance sheet business such as wealth and insurance. Many parts of the landscape, such as mortgages and other balance sheet business, would likely remain untouched.

The second scenario is that the new virtual banks fail to convince customers of their value proposition, resulting in high acquisition costs, while the major traditional banks are able to create successful digital propositions much faster than anticipated.

The most likely scenario in the medium term is likely to be somewhere in the middle, with virtual banks winning over a considerable number of customers, but only a minor share of banking assets. Nonetheless, it is certain that the road ahead will be fiercely competitive, and both traditional banks and the new virtual bank entrants will need to develop a strategy for success in Hong Kong, which will include a mix of offence and defence. Overall, customers stand to be the real winners.

## What it will take to win: Traditional banks

For traditional banks, a defensive approach entails looking through the value chain to understand where they are vulnerable to disruption – as well as what their customers think about their existing processes – and focus resources on developing appropriate countermeasures.

An offensive strategy involves understanding and exploiting the areas where they might have a competitive advantage over their virtual bank peers. Traditional banks, which have a significant amount of capital and large customer bases, could seek to build completely new platforms for themselves, or capitalise on their inherent advantages by delivering a consistent and seamless experience across physical and online channels.

Importantly, bank branches are still valuable to customers – even those who are digitally savvy – especially for high-value transactions (e.g. higher margin and wealth management and mortgage products). For example, KPMG China's *Customer Experience Excellence Survey*[18] finds that customers, particularly in Hong Kong, still value human interaction.

Successful execution for traditional banks will also rely on their ability to better understand their customers and adopt a more customer-centric approach, which will require rapid IT and systems transformation. Existing banks will need 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 offer electronic onboarding and customise their digital banking user experience.

## What it will take to win: Virtual banks

We know from our work with virtual banks in Hong Kong that they have already developed their differentiation strategy and innovative products. Now, for the successful applicants, the focus is on seamless execution. In order to be successful, virtual banks will need to effectively recruit the right people, put in place the necessary systems, processes and controls, and quickly plug into the local ecosystem all within the next six to nine months. Meeting regulatory requirements and ensuring cybersecurity will also be crucial. Any regulatory or data and cybersecurity setbacks early on could potentially have a serious negative impact not just on the organisation, but also on the reputation of the whole sector.

[18] '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

Virtual banks are also expected to have a competitive advantage over traditional banks with respect to costs and digital infrastructure. For example, virtual banks are likely to enjoy cost and operating efficiencies in the KYC process, particularly through digital onboarding. Virtual banks are also not constrained by legacy systems and infrastructure that have hindered some traditional banks. However, if the execution of their strategy is below par, even virtual banks which are assumed to have a cost advantage may fail to overcome the scale advantages of traditional players.

## Cultivating an environment for digital banking

Hong Kong's digital banking landscape could follow a similar path to other jurisdictions like the UK, where virtual banks have been steadily building their customer base over time. Furthermore, the HKMA's initiatives to usher in a new era of Smart Banking, coupled with the opportunity to enhance customer experience in the banking sector, is creating an environment for digital banking to thrive in Hong Kong.

In particular, the Faster Payment System (FPS) – which was launched by the HKMA in September 2018 – could be a game changer. It will be interesting to see to what extent the further adoption of FPS for retail payments shifts Hong Kong towards a more cashless society over time, and the extent to which it opens opportunities for virtual banks and traditional banks alike to enhance more direct competition with e-wallets.

> *"We know from our work with virtual banks in Hong Kong that they have already developed their differentiation strategy and innovative products. Now, for the successful applicants, the focus is on seamless execution."*

# Customer Experience

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## Customer experience at the core of banks' winning strategy

Today's customers are better informed, better connected and more demanding than ever before. They expect consistent experiences across industries and are creating waves of disruptive change through the choices they make every day. Banks operating in Hong Kong have recognised the importance of the customer and yet today still struggle in execution.

The backdrop is a rapidly evolving landscape. The rise of virtual banks, the proliferation of mobile payments, open banking and other fintech companies are adding to an already competitive market. Coupled with the rapid development of innovation and technology generally in mainland China and particularly in the Greater Bay Area, banks in Hong Kong need to adjust their strategy to avoid losing out. Customers are less loyal to their bank than ever before and the trend of cherry-picking services will increase as other players make it easier to do so. Banks must ask themselves where future growth and performance will come from.

This all points to the need for further focus on the customer and customer experience. At the highest level, the ask is clear: customers want their bank(s) to 'know me', 'recognise me', 'reward me' and 'make it easy for me'. This does not only apply in a retail environment. Our research clearly shows that customer expectations across wealth, asset management and even corporate investment banking are not different. Practically this translates into a need to personalise, digitise and build trust.

It is well known that delivering a personalised service drives customer loyalty, and data sits at the heart of this. Banks need to invest in data management and analytics solutions if they want to deliver this personalisation regardless of channel. This needs to be consistently executed and implemented across all business lines.

As traditional banks continue along their digital transformation journey, it is clear they need to urgently consider the high expectations around digital and raise their level of delivery to attract and retain customers. Banks need to offer a seamless omni-channel experience that is highly digitally enabled but provides valued human touch-points at the right time. To achieve a true understanding of the customer, a bank needs to look at experience from outside in and then cascade change down through the organisation.

Lastly, like all organisations, banks need to show that they are doing the right things by their customers. Customer insight surveys across Hong Kong highlight the increasing importance that customers attribute to integrity. Trust emerges as a bedrock principle for the financial services sector to uphold. This entails building and maintaining trust beyond traditional customer privacy and cybersecurity measures. When banks place customers' best interests at the core of their business strategy, brand loyalty follows. Regulators are also working in this direction with more scrutiny of culture and conduct.

There is no lack of understanding that customer experience is important, but in reality implementation and execution in Hong Kong is inconsistent and the market is often still seen as lagging behind. Practically what should banks be doing?

> *"Banks that are able to get their integrated physical and online experience right will be leaders in the market."*

> *As traditional banks continue along their digital transformation journey, they should look at the experience they provide customers as perceived from outside the institution rather than look from the inside out.*

Our research reveals high-performing organisations are getting connected by making significant investments across eight enterprise-wide capabilities (see Figure 1). They are doing this to a greater degree than less mature organisations. These banks are able to understand what customers need and value, and they achieve it by delivering the intended experience profitably. They also have the responsiveness and resiliency to evolve with the changing consumer and competitive landscape to consistently deliver on their customer promise.

## Figure 1


*Source: KPMG*

For example, these banks:

- utilise and manage customer data to generate real-time customer insights and deliver contextual experiences (i.e. personalised, timely, location-based, proactive, etc)
- leverage partners and technology players in the ecosystem to work around the boundaries of old legacy platforms
- focus on employee experience to nurture the talent that will in turn deliver an exceptional customer experience and build trust
- foster a safe-to-fail environment in which employees and customers can collaborate on the future of banking, honing in on pain points and opportunities to prototype innovative solutions
- embrace a customer-centric digital architecture and embrace emerging technology to transform processes front to back

When organisations have truly adopted and invested in these capabilities, it is clear they deliver a better business performance and a higher return on equity. Banks must continue to factor in what customers value in order to formulate an effective strategy and achieve growth. Banks that can focus their initiatives accordingly and determine where best to invest their transformation efforts are most likely to excel. Keeping the customer at the core of their front-to-back thinking is critical.

# M&A and partnerships

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## Wealth management partnerships take centre stage in China

This is an era of unprecedented change for the wealth management sector. Asia is likely to set the pace for global wealth creation over the next few decades, led by China. New technologies, customer expectations, regulations and competitive pressures are rapidly disrupting the traditional business models. In this environment, wealth management organisations have no choice but to adapt.

Despite the rapid growth of wealth management in mainland China and Hong Kong, the industry remains fragmented. This fragmented industry, coupled with other drivers which are increasing costs and driving down fee margins – such as more stringent regulations around investment traceability and customer suitability, digital disruption, and an increasingly competitive landscape – points to a market that is ripe for consolidation.

Private banks and wealth managers are actively seeking to acquire assets under management in Hong Kong and Greater China, and in the years ahead, we expect to see a lot more deal activity. While M&A has long been the preferred option, we believe future deals will increasingly take place in the form of partnerships and alliances.

### Partnerships as an alternative to M&A

In terms of pure M&A, a number of wealth managers that already have operations in Hong Kong continue to seek quick access to new assets and revenue pools, as well as to increase their scale and efficiency. We are also seeing new entrants looking to establish a presence in the Hong Kong market as a foothold to access China onshore assets.

> *Wealth managers are now increasingly focused on creating alliances and partnerships to drive new growth, create new channels and drive new innovation. Successful partnerships can result in win-win outcomes such as client and revenue pool access in return for product manufacturing or content expertise.*

However, there are significant risks associated with M&A, and outright acquisition of capabilities, customers or technologies is not always the right option. As a result, wealth managers are now increasingly focused on creating alliances and partnerships to drive new growth, create new channels and drive new innovation. Successful partnerships can result in win-win outcomes such as client and revenue pool access in return for product manufacturing or content expertise.

Indeed, there is certainly strong demand for partnerships from all parties. Within the Greater Bay Area – and more broadly in mainland China – there are a number of regional and city commercial banks that have wealthy client bases but lack the desired product capabilities. We also see Chinese retail banks with large deposit and customer bases proactively looking to diversify into wealth management, but at the same time lacking the capabilities or expertise with regards to product manufacturing and related risk management, reporting and asset value calculation.

These retail banks are therefore looking for partnerships with foreign wealth managers that offer product expertise to enable them to expand their offering for their existing retail client base. This is also an attractive proposition for foreign players as it gives them access to revenue pools in mainland China. It is also important to note that there are significant opportunities for partnerships not just in mainland China, but also in other high-growth ASEAN markets that are seeing a surge in private wealth.

Separately, new wealth management product regulations issued last year by the China Banking and Insurance Regulatory Commission (CBIRC) aims to encourage banks to standardise their wealth management businesses and to invest funds into the capital market in a compliant manner. The new rules are aligned with global standards, and are upping the game with regards to suitability checks, disclosure and asset value calculation, as well as curbing shadow banking and 'channel business'. With the transition period lasting until the end of 2020, the new regulation provides an opportunity for foreign entrants to leverage their overseas expertise and experience in the wealth management space in mainland China.

As alliances in wealth management continue to take centre stage, we are starting to observe two forms of partnerships emerge. The first is to provide investment products – and expertise around it – to complement, enhance or expand the partner's product shelf. In return, the partner gains access to the other organisation's clients – direct or indirectly – and therefore new revenue pools without having to build a customer base from scratch. Important considerations for product providers are the ability to provide content in a cross-border context, in particular with regards to capital controls (e.g. possessing the appropriate quotas for China outbound investment), or whether onshore product capabilities are sufficient to complement the partner's product shelf and satisfy onshore client requirements.

The second type of partnership is the provision of specific advice and expertise on product content and management, and generally on how to set up and run a wealth management business. These arrangements are most appropriate in situations where wealth managers cannot place products on their partner's shelf due to capital restrictions, but can still capitalise from their expertise and gain access to revenue pools which would not be available otherwise.

## The rise of wealthtech

The growth of the wealth management industry has also led to the rise of wealthtech providers and solutions in the region. This is another area where we see partnerships forming. A number of Chinese technology companies have their origins in retail and e-commerce, and have therefore built up a significant captive consumer base. Many are now making a foray into financial services and starting to cross-sell other products, among them wealth management products.

In terms of distribution channel technology and client onboarding, a growing number of mid-tier and larger banks are considering partnering with these Chinese technology companies to enhance the user experience for their existing client base. This is essential as consumer expectations and the demand for digital are much higher in mainland China than elsewhere in the world. We therefore believe that the wealth managers that are unable to offer a seamless mobile and digital experience will face significant challenges to growth in the mainland Chinese market.

Although wealthtech continues to transform the wealth management industry, mainland China's sprawling tech landscape can make finding and vetting the right partner a serious challenge. Asymmetry in terms of leverage and influence in the market is also adding to the complexity. Foreign wealth managers therefore need to carefully consider these challenges when seeking to tie up with a wealthtech company in China.

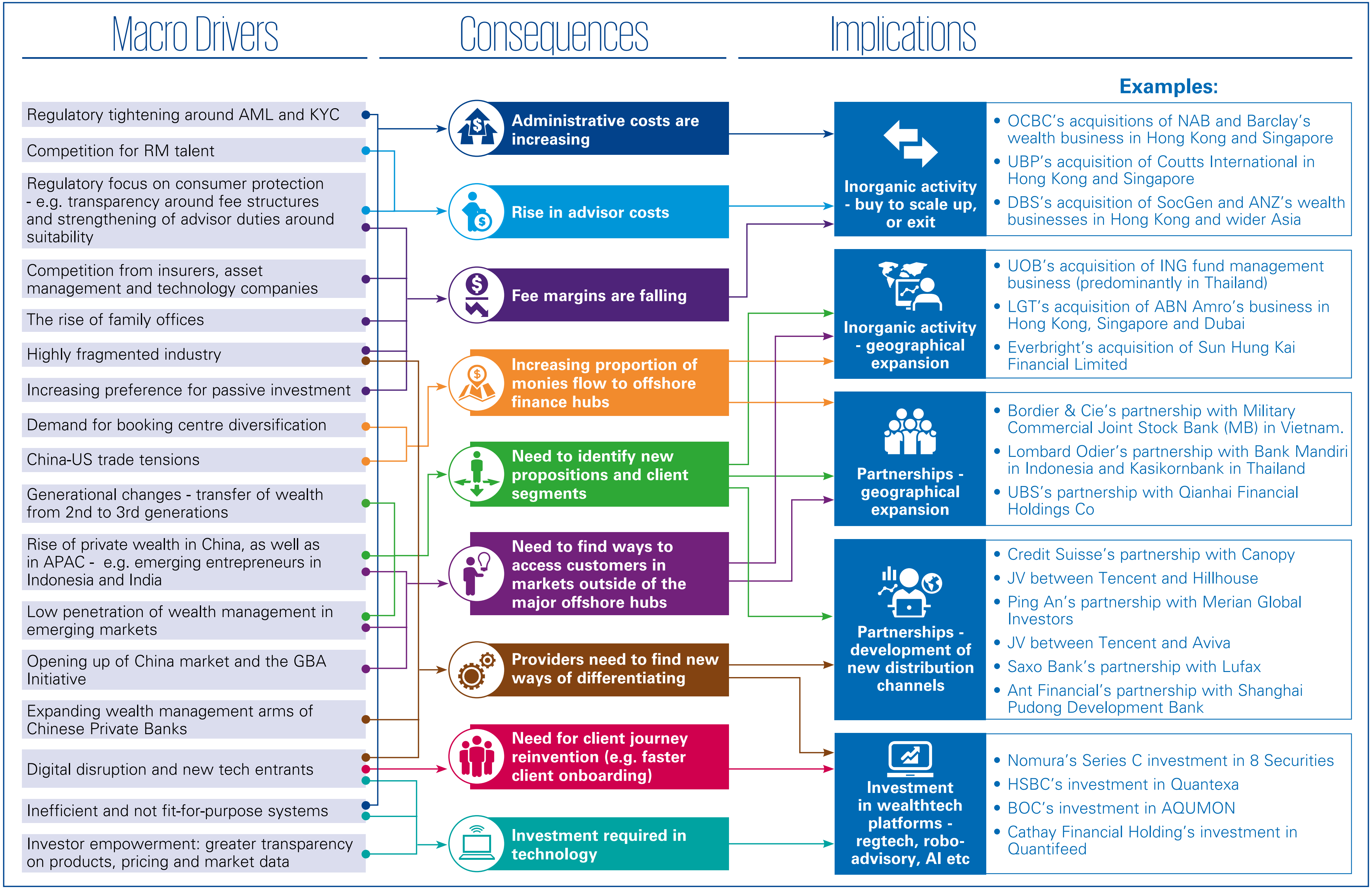
## China's financial services sector continues to open up

The continued opening up of China's financial services sector to foreign investment is also having an impact on private banks and wealth managers in Hong Kong. More recently in May, the CBIRC announced that it intends to open up the financial services sector further by dropping foreign ownership limits in local banks and scrapping asset size requirements for foreign banks operating onshore. Amid this changing landscape, foreign institutions and investors will seek to select partners based on the strength of their customer base, distribution power, capital and brand.

The next few years will see continued consolidation – increasingly through partnerships – in the wealth management industry, which may lead to a few players starting to establish a more significant market share. A less fragmented market with partnerships that combine expanded client bases and revenue pools with enhanced product manufacturing and content expertise will ultimately benefit the consumer, who should remain at the heart of the future development of wealth management.

*"The growth of the wealth management industry has also led to the rise of wealthtech providers and solutions in the region. This is another area where we see partnerships forming."*

**The drivers and implications for wealth management M&A and partnerships**




*Source: KPMG*


# Target Operating Model

**Isabel Zisselsberger**
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## Moving towards a connected enterprise

Evolving technology and changing customer behaviour over time have forced banks to change the way they operate to deliver the desired customer experience. There are few banks, if any, that are not undergoing a major digital transformation programme. This digitalisation of financial services is creating new opportunities for banks in Hong Kong to grow more efficiently and effectively. However, the fast-evolving landscape is putting stress on their organisational structures. It is therefore essential that banks revisit and start thinking about the next-generation of target operating model (TOM). At the simplest level, a bank's TOM provides insight into the organisation, delivery models, business processes, data, technologies and governance that comprise the organisation.

Today's operating model is under pressure for a number of reasons:

**The search for regional growth:** The growth of the China market is having a significant impact on banks, particularly with regards to the development of key strategic policies such as the Greater Bay Area (GBA) and the Belt and Road Initiative (BRI). While most banks in Hong Kong are expected to have a long-term China strategy in place, many have different business models and objectives for the GBA, BRI or other initiatives. A bank's TOM will therefore need to be agile enough to be able to cope with multiple strategies in the region.

**The age of the Customer:** It is clear that consumer preferences are changing and expectations are increasing. The way banks interact with their customers, as well as how they deliver products, services and customer touchpoints is evolving, and will have a knock-on impact on how banks do business and how they structure their teams. To compete more effectively, capture the value inherent to the digital channels and reduce the cost to serve in the traditional channels, banks need to organise themselves to be more customer centric.

**The pace of technological change:** Technology change, accelerated by the development of open banking and virtual banking in Hong Kong, has disrupted the traditional banking model. The use of intelligent automation, artificial intelligence and other emerging technology is having a transformative effect on banks' go-to-market propositions. Furthermore, with some previously human-led tasks now being handled by machines, banks will need to consider how the adoption of new technology affects both the current and future composition of the workforce.

**The ongoing compliance challenge:** Whether it is macroprudential regulation or issues like conduct, regulatory tightening will continue to have an impact on how banks structure themselves, how they set up their lines of defence, and how they implement controls and monitoring systems. New regulations and compliance issues make coordinating technologies and services across all possible touchpoints incredibly difficult.

**The search for better efficiency ratios:** Many banks are operating against a backdrop of intense cost pressure and search for profitability in a tough market. This cost pressure also requires a rethink of organisation structures, processes and the use of technology to achieve greater efficiency.

For all these reasons and many more, it is evident that the current operating models and ways of working are not fit for purpose anymore. This calls for a new approach that looks at the TOM through a different lens.

## The Next-Gen Target Operating Model

In our view, the key to successfully transforming a bank's TOM lies in its ability to become a 'connected enterprise' – an organisation that can translate pure customer focus into its day-to-day operations in an efficient and effective manner, and connect front to back breaking down any siloes that exist between functions.

KPMG has identified eight fundamental capabilities (see Figure 2) that will help an organisation achieve this, which include product, pricing and customer strategy; partnerships, alliances and vendor management; technology architecture and enablement; and organisation alignment and people capability. Investing in these capabilities across the front, middle and back office and the wider partner ecosystem is pivotal to capturing the financial opportunities across the entire value chain.

In particular, the ability to effectively leverage third-party entities to increase speed to market, reduce costs or supplement capability gaps to deliver on the customer promise is essential for banks to factor into their TOM. This is especially important as the development of the Open API framework and the proliferation of fintech firms in Hong Kong mean that future growth and success lies in increased collaboration between multiple parties in the banking ecosystem.

"*The use of intelligent automation, artificial intelligence and other emerging technology is having a transformative effect on banks' go-to-market propositions. Furthermore, with some previously human-led tasks now being handled by machines, banks will need to consider how the adoption of new technology affects both the current and future composition of the workforce.*"

## Figure 2

| Experience attributes | Connected enterprise capability | Description |
|---|---|---|
| Brand | Product, pricing and customer strategy | The ability to deliver relevant, valuable and consistent products, services, experiences, pricing and offers that are targeted to their intended customer segments. |
| | Experience centricity | The ability to design and deliver a seamless and personal customer experience that continually meets evolving expectations across all physical and digital touch points to drive engagement, satisfaction and loyalty. Experience centricity applies to prospects, customers, employees and partners. |
| Products/ services | Responsive supply chain and operations | The ability for a customer to select, receive and return products/services when, where and how it is convenient for them and in a way that is enabled through advanced, analytics-driven demand planning, inventory management and distribution. |
| | Partnerships, alliances and vendor management | The ability to effectively leverage third-party entities to increase speed to market, reduce costs or supplement capability gaps to deliver on the customer promise. |
| Interactions | Advanced data and analytics | The ability to harness and use data, analytics and insights to engage and execute in a thoughtful and orchestrated manner across all touch points while also protecting customer data integrity, privacy and security. |
| | Technology architecture and enablement | The ability to leverage technology systems and expertise to effectively and efficiently deliver cross-channel experiences, provide employees with enabling tools and synchronise with partners and the broader digital ecosystem. |
| | Seamless commerce | The ability to deliver a convenient, secure transaction experience that meets customer preferences while ensuring payment technologies are integrated and provide a consistent experience across channels. |
| People | Organisation alignment and people capability | The ability for an organisation to marry outside-in customer perspectives with inside-out experience management processes and capabilities, including top-down executive vision, cultural alignment, matrixed and agile organisational structures and integrated, aligned performance management. |

*Source: KPMG*

> *The key to successfully transforming a bank's TOM lies in its ability to become a 'connected enterprise' – an organisation that can translate pure customer focus into its day-to-day operations in an efficient and effective manner, and connect front to back breaking down any siloes that exist between functions.*

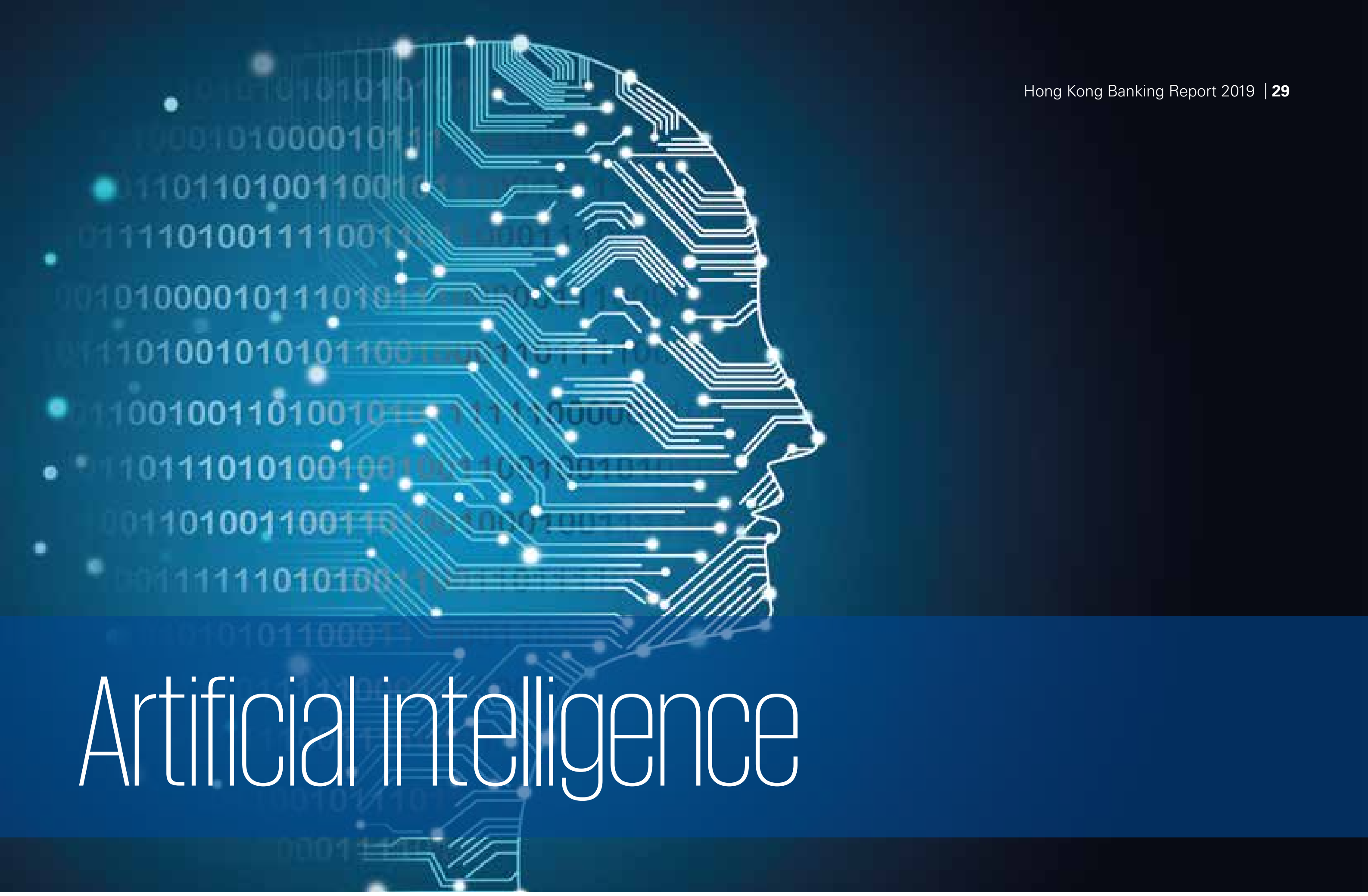
Partnerships and alliances are also an important consideration for banks that are revisiting their GBA and broader mainland China strategies. Many banks are finding that forging partnerships with mainland Chinese banks and tech firms is an increasingly viable strategy for growth in the region. The wealth management industry serves as a fitting example, where foreign, local and non-financial services companies are partnering to mutually benefit from access to new clients, larger product shelves and greater knowledge and expertise. However, working with partners can have its challenges, and banks need to keep this in mind when designing an operating model that is fit for purpose.

Furthermore, the ability to leverage technology and data analytics to effectively and efficiently deliver cross-channel experiences, provide employees with enabling tools and act on forward-looking data-enabled insights will be key to winning new customers and retaining existing ones. Related to this, the adoption of an enterprise-wide connected and controlled intelligent automation strategy underpins the next generation operating model across all functions.

We believe that banks must continue to become more agile in their way of working to increase their speed to market, enhance customer experience and stay ahead of their competition. Ensuring that the workforce evolves across the entire organisation and identifying and filling talent gaps will also be key to remaining agile, responding better to business and customer needs, and delivering an improved customer experience.

All our research shows that the banks that can effectively transform their operating models and move towards becoming a connected enterprise by truly adopting these principles will enjoy stronger business performance and success.

# A digital future



# Artificial intelligence

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## Harnessing the full power of AI also requires smart governance and controls

As banks continue to accelerate digital transformation and embrace emerging technologies, many are seeking to harness artificial intelligence (AI) to stay ahead by increasing operational efficiencies, creating new personalised products and services, and improving customer experience. However, banks must also ensure that appropriate governance and controls are put in place to manage the evolving risks that new technologies like AI bring.

In Hong Kong, we continue to see a number of AI use cases for banks through the application of AI on top of automation platforms – for example in finance processes and regulatory reporting. We are also seeing AI being used on new credit risk management techniques, allowing banks to expedite the approval process for customers to receive unsecured lending on loans. Indeed, AI and technology like software bots continue to be seen as having great potential to drive future business transformation and long-term value (see 'Top 10 ranking' on Page 30).

Regulators also continue to support the use of emerging technologies in financial services, with the Hong Kong Monetary Authority (HKMA) introducing a number of initiatives in recent months to enable banks to conduct digital onboarding and provide loans using their own data, among other things.

Looking further forward, quantum computing is on the horizon. Equipped with a new paradigm of algorithms and processing powers, quantum computers enable organisations to process large amounts of complex data much faster and more accurately than existing computers, resulting in increased efficiencies and the optimisation of processes. While some banks have experimented with early stage applications of it, we believe quantum computing will soon become mainstream in financial services, and Hong Kong banks have an opportunity to capitalise on this wave and become leaders in this space.

## The top 10 ranking

Responses to the 2019 Technology Industry Innovation Survey yielded the following top ten list of technologies that are perceived by technology industry leaders as having the greatest potential to drive future business transformation and long-term value.

| Technology | 2019 Rank | | 2018 Rank |
|---|---|---|---|
| Internet of Things (IoT) | 1 | | 1 |
| Robotic process automation (RPA, e.g. software bots) | 2 | ◀◀◀◀ | 9 |
| Artificial intelligence, cognitive computing, machine learning | 3 | | 2 |
| Blockchain | 4 (tie) | ◀◀◀◀ | 7 |
| Robotics and automation (including autonomous vehicles) | 4 (tie) | | 3 |
| Augmented reality | 6 | | 8 |
| Virtual reality | 7 | | 4 |
| Social networking, collaboration technologies | 8 | | 5 |
| Biotech, digital health, genetics | 9 | | 6 |
| On Demand marketplace platforms | 10 | | 10 |

Largest jump in ranking ◀◀◀◀

*Source: KPMG Technology Industry Innovation Survey 2019*

## Managing AI risks

While AI is set to have a significant influence on the future of banking, it also brings new risks to the organisation that need to be properly identified and managed, especially given that an error in an algorithm or the use of incorrect or incomplete data has the potential to turn small issues into large-scale problems very quickly. Problems related to the collection or use of data can lead to bias in systems, where AI technology draws improper conclusions about data sets, resulting in a negative impact on financial inclusion and diversity.

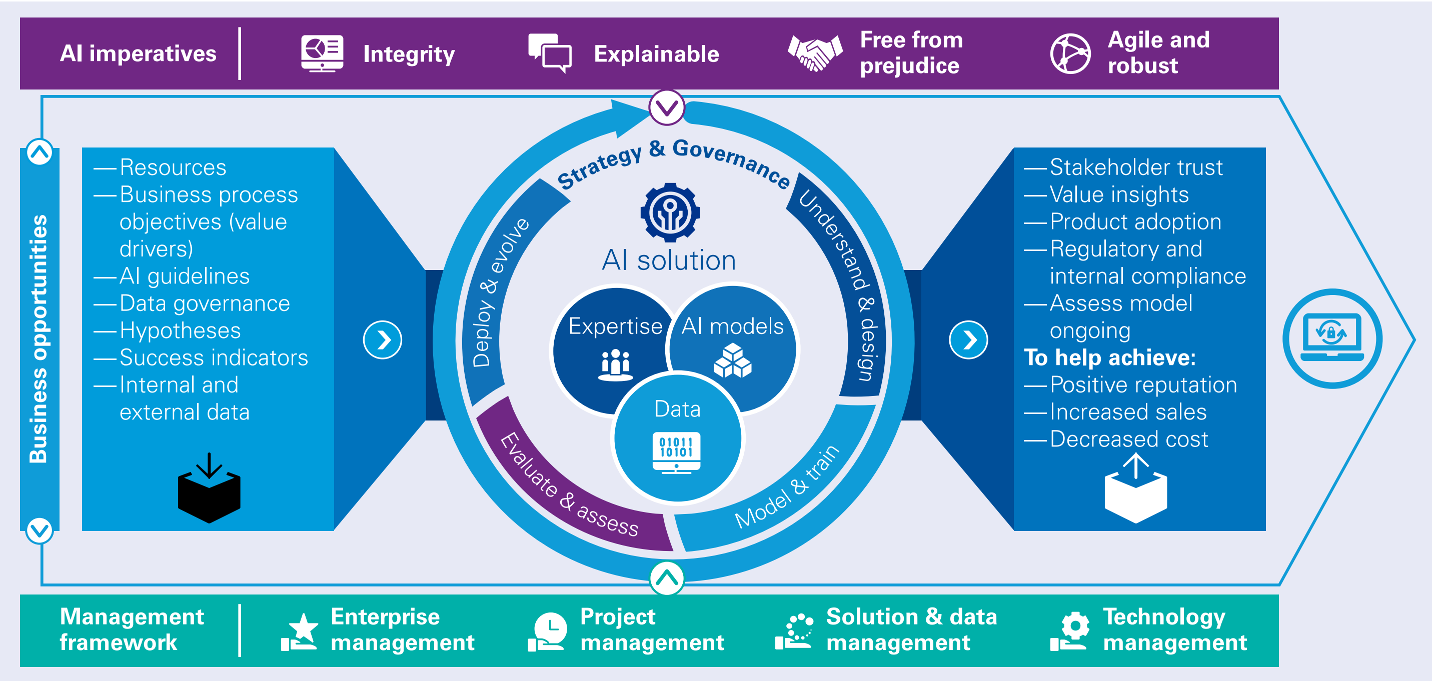
Furthermore, the proliferation of bots operating in organisations is creating additional challenges around how to fully understand and assess the risks. Our view is that the risk function is often brought in only once a bot has been developed instead of during the conceptualisation and programming stage, which creates a challenge around implementing effective controls.

It is therefore clear that banks must improve their controls and governance to ensure that AI and its associated risks are properly managed. First and foremost, banks should seek to develop a purpose-built risk and control framework[19] that can help mitigate data privacy, security and regulatory risks across the entire lifecycle of the model.

[19] 'AI Risk and Controls Matrix', KPMG UK, https://assets.kpmg/content/dam/kpmg/uk/pdf/2018/09/artificial-intelligence-risk-and-controls-matrix.pdf

KPMG's 'AI in Control' framework,[20] is supported by a set of methods, tools and assessments that can help banks realise value from AI technologies while addressing their inherent challenges, such as integrity, explainability, fairness and agility. As part of the framework, banks should develop criteria for the continuous monitoring and control of AI solutions and their performance, without impeding innovation and flexibility. The framework also enables banks to conduct diagnostic reviews of these solutions, as well as risk assessments of the control environment to determine organisation readiness for effective AI control.

## KPMG's AI in Control Framework




*Source: KPMG*

The key to managing AI and its associated risks is for banks to have a comprehensive understanding of who developed the algorithm, the value the technology currently delivers and how it fits into the overall business strategy. Having a clear understanding of the entire ecosystem including third party data and cloud service providers will also help banks build AI thinking into their risk function.[21] This is increasingly crucial as business users are deploying these technologies directly with the third party software as a service provider with less direct involvement from IT, Risk, Compliance and Cybersecurity.

Data remains the critical foundation for developing and deploying AI successfully throughout the organisation. The banks that ensure that their data is consistently reliable and secure will be able to unlock the true value and power of AI, and maintain a competitive edge in the market.

With banks in Hong Kong expected to further ramp up investments in AI in the year ahead, ensuring that they keep up with the pace of change of the associated risks and compliance issues will be a key to sustainable success.

[20] 'KPMG Artificial Intelligence in Control', KPMG, https://home.kpmg/xx/en/home/insights/2018/12/kpmg-artificial-intelligence-in-control.html

[21] 'Keeping the AI in line: Managing risk in an automated world', KPMG, https://home.kpmg/xx/en/home/insights/2019/03/keeping-the-ai-in-line-fs.html

# Open Banking

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## Open APIs offer new opportunities for banks, but first they must focus on working effectively with third parties

The ongoing development of Hong Kong's Open Application Programming Interface (API) Framework continues to reshape the digital banking landscape, providing a number of new business opportunities for banks, technology players and retail firms alike. However, as banks continue their technical implementation of the initiative, many are also facing challenges, particularly around the onboarding of third party service providers (TSPs).

The Open API Framework, introduced by the Hong Kong Monetary Authority (HKMA) last July, aims to improve customer experience, promote financial inclusion and provide consumers with more information and greater access to financial products and services. Through providing a common way to retrieve pricing and product information, customers will be able to easily compare products and services, helping them to find exactly what they want, and at the right price via the aggregators in the market.

### Managing TSPs and cybersecurity challenges

However, as the Open API initiative moves into its second phase, banks are finding themselves facing challenges that could slow the process down or impact the level of adoption. In particular, while many banks are primed for the technical implementation of Open APIs, the governance of the whole process remains a key area of focus. With TSPs now part of the ecosystem, the HKMA has stated that banks have a fiduciary duty to onboard them to ensure that they have the right capabilities and relevant internal procedures to manage the Open APIs and to ensure consumer protection.

The banking industry continues to seek further clarity around the steps that should be taken to onboard TSPs and how due diligence should be conducted.

## Open API phases for the Hong Kong banking sector

| Phase | Open API functions | Examples | Delivery time |
|---|---|---|---|
| I | Product information | Deposit rates, credit card offerings, service charges and other public information | by the end of January 2019 |
| II | Customer acquisition | New applications for credit cards, loans and other products | by the end of October 2019 |
| III | Account information | Account balance, credit card outstanding balance, transaction records, credit limit change and others | To be set out before July 2019 |
| IV | Transactions | Payment and transfers | |

*Source: HKMA*

Indeed, we believe that some institutions have underestimated the level of effort and infrastructure required to effectively onboard TSPs. We know from our work on open banking initiatives in other markets that banks need to focus on ensuring that they have a clear understanding of what their risk appetite is with regards to entering into arrangements with TSPs, and that they partner with the right vendors.

Cybersecurity should be top of mind and integral to a bank's approach as they continue to build an Open API ecosystem: it is essential that they ensure that their networks are secure and that cyber risks are properly managed.

Banks should also focus on establishing a robust operational governance mechanism to manage the day-to-day communication around the availability of services, changes to the API and the knock-on effects of the changes.

## Capitalising on new opportunities

Despite the challenges, the ongoing development of Open APIs presents a number of opportunities for banks. For example, banks could apply artificial intelligence across aggregated data in order to offer tailored customer-specific products for their customers, enhancing the overall banking experience.

The use of Open APIs is still focused on the retail banking side, targeting consumers' lifestyles such as shopping and commuting habits. However, the application of Open APIs to corporate banking offers a currently untapped opportunity for banks to find a standardised way to handle financing for SMEs, as well as for treasury management and wealth management. We believe that this is the logical next step for open banking in Hong Kong.

From a more macro perspective, the ongoing development of the Greater Bay Area (GBA) provides a significant opportunity for Hong Kong to up its game and demonstrate its competitiveness in the wider region. As it stands, the seamless adoption of technology, the level of data and information sharing and the proliferation of online payments in Shenzhen and Guangzhou paint a different picture to the current landscape in Hong Kong. However, the implementation of Open APIs, as well as the development of virtual banking and the launch of the Faster Payment System, are sending an encouraging message that Hong Kong is nurturing an environment that is conducive to digital banking. Over time, this could also shift Hong Kong towards a more cashless society, a phenomenon that is currently being observed in the rest of the GBA and more broadly in mainland China.

*"The implementation of Open APIs, as well as the development of virtual banking and the launch of the Faster Payment System, are sending an encouraging message that Hong Kong is nurturing an environment that is conducive to digital banking. Over time, this could also shift Hong Kong towards a more cashless society."*

Overall, Hong Kong continues to make good progress towards creating the digital banking ecosystem of the future. For the banks themselves, the current challenge to the successful development of an API ecosystem lies not in the technical implementation, but rather in the business models and governance and risk practices that need to be implemented quickly and effectively. We believe that the leaders in this space are the organisations that have a clear business-led proposition on what they want to achieve from Open APIs, and are applying this proposition to the wider context of their digital strategy.

# Blockchain

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

*"It is likely that more banks and technology providers will explore the use of blockchain-powered solutions to provide remittance services to other markets, with RMB remittance a potential opportunity in Hong Kong."*

## Blockchain: no longer a buzzword in Hong Kong

As the digitisation of banking services continues at a rapid pace, the industry is starting to see the emergence of genuine blockchain-based solutions. This presents a number of opportunities ahead for banks.

Blockchain facilitates the creation of trusted data by using a distributed ledger for transaction information. The value to banks and their clients is significant – with enhanced data integrity, improved customer experiences, and increased efficiency, the creation of this shared and transparent ledger allows organisations to focus on generating value from data.

### Blockchain developments in Hong Kong

We continue to see an increasing use of blockchain in financial services both worldwide and in Hong Kong. For example, blockchain is being applied in trade finance with the Hong Kong Monetary Authority's (HKMA) launch of eTradeConnect last October. The blockchain-based platform aims to improve efficiency, reduce risks, and strengthen trust among trade participants. The HKMA also signed a Memorandum of Understanding between the operators of eTradeConnect and we.trade in Europe to conduct a proof of concept on connecting the two platforms. We expect to see more participants use eTradeConnect in the year ahead, with participating banks starting to promote the platform to their customers.

Blockchain-based solutions are also starting to be applied to remittance services. For example, Alipay and GCash – supported by Standard Chartered Bank – launched a cross-border real-time remittance service between Hong Kong and the Philippines last year, which applies blockchain technology to streamline the remittance process. It is likely that more banks and technology providers will explore the use of blockchain-powered solutions to provide remittance services to other markets, with RMB remittance a potential opportunity in Hong Kong. For example, in December 2017, China Merchants Bank and CMB Wing Lung Bank launched a blockchain-based solution to facilitate cross-border RMB remittance.[22]

[22] http://www.cmbwinglungbank.com/wlb_corporate/files/en/upload/about-us/press_release_20171228a.pdf

In addition, in the last year we have seen banks launch their own blockchain-based settlement platforms to enable easy payments between customers and for interbank clearance. We have also seen banks such as J.P. Morgan become the first US bank to launch a digital coin – JPM Coin – using blockchain technology to enable the instant transfer of payments between institutional accounts.

Meanwhile, the Securities and Futures Commission recently clarified its position on digital assets – including Security Token Offerings (STOs) – noting that STOs will be treated like any other security. We believe that this is a welcome development as this provides more certainty in the market, and we predict that we could see the first STOs in Hong Kong before the end of this year.

## Opportunities in mainland China

Importantly, we continue to see a buzz of activity around blockchain in mainland China. In fact, data from the World Intellectual Property Organization shows that China holds the largest number of blockchain patents worldwide, and continues to be a leader in new patent filings.

China's government continues to encourage innovation around blockchain, but has also taken steps to regulate the technology. In January, the Cyberspace Administration of China announced regulations requiring Chinese blockchain platforms to censor content, and to allow authorities access to stored user data and check the identity of users.

The speed of blockchain development and innovation in mainland China is likely to have a significant impact on the pace of the technology's development in Hong Kong – for example the growth of eTradeConnect and cross-border trading. In the future, we could start to see stocks and securities being issued via blockchain. Switzerland's SIX exchange is already experimenting with this concept. This approach could also extend to the Hong Kong Stock Connect with Shanghai and Shenzhen in the long run, with the Hong Kong Stock Exchange announcing in November last year that it is developing a new blockchain-powered platform to facilitate trading on Stock Connect.[23]

## Blockchain talent in the spotlight

As blockchain continues to take shape in Hong Kong, the potential opportunities the technology provides to financial services are becoming increasingly clear. We expect banks to actively seek to explore blockchain and capitalise on these opportunities in the year ahead. However, concerns and uncertainty around the technology remain, and banks should ensure that they keep a close eye on ongoing local and global regulatory developments in this space. Nonetheless, we expect banks to be one of the primary recruiters of blockchain talent in the coming years. However, with many of the young blockchain professionals currently preferring to work at startups and tech firms, figuring out how to attract and retain the top blockchain talent should be a key consideration for banks in Hong Kong.

*"In the future, we could start to see stocks and securities being issued via blockchain. Switzerland's SIX exchange is already experimenting with this concept. This approach could also extend to the Hong Kong Stock Connect with Shanghai and Shenzhen in the long run, with the Hong Kong Stock Exchange announcing in November last year that it is developing a new blockchain-powered platform to facilitate trading on Stock Connect."*

[23] https://www.info.gov.hk/gia/general/201811/06/P2018110500636.htm

# Data

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## The age of the 'data culture' is here

With banks actively seeking to transform amid the digitalisation of the industry, it is now more important than ever for them to embed a 'data culture' throughout their organisation in order to realise the real value of their technologies and meet customer expectations.

Good data culture encompasses the application of data to enhance front, middle and back office processes, but also ensuring that the appropriate infrastructure, governance and security are in place. For instance, we are starting to see banks develop new models using deep learning algorithms to manage risk, instead of the traditional statistical model approach. We are also seeing more use of artificial intelligence (AI) technology to streamline and automate previously human-led bank processes that are repetitive, time consuming or time sensitive.

The front office of both retail and commercial banks is also increasingly harnessing data to create new business models and drive customer growth through obtaining a single customer view – aggregating data to create a profile of a customer to give a clear view of how they fit into the business, and importantly where they can be served by other parts of the bank.

### Data infrastructure and governance is key

However, without proper data infrastructure and governance, banks will not be able to truly realise the value that data can bring. We have seen some innovative use cases among banks in Hong Kong using AI and other technologies, but on the other hand we continue to see slow progress when it comes to developing infrastructure to facilitate the use cases. Even today, large global institutions are only starting to define what their data governance looks like and who is responsible for it in the region.

One way to improve the application of data is through the use of cloud technology to store data. This is one area that presents significant opportunities, but is yet to be fully utilised by banks in Hong Kong.

> *Without proper data infrastructure and governance, banks will not be able to truly realise the value that data can bring. We have seen some innovative use cases among banks in Hong Kong using AI and other technologies, but on the other hand we continue to see slow progress when it comes to developing infrastructure to facilitate the use cases.*

We appreciate that there are significant regulatory and compliance hurdles to jump on this journey, all of which are challenging and time consuming. But we think that to truly unlock the power of data, the application of these types of cloud services (e.g. access to significant capacity, scalable infrastructure and very high speeds) is a must. Once in place, we expect to see the market's use of data accelerate dramatically.

## Drivers to foster a data culture

There are a number of drivers that we believe will push banks in Hong Kong to ensure that they foster a data culture. First, regulators are demanding more data from banks, and at a greater level of granularity. This is unlikely to let up in the foreseeable future, and we expect banks to increase their investment and focus on getting their data strategy right to ensure regulatory compliance.

Second, the development of an Open Application Programming Interface (API) framework in Hong Kong is transforming how banks will work with non-financial services organisations and other third party service providers to enhance the overall banking experience for customers. Data will be a key enabler and crucial to the success of the Open API initiative as it will bring together insights from a number of data points to create new products, services and experiences for consumers.

In addition, the launch of virtual banks in Hong Kong is a significant development for the industry, with the new entrants creating their IT architecture from scratch. Once they start to build up their data sets, virtual banks will be a force to be reckoned with in certain product areas and segments as they will be powered by greater insight and faster foresight.

These developments further underscore the need for banks to have a holistic culture and enterprise-wide view on what data to collect, where to store it, and how to manage, secure and harness it for the benefit of their customers. Banks that fail to do this and look at data simply to assist with Management Information reports will find themselves falling behind their competitors.

## Making data a business priority

Embedding a data culture throughout an organisation will not be an overnight process. It is therefore essential that banks start to embark on the journey and devise a holistic, methodical approach to their data. Importantly, it is not just about getting it right once. Banks need to have a sustainable platform, governance and associated processes to ensure that their data is maintained at a high level to enable the business to fulfil its digital agenda.

For banks to succeed, they need to view data not as a technology agenda item, but rather as a broader business priority. Banks might have a great business proposition, but poor data quality and governance will slow them down and limit the effectiveness of their digital strategy. It is clear that data has a direct impact on an organisation's ability to deliver products and services or expand into a new market, and is fast becoming a key topic on the board agenda.

Ensuring that senior management at banks understand how to unlock the true value of data for the business, while being aware of the associated risks that need to be managed, is key. The banks that are able to take a broad enterprise-wide view of their data and foster a data culture throughout the entire organisation will be the ones that are able to maintain their competitive edge in the long run.

> *For banks to succeed, they need to view data not as a technology agenda item, but rather as a broader business priority.*

# Smart risk management

# Regtech

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## Regtech is fast becoming an indispensable part of the banking industry

The increasing complexity and scope of regulations globally over the past 10 years has led to the cost of compliance to surge, particularly for banks operating across multiple jurisdictions where differences in regulatory requirements across jurisdictions can be a significant stumbling block in driving consistency in global processes. This comes in an environment where margins are thin, competition is fierce and the volume of transactions and data that banks need to handle continues to increase exponentially.

These challenges are driving banks to seek new technologies and ways of working to succeed and grow. Regtech is emerging as one of the fastest-growing elements of financial innovation. Through the use of technologies such as advanced analytics, robotic process automation, cognitive computing and the cloud, regtech helps banks to achieve regulatory and compliance outcomes more efficiently and effectively. It also has the potential to enable banks to get ahead of requirements and detect risk before the regulators do.

### A growing appetite for investment

Regtech investment in 2018 hit USD 3.7 billion worldwide, more than triple the amount in all of 2017.[24] While much of this investment has been in the US and Europe, we believe that Asia-Pacific is becoming the new engine of regtech growth and innovation, driven by increased investment in new technologies, greater regulatory acceptance, extensive infrastructure development and strong economic growth in the region. As a leading regional and international finance centre, Hong Kong – and in particular the banking industry – is likely to be a key beneficiary of this shift.

In the past, banks in Hong Kong have primarily used regtech solutions around KYC and anti-money laundering, for example in improving the effectiveness of the sanctions alerts clearance process.

[24] 'The Pulse of Fintech 2018', KPMG International, February 2019, https://assets.kpmg/content/dam/kpmg/xx/pdf/2019/02/the-pulse-of-fintech-2018.pdf

However, in the year ahead we expect banks to broaden their regtech investment to include Governance, Risk and Compliance (GRC) solutions coupled with other tools to track regulatory developments, automate business-wide control assessments, further reduce false positive alerts in trade surveillance and digitalise voice monitoring.

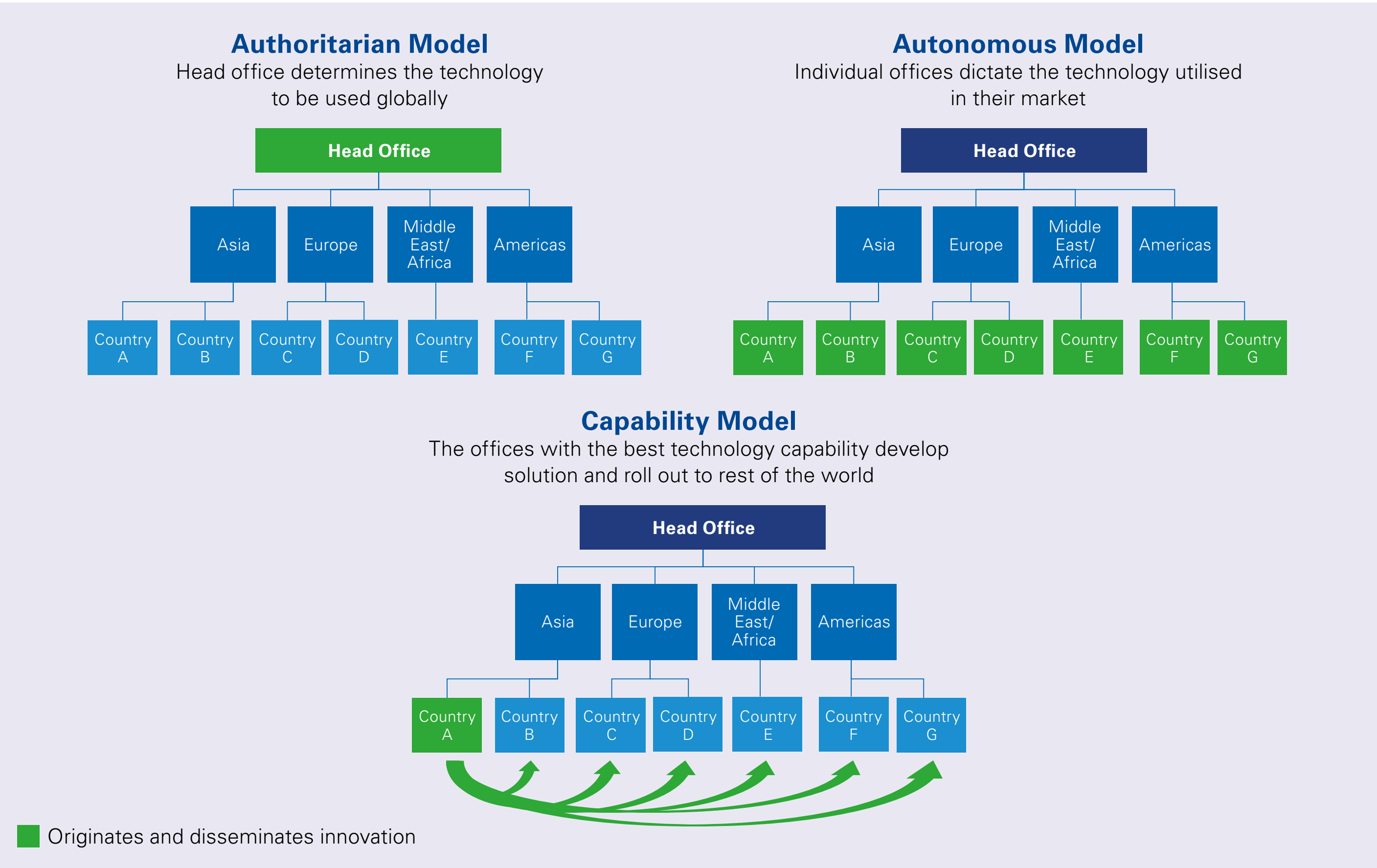
Many of these developments will be driven by artificial intelligence (AI) and machine learning. For example, AI is being deployed to help financial institutions reassess their LIBOR-linked contracts for derivatives and other financial instruments as they prepare for the transition away from LIBOR and towards alternative risk-free rates.

Furthermore, the launch of the first virtual banks in Hong Kong is likely to accelerate the uptake of regtech in the city, as these new players will need to build a comprehensive compliance framework from scratch and utilise the best in existing technology to ensure that they meet banking regulatory and data management requirements swiftly and effectively. By the nature of their business and corporate DNA, we expect these banks to be early adopters of solutions that are currently in the experimental stage.

## Driving regtech initiatives from Hong Kong

We predict a trend of global banks revisiting how they drive regtech initiatives. The traditional approach has been to adopt regtech solutions at a global level before rolling them out to the regional branches (see Figure 3). However, we have seen examples where market-leading organisations are giving more autonomy to individual offices to lead their own regtech initiatives, especially if that region is where the biggest opportunity resides. This is an increasingly viable option for multinationals as there are distinct benefits to be had from using some of these tools as point solutions for discrete challenges such as country specific regulatory requirements. The offices with better technology capabilities may seek to develop their own solutions that can then be scaled up and deployed in other markets.

### Figure 3




*Source: KPMG*

## Smart use of intellectual property

The leading banks of the future will also view patents as an important part of their innovation and digital transformation strategy. Investment in regtech and smart use of intellectual property can deliver long-term value for banks' shareholders.

We note that leading financial institutions have applied for more patents on a widening range of innovative products. However, many in-house innovations still focus on products and services rather than regtech – and the financial sector lags behind the big technology companies. To put this into perspective, the world's 15 largest banks together own five times fewer fintech patents (4,697) than the biggest single technology company (23,864).[25] Technology companies' patents are not restricted to consumer-friendly innovations: they include credit checking, security and authentication.

## Regtech's transformative effect on compliance

Regtech is on the cusp of revolutionising the Hong Kong banking industry's approach to compliance. We believe that emerging regtech solutions will establish themselves as an indispensable part of the value chain and transform every area of compliance, as it has already started to do in AML. This trend is reinforced by the strong regulatory support in Hong Kong for regtech and the benefits it can bring to help banks meet their regulatory and compliance obligations more efficiently.

With the proliferation of regtech solutions available to the banking industry in Hong Kong, we expect more banks to engage with advisory partners to help them scan and screen the regtech landscape for effective collaborators with successful solutions.

The leading banks of the future will implement regtech as part of a broader digital transformation mandate in order to reduce costs, enhance customer experience and maintain their competitive edge. It is clear that regtech is no longer a buzzword; it can be applied and its benefits realised today. Not only can it reduce the cost of compliance, but it can also provide banks with a first mover advantage over competitors who have yet to unlock the true potential of regtech.

> "*Asia-Pacific is becoming the new engine of regtech growth and innovation, driven by increased investment in new technologies, greater regulatory acceptance, extensive infrastructure development and strong economic growth in the region. As a leading regional and international finance centre, Hong Kong – and in particular the banking industry – is likely to be a key beneficiary of this shift.*"

[25] 'There's a revolution coming: Embracing the challenge of RegTech 3.0', KPMG UK, September 2018, https://home.kpmg/content/dam/kpmg/uk/pdf/2018/09/regtech-revolution-coming.pdf

# AML

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## Information sharing the key to enhancing financial crime compliance

As the evolution of regtech catches up with the latest fintech developments, the key to success in the fight against financial crime lies in the ability to share information between market participants, regulatory authorities and law enforcement agencies.

In this context, one area of regtech generating greater attention globally is the development of Know Your Customer (KYC) utilities to improve reliability of customer data, reduce risks and increase efficiencies.[26]

In Hong Kong, the Financial Services Development Council (FSDC) announced the development of appropriate infrastructure for digital identification and KYC utility, and has lobbied for a KYC utility across the city's financial services industry. However, aimed at raising the quality of risk management by harmonising standards, the push for a KYC utility model is likely to encounter difficulties without the full backing of the HKSAR government.

However, we believe the focus could shift from compliance with KYC rules to active management of risks related to the handling of potentially suspicious transactions.

Effective anti-money laundering measures are those that stop suspicious persons and activities in a timely manner. While conducting KYC is essential to understand the customer and their intended use of the institution's financial services, monitoring the customer's transactions is critical to catch any potential wrongdoing.

However, traditional monitoring of customer transactions only occurs after the settlement of transactions and funds have moved out of the institution. Financial institutions are always one step behind in tracing the money flows.

[26] 'How a Know-Your-Customer Utility could increase access to financial services in emerging markets', thought leadership published by the International Finance Corporation, a member of the World Bank Group, Note 59, October 2018

While suspicious transaction reports in Hong Kong have tripled in the span of four years, the actual conversion of these reports into law enforcement cases remains low. Of the 73,889 suspicious transaction reports filed in 2018, only 86 people were convicted of money laundering.[27]

KYC yields information at on-boarding, but it cannot provide full disclosure of all the counterparties the customer is transacting with. It is not until a customer's transaction appears on a monitoring solution's radar that a financial institution will engage in a review of third parties and their relationship with the customer.

*"Not being able to share information for the purposes of deterring financial crime is a significant issue and frustration for many banks to fight financial crime."*

In contrast, a Know Your customers' Transactions (KYT) utility might perhaps be a more effective option.

A KYT utility is a central repository that stores data on transactions entered into by customers of financial institutions operating in Hong Kong. Its objective is to grant access to and provide visibility over a chain of transactional instructions in which the relevant institution's customer is involved, i.e. each financial institution contributes transactional data into the KYT utility.

The ability to see the transaction history and follow any suspicious flows gives a compliance team a thorough assessment of the risks presented by the customer and his relationships. That level of transparency is currently unavailable in Hong Kong due to personal data protection and privacy interest concerns. Such concerns could be addressed by the anonymisation of identifiable personal data before the data enters into the central repository.

Financial institutions already share transactional data between them, but this exchange is limited to the chain of where it comes from, where it sits and where it goes. A KYT utility may help to expand the view of the money flows.

For a KYC utility, harmonisation of KYC standards is required. For a KYT utility, standards on data quality would be required. As to whether a KYT utility would be more effective in the long run, the initiative would need a thorough feasibility study on that point as well as on data issues such as quality, governance, protection and cybersecurity.

Projecting into the future of financial crime deterrence, it is possible that a KYT utility and in-flight regtech developments could train data models to analyse fund dissipations to make predictions. The Joint Financial Intelligence Unit in Hong Kong reported that 60 percent of fund dissipations were performed on the same day, and 18 percent on the day following the receipt of funds.

A KYT utility might also optimise the quality of suspicious transaction reports and ensure that reports made to the authorities are backed by intelligence garnered from complete analysis of patterns and relationships.

The need to improve the quality of suspicious transaction reports is not new. Both in the UK and Japan, government agencies, law enforcement and financial institutions are coming together to continue efforts to fend off financial crime and to keep pace with changes to criminality.

Separately, at the time of writing, FATF's mutual evaluation of Hong Kong is nearing completion. The results are expected to focus on how effectively the city 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 future of financial crime compliance is moving in the direction of more information sharing and collaboration, not just between financial institutions and regulators but also between banks. By fostering a higher quality of risk management, Hong Kong is better equipped to combat financial crime, and the industry and city stand to benefit.

[27] https://www.jfiu.gov.hk/en/statistics.html


# Cyber and emerging tech risk

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## Consumer trust is at the core of managing cyber and emerging technology risk

With the proliferation of innovative new technologies in financial services, digital banking has become the norm. The opportunities this presents are clear and already proven. Emerging technologies – including artificial intelligence (AI), blockchain, cognitive automation, advanced analytics, open application programming interfaces (APIs) – are enabling banks to increase efficiency, create new products and services, enhance customer experience and ultimately drive growth.

In Hong Kong, the development of virtual banking, the rise of fintech players and the introduction of an Open API Framework and the Faster Payment System are transforming the banking landscape. In parallel, evolving consumer expectations are driving the digital transformation agenda of most banks. It is therefore essential that these organisations continue to embrace emerging technologies in order to keep pace with their competition and market expectations.

### A swift and effective response to security breaches

As technological innovation progresses, customers are developing heightened expectations of how they want their banks to deliver digital products and services, and expect security to be an integral part of their digital experience. The inclusion of third party service providers in the digital ecosystem also presents an additional challenge for banks, especially as open banking becomes mainstream.

With concerns around data security and privacy increasing, we believe that building and maintaining trust is crucial to attracting and retaining customers. Consumers currently place a large amount of trust in their banks, and accept the reality that certain cybersecurity and other risks related to the digitalisation of services cannot be completely avoided. However, in the event of a breach, they expect a swift and effective response.

KPMG research finds that an overwhelming majority of consumers would be willing to remain with their existing financial services provider following a breach if the organisation takes the appropriate actions to address their concerns.[28]

[28] Consumer Loss Barometer – The economics of trust', KPMG International, March 2019, https://home.kpmg/content/dam/kpmg/co/pdf/2019/03/consumer-loss-barometer-economics-of-trust.pdf

> *"Consumers currently place a large amount of trust in their banks, and accept the reality that certain cybersecurity and other risks related to the digitalisation of services cannot be completely avoided. However, in the event of a breach, they expect a swift and effective response."*

These actions include compensating customers for losses incurred, providing proof that vulnerabilities have been fixed, as well as assistance with any resulting credit or identity theft issues.

Data security and privacy are not the only concerns that banks have to address. Banks must confront concerns around broader emerging technology risks. In particular, the concerns around use of AI-driven technology for decision-making need to be appropriately managed.

Despite digital banking becoming the norm, not all customers are fully comfortable with all that it entails. We believe that banks should therefore focus on explaining the benefits of new processes such as digital onboarding to customers, while making it clear that the related technology and cyber risks are being managed, especially in an environment where banks are handling an increasing amount of customer data.

## Embedding cybersecurity into the core of the business

From our work with leading banks, we know that as they continue to develop and deploy emerging technologies, cybersecurity and broader emerging technology risk management are rising up the senior management agenda. As technology evolves, so do the methods cyber criminals employ to manipulate weaknesses, as well as concerns around ethical use and inherent prejudice. This means that the traditional security protection and technology risk management mechanisms that banks have put in place may not be sufficient to deal with advanced technology-enabled attacks and currently unknown technology risks.

It is therefore important that banks have the agility and rigour to appropriately manage fast-evolving risks. We have seen a number of banks rethinking their approach and embedding emerging technology risk management and 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, enhancing data protection capabilities and ensuring that cybersecurity and resilience become part of every digital adoption. Another positive development we have observed is that some banks are beefing up their capabilities of their emerging technology risk function.

## Keys to success

In our view, banks' success in embedding cybersecurity and emerging technology risk management functions into their overall digital strategy often relies on a number of key factors. First, the tone from the top and how technology leaders embrace and drive a risk management culture, as well as where technology risk is positioned within banks, are paramount to ensuring security and maintaining customers' trust.

Second, when it comes to innovation and digital strategy, cybersecurity and emerging technology risk leaders need to rethink their approach around new initiatives. This involves a shift in mindset away from saying "it should not be done", to one that asks "how can it be done with less risk?".

Lastly, while skill shortages remain in cyber and emerging technology risk management, it is equally important that the existing talent broadens their understanding of the business beyond just their core capabilities. The banks that get this right will seek to educate their technology professionals on macro business issues to ensure that their cybersecurity and emerging technology risk functions have the knowledge and understanding to effectively incorporate risk insights into strategic discussions and decisions.

We believe that when cybersecurity and emerging technology risk management are left out of the business value chain, a trust ecosystem is not delivered, a significant commercial opportunity is missed, and the risk for all increases. Banks that understand that maintaining trust in the age of the customer and amid their digital transformation will be best placed for future success.

# Conduct

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*"Banks should seek to better understand what it is in the culture that is enabling the underlying drivers of misconduct, and shift gears to become more forward-looking and proactive about shaping the right employee behaviour to prevent future instances of misconduct."*

## Viewing conduct risk through a forward-looking lens is the way of the future

Regulation continues to be a key driver of change for banks in Hong Kong and we are starting to see a greater focus on conduct and culture – with a particular focus on how banks treat their customers.

The way in which banks in Hong Kong have dealt with conduct issues has been predominantly backward-looking and reactionary, with a focus on remediation through the implementation of policies, procedures and controls hoping to deal with specific patterns of behaviour that caused issues in the past. While such organisational levers are an important part of a framework to manage conduct risk, they are not fully effective on their own. We believe that banks should instead seek to better understand what it is in the culture that is enabling the underlying drivers of misconduct, and shift gears to become more forward-looking and proactive about shaping the right employee behaviour to prevent future instances of misconduct.

### A focus on culture, governance and remuneration

In particular, we continue to see regulators focussing on governance and individual accountability, as well as on how to design remuneration systems that reward good behaviour and support the values of an organisation. Proper governance and incentive systems are key levers to shape a bank's culture, which is arguably the biggest factor in a bank's ability to manage conduct risk. The Final Report of the Australian Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry,[29] focused on three main areas of culture, governance and remuneration as being at the core of what happened in Australia's financial services entities. For example, the commission noted that remuneration and incentives communicate to staff what behaviour is rewarded, clearly linking remuneration to misconduct.

[29] 'Final Report - Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry', February 2019, https://www.royalcommission.gov.au/sites/default/files/2019-02/fsrc-volume-1-final-report.pdf

Culture is also a key focus for regulators in Hong Kong, following the Hong Kong Monetary Authority's (HKMA) 2017 circular on Bank Culture Reform. In December 2018, the HKMA also announced[30] a requirement for authorised institutions to perform cultural self-assessments. While this is a positive step, it is our view that the self-assessments to date have focussed on what culture frameworks banks have put in place ("what to do"), rather than focusing on the outputs of the framework, and how culture is understood and manifests itself on a daily basis ("how it is done").

We believe that for bank culture reform to be effective in the long run, banks as well as the HKMA need to shift their focus to monitoring how well the desired cultural attributes have been embedded in banks. This requires a strong focus on leadership, change management, and the roles and accountabilities of employees, across all levels, as custodians and shapers of culture. The subsequent assessment of culture within banks will require the development of management information (MI) on culture and conduct, through a mix of deep and rigorous cultural assessments; both self-assessments and external assessments.

*"An external cultural assessment, that brings a fresh perspective and proven method to analysing day-to-day behaviours and identifying employees' "Intent to Act" as a proxy for misconduct…… These assessments, when benchmarked against senior management's vision of what good culture looks like, provide a roadmap to address behaviours that would otherwise lead to misconduct."*

## What should banks do?

Define and embed a structured means of assessing and reporting on Conduct and Culture. MI that captures the day-to-day behaviours that are taking place in the organisation will help banks identify potential gaps and weaknesses, enabling them to act swiftly to prevent future issues of misconduct from arising.

In doing so, banks must avoid the risk of conduct and culture within an organisation being driven by the numbers rather than the underlying behaviours behind them. This calls for a more thorough approach. An external cultural assessment, that brings a fresh perspective and proven method to analysing day-to-day behaviours and identifying employees' "Intent to Act" as a proxy for misconduct. Using proven psychological theory, the assessment provides evidence-based insight into the organisational levers that will positively influence employees' "Intent to Act". These assessments, when benchmarked against senior management's vision of what good culture looks like, provide a roadmap to address behaviours that would otherwise lead to misconduct.

As mentioned previously, part of the solution to driving the right culture throughout the organisation is remuneration and incentive systems. This is highlighted as a key factor by the HKMA and other regulators worldwide, and it is important that senior leaders at banks understand and ensure that they reward the people that exude the right behaviours. However, this should extend beyond pure financial rewards like bonuses to also include non-financial rewards such as career advancement opportunities and other forms of employee recognition. We strongly believe that a combination of both financial and non-financial incentives will help ensure that positive behaviour is rewarded and the right culture cascades throughout the organisation.

Importantly, the key to managing conduct risk is not just about putting in place new controls ("what to do"), but also about assessing day-to-day behaviour ("how it is done"). Behaviour can be influenced through the use of organisational levers such as KPIs, training and controls. However, our experience proves that embracing the softer side – maintaining a consistent tone across the organisation and ensuring the right culture is understood and embedded through consistent leadership and effective change management– is the way of the future for banks.

With increasing regulatory scrutiny on banking conduct and culture in Hong Kong, the successful banks will be the ones that recognise culture as a key differentiator that can set themselves apart from their competitors. Leading banks will also effectively weave their conduct culture into their growth strategy to ensure that they continue to keep the customer at the heart of their business.

[30] 'Supervision for Bank Culture', Hong Kong Monetary Authority, December 2018, https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2018/20181219e1.pdf

# The future market

# Regulatory landscape

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## A shifting regulatory focus towards conduct and data

In line with global trends, the last 12 months have seen Hong Kong's regulators focussing more on issues such as conduct, culture and compliance rather than traditional prudential issues.

One big prudential-focussed issue remains on the horizon, namely Basel 4. Preparations for this are underway, with the industry awaiting the results of a recent Quantitative Impact Study by the Basel Committee on Banking Supervision. In Hong Kong, banks are waiting for more clarity around how the Hong Kong Monetary Authority (HKMA) will implement Basel 4, particularly the internal rating-based changes and the treatment of residential mortgages. The HKMA is of the view that the market is currently towards the peak of the economic cycle, and as a result the countercyclical capital buffer is at its highest level. Indeed, Hong Kong has one of the highest regulatory capital requirements worldwide, and is therefore very well protected against any potential future downturn.

### An increasing focus on conduct and culture

The HKMA and the Securities and Futures Commission (SFC) are shining the spotlight on conduct and culture, and on ensuring that banks are implementing appropriate frameworks and conducting holistic assessments to manage conduct risk effectively. The increasing importance of conduct was further highlighted in the Final Report of the Australian Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, which identified dishonesty and greed as the two main drivers behind misconduct.

A key area of focus for Hong Kong's regulators is on individual accountability, and ensuring that managers-in-charge and senior management are actively involved in ensuring that they promote the right culture throughout the organisation to prevent future conduct breaches. A recent self-assessment survey conducted by the HKMA, for example, asked pointed questions to senior management about whether they have personally affected good conduct outcomes, how this can be measured and what feedback mechanisms their banks have in place.

*By concurrently implementing a data standard and building up their own analytics engine and big data capabilities, regulators will over time be able to much more effectively harness unstructured data and metadata to form a more data-driven, real-time identification and holistic assessment of emerging risks.*

Ultimately, it is clear that just having frameworks, controls and processes in place is not good enough for banks to manage conduct risk. Banks need to broaden their focus to better understand the underlying drivers of misconduct and drive the right behaviours throughout the organisation to affect sustained positive outcomes. We are starting to see some forward-looking organisations roll out predictive metrics and build up management information on culture and conduct to help them identify potential gaps and weaknesses, and to take positive actions to prevent future conduct breaches. However, this is still being tried and tested in the market, and banks need to ensure they develop a standard of metrics that is suitable for their business, especially given that different banks have different mandates, products and clients.

## Technology innovation and data are core market topics

Regulators continue to focus on technology innovation and data as core market topics, both from a regulatory guidance lens as well as leveraging the potential power of big data, machine learning and AI-powered analytics.

Data is also high on the agenda for regulators. We are seeing the HKMA, SFC and Monetary Authority of Singapore place a greater focus on enhancing their analytics capabilities and, in parallel, expecting the same of supervised institutions, including promoting data standardisation requirements in the market. By concurrently implementing a data standard and building up their own analytics engine and big data capabilities, regulators will over time be able to much more effectively harness unstructured data and metadata to form a more data-driven, real-time identification and holistic assessment of emerging risks. Gone are the days where risk will be measured in silos of market, credit, operational or liquidity, but will be measured more holistically across the organisation inclusive of conduct, reputational and franchise risks.

With this in mind, it is essential that banks act fast to assess and improve how they collect, cleanse, manage and use their data. Only with clean and structured data can an organisation hope to harness the potential of big data and AI powered analytics. This is a fundamental issue that banks need to address to succeed and grow in the long run, especially as some continue to grapple with the challenges of increased regulatory expectations, legacy infrastructure and emerging asymmetric competitors who are often founded on the principles of digital data, agility and ecosystem platforms that provided deep insights into client behaviour and trends.

The challenge of legacy infrastructure for many banks is further amplified by the rapid growth of Chinese financial institutions – as well as Hong Kong's new virtual banks – many of which have built new and holistic digital infrastructure from scratch. A comprehensive, modern and agile IT infrastructure is critical to the effective operation of a financial institution, and banks are recognising that they need to up their game and fully harness their data to remain competitive. But the road ahead will not be easy.

As they upgrade their data infrastructure, it is crucial that banks minimise disruption to their business and commercial operations, which adds an extra layer of complexity. Banks that fail to evolve and enhance their data infrastructure will find themselves falling behind not just their peers, but the regulators too. Instead, over time, the successful banks will be the ones that get their data strategy and conduct culture right, while continuing to place their customers at the heart of their growth agenda.

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# With LIBOR set to be phased out, does this spell the end of HIBOR?

Following the UK Financial Conduct Authority's announcement that it will no longer require banks to submit LIBOR data after 2021, financial institutions should have already started to implement an enterprise-wide programme to transition from LIBOR to alternative risk-free rates (ARRs).

In Hong Kong, there is ongoing discussion around identifying an ARR for the Hong Kong Interbank Offered Rate (HIBOR). HIBOR has been in place for many years and is widely recognised by market participants. According to the HKMA, HIBOR-based assets of the banking sector amounted to around HKD 3,400 billion at the end of 2018, and HIBOR-based mortgages accounted for 86 percent of mortgage loans approved in March 2019.[31]

The Treasury Markets Association (TMA) has proposed adopting the Hong Kong Dollar Overnight Index Average (HONIA) – which is based solely on transaction data – as the ARR for HIBOR. The TMA is now consulting the industry on some technical refinements to HONIA around data sources, the reporting window and publication times.

The TMA also noted in its consultation paper that HIBOR is a benchmark widely recognised by market participants and is viewed as desirable and necessary to remain in use. Indeed, while the HKMA and TMA have proposed HONIA as the ARR for HIBOR, the HKMA has also stated that it does not plan to discontinue HIBOR. Both HIBOR and HONIA are therefore expected to co-exist as benchmark reference rates in Hong Kong. However, with the global trend moving towards the use of ARRs, we expect to see banks in Hong Kong follow suit and increasingly use HONIA in the longer term as an alternative to HIBOR.

At the same time, financial institutions still need to prepare for the end of LIBOR. The implications for banks in Hong Kong are significant. According to the HKMA, LIBOR-based assets of the local banking sector amounted to HKD 3,800 billion at the end of 2018. It is therefore essential that banks begin their preparatory work around this, which includes identifying all LIBOR contracts, assessing the related fallback options and understanding the potential impact across products, processes and systems. Banks should also ensure that these efforts are focussed across business lines and support functions, which include sales and trading, finance, operations, risk, compliance and legal.

It is encouraging to see that some banks have started preparing for the LIBOR transition. New technologies such as artificial intelligence, machine learning, natural language processing and optical character recognition can be leveraged to manage the impact of the large volume of affected contracts. Importantly, banks in Hong Kong should also take advantage of the LIBOR transition to identify contracts that make references to HIBOR and their fallback clauses to better prepare for any future possible changes to HIBOR.

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[31] HKMA, May 2019, https://www.hkma.gov.hk/eng/key-information/insight/20190502.shtml

# Tax

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## Tax developments will drive banking opportunities in Hong Kong, but potential challenges lie ahead

Hong Kong's tax landscape has experienced significant change in the past few years, with the new administration keen to use tax as a lever for economic development. A number of key international and local developments point to opportunities for banks, but also potential challenges ahead in terms of how they pay tax on their income, as well as their role as financial intermediaries.

### Tax as a lever for economic development

As part of its push to use tax as a driver for economic growth, the government has introduced concessions and incentives to encourage aircraft leasing, to promote Hong Kong as a corporate treasury centre and an asset management hub, all of which present business opportunities for banks. We also expect continued discussion around whether banks can obtain concessions for some of their R&D expenditure around IT development. This will become increasingly important for banks – as well as the new virtual banks in Hong Kong – which are expected to continue to spend big on IT and digital transformation.

In addition, the implementation of new transfer pricing rules in Hong Kong from 1 April 2018 will have a knock-on effect on investment banks and branches due to the requirement to attribute some capital to bank branches, which will change their tax profile. Moreover, the new rules call for more robust control over cost infrastructure, and banks – especially those that run regional businesses – need to carefully examine the costs and income that are being allocated to their Hong Kong operations. These developments will change the analysis around how the Hong Kong business is perceived and operates.

The Financial Services Development Council and other government bodies continue to look at solutions to remove impediments and to encourage banking business in Hong Kong. One area that we expect greater focus on in the year ahead is around enhancing Hong Kong's position as a regional booking centre for securities and derivatives.

> *We continue to see a global trend towards a more technology-driven method of online payments and filings. With a lot of tax filings still being very paper-based in Hong Kong, it is essential that not just the banks, but also the revenue authorities and other government bodies keep pace with this global movement.*

Banks would also appreciate an improvement in administrative efficiency around the operation of Hong Kong taxes. We continue to see a global trend towards a more technology-driven method of online payments and filings. With a lot of tax filings still being very paper-based in Hong Kong, it is essential that not just the banks, but also the revenue authorities and other government bodies keep pace with this global movement.

## A shift from offshore to onshore?

Looking ahead, we expect a number of international tax developments to have an impact on banks and on the development of law and practice in Hong Kong. An OECD study[32] on addressing the tax challenges arising from the digitalisation of the economy suggests that there may be challenges ahead for banks. This could include changes to the current transfer pricing settings around where income is taxed, which could add a layer of complexity for banks that operate across many jurisdictions, and for banks that collect tax on behalf of governments in various jurisdictions.

Also driving business to Hong Kong is a new Economic Substance Law introduced in the Cayman Islands effective 1 January 2019 that requires an increased level of substance to be maintained in the Cayman Islands for all companies that fall within the new regime. Similar new laws have been introduced in the British Virgin Islands, Bermuda and some other offshore jurisdictions.

This new law requires groups using Cayman Islands and other offshore jurisdiction companies to review their entities to evaluate whether or not they need to comply or be carved out and exempted from the new substance requirements. It is our view that the new substance requirements will drive a lot of offshore structures onshore, with Hong Kong likely to be a significant beneficiary. Moving offshore holdings and trading in other businesses to Hong Kong will ultimately benefit banks in terms of managing their KYC requirements as it should make it easier to understand their customers and risk profile. This might also present additional opportunities for banks because as structures become more transparent, companies may want more banking services to originate out of Hong Kong.

For private banking, the move away from offshore jurisdictions means that organisations should assess if any changes need to be made to customer structures and the bank's product offering. The amended PRC Individual Income Tax law is also driving private banks to review their structures and product offering. The amended law introduces general anti-avoidance rules which bring into focus the investment structures that private banks, wealth managers, personal investors and high net worth individuals have in place to hold offshore investments. It is important to note that there is a strong push globally and by the OECD on these structures – it is not just confined to mainland China – and all parties need to revisit their arrangements to ensure they remain compliant.

Overall, regulatory expectations for greater transparency and for banks to ensure that they know who their clients are will continue in the foreseeable future. Furthermore, with the launch of virtual banks in Hong Kong, it will be interesting to see how these new players cope with the evolving tax landscape and demands to maintain higher levels of transparency and standards. For example, virtual banks will be subject to the same requirements around the Common Reporting Standards as traditional banks, and will need to find efficient means to identify who their customers are, and have the systems and processes in place to report all that information to the tax authorities. Ensuring that their systems can manage all of this in an efficient manner is a key challenge that they will face.

[32] https://www.oecd.org/tax/beps/public-consultation-document-addressing-the-tax-challenges-of-the-digitalisation-of-the-economy.pdf

# Future of banking in China

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## The future of banking in China

China's banking sector exhibited steady growth in 2018. Asset quality remained stable and total assets increased by 6.3 percent year-on-year, with banks showing stronger capital adequacy and liquidity measures. Despite some challenges ahead, the outlook remains positive for banking in China. However, the rapid pace of regulatory and technological change, coupled with heightened customer expectations and increasing competition, means that the future of banking in China will look significantly different to the landscape today.

### An expanded banking ecosystem

The rapid pace of technological advancement and adoption, driven by an increasingly influential and digitally-savvy customer, is having a transformative effect on banking in China – from payments and retail banking to commercial banking and wealth management. Meanwhile, the development of fintech, digital and open banking and the proliferation of emerging technologies like artificial intelligence, natural language processing and automation continue to disrupt the banking industry.

Against this backdrop, the successful banks of the future will be the ones that are able to capitalise on these developments to deliver new and personalised products and services, manage their business more efficiently and enhance customer experience. The leaders will have also built scalable IT architecture that centres around the concept of open data, and that also enables the business to be agile enough to respond quickly to market changes.

The future of banking in China will also have fintech deeply embedded into the ecosystem. Many banks are embracing this trend and devising an appropriate winning strategy for collaborating – or competing – with the growing number of fintech firms and pure technology companies that are starting to enter the financial services space. We have seen some banks continuing to develop their own fintech solutions, while an increasing number of financial institutions are entering into strategic partnerships and alliances with fintech firms.

Meanwhile, other larger players have opted to acquire fintech firms outright, turning the fintech industry into an even more competitive market. By working closely and innovating with fintech and other technology players, some banks will find that their business and operating models will eventually undergo much more transformation than anticipated.

*"As banks embark on their digital transformation journey, they must make sure that their risk functions do as well. The banks that can successfully digitise their risk function will be able to generate value by improving the overall efficiency of risk management and providing more effective regulatory compliance."*

### The digitisation of the risk function

The rapid pace of digitalisation and the benefits for revenue growth, cost optimisation and an enhanced customer experience means that it is essential that banks view digital transformation as a key priority. The ones that do not actively pursue a digital agenda will be left behind. However, as banks embark on their digital transformation journey, they must make sure that their risk functions do as well. The banks that can successfully digitise their risk function will be able to generate value by improving the overall efficiency of risk management and providing more effective regulatory compliance.

The need to transform and strengthen risk management practices is made even more clear as regulators in China continue to clamp down on risks in the financial system, and global regulations like IFRS 9 and Basel 3 continue to take up a lot of banks' focus and resources. In order for banks to be successful in the future, they will need to elevate risk management to the next level, and ensure that the risk function is agile and robust enough to enable banks to pursue their growth agenda while balancing and managing the associated risks.

## Opening up China's financial services sector

The continued opening up of China's financial services sector to foreign investment is also transforming the future banking landscape. International financial institutions are already making significant strides to expand their presence in mainland China. In December last year, UBS became the first foreign company to acquire majority ownership of a securities joint venture in China, and other foreign financial institutions have followed suit – or indicated their intentions to – so far this year. We expect this trend to continue in the coming year, with consumers set to benefit from the increased cooperation between local and international banks to combine knowledge, capabilities, resources and talent to provide new and improved products and services.

In addition, key policy initiatives such as the development of the Greater Bay Area and the Belt and Road Initiative will continue to be major drivers of investment, trade and economic development, presenting a number of opportunities for banks. These regional initiatives will add significant momentum to the development of corporate banking in the region, and will also stimulate demand for financing, cash management, payments and remittance services.

While China's banking industry has made rapid progress along its transformation journey, there is still a long way to go. During this process, banks must maintain ongoing communication with government agencies and regulatory authorities, re-examine their business development and consumer education and protection from a strategic perspective, and maintain risk management as the core value to prudently make change happen.

Overall, the successful banks in the longer term will be the ones that change their strategic position in the market from fund providers to value providers, and eventually, ecosystem co-creators. This also involves establishing cross-platform/scenario touchpoints within the ecosystem, and seamlessly embedding their services into the lifecycle of customers through closer cooperation with fintech firms and other third party service providers. Perhaps most importantly, the leading banks of the future will be the ones that build their business models and digital infrastructure with the customer at the core of their strategy.

# Greater Bay Area

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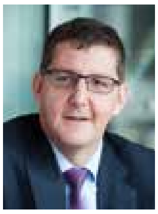

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## Creating a seamless banking experience in the Greater Bay Area

The Greater Bay Area (GBA) represents a key strategic component of China's national development blueprint, with the aim of promoting close cooperation between Hong Kong, Macau and nine cities in Guangdong Province to create a globally competitive and world-class city cluster.

In February, China's central government authorities issued a 'Development Plan' for the GBA, which lays a solid foundation for achieving this ambition. The Development Plan identifies Guangzhou, Shenzhen, Hong Kong and Macau as the four 'core cities' to drive the GBA's development, with Hong Kong importantly highlighted as an international centre for finance and asset management, as well the global offshore RMB business hub for the GBA.

While plans for the GBA's development are more long-term in nature, ongoing reforms and greater regulatory cooperation are already creating an increasing demand for financial services and presenting a number of business opportunities for banks. For banks in Hong Kong, the next couple of years will therefore be essential to devise and implement a strategy for the region to capitalise on these opportunities.

### Facilitating cross-border payments and account opening

The ultimate aim for banks should be to create a seamless and integrated experience for their customers across the three jurisdictions of Guangdong, Hong Kong and Macau. The optimal model entails having one centralised relationship manager who manages account opening and management, as well as a seamless approach to KYC and transactions. Getting this right from the outset will be key for banks to effectively service both corporates with operations in multiple jurisdictions in the GBA, as well as individuals who live and work across boundaries.

In a recent joint report[33] by KPMG China and the Australian Chamber of Commerce in Hong Kong – which surveyed Hong Kong's international business community on how to maximise business opportunities in the GBA – senior executives highlighted the portability of bank accounts as a key issue that needs to be addressed. The government's GBA Development Plan acknowledges this challenge, and proposes to expand the functions of offshore accounts and move towards capital account convertibility. This would be a major step towards facilitating cross-border investment and financing activities in the region.

Some banks have already started to make headway in creating a seamless banking experience for their customers. From March this year, existing customers of Bank of China (Hong Kong) are allowed to open accounts in the bank's mainland China branches without having to travel to mainland China in person.

To facilitate the seamless transfer of payments in the GBA, Bank of China (Hong Kong) also launched its e-wallet BOC Pay app in December to enable its Hong Kong customers to make mobile payments in mainland China without the need to have a bank account there. In comparison, Hong Kong users of payment providers such as Alipay and WeChat Pay are only permitted to make payments in mainland China if they have a bank account in the mainland. We believe that there is a significant first mover advantage for the banks that are able to offer an effective platform for cross-border payments to their customers, especially given the proliferation of payments providers in the GBA.

> *"While banks will continue to offer wealth management services to ultra-high net worth individuals in the GBA, they are also increasing their focus on addressing the needs of other affluent clients (those who hold between USD 500,000 and 5 million in assets). This fast-growing segment in the region is increasingly demanding greater access to offshore global products."*

## Wealth management opportunities in the GBA

In addition to account opening and payments, the People's Bank of China and the HKMA are continuing to look at ways to facilitate cross-border wealth management services in the GBA. Further developments in this space will be key for banks and wealth managers aiming to serve the roughly 70 million residents in the region. While banks will continue to offer wealth management services to ultra-high net worth individuals in the GBA, they are also increasing their focus on addressing the needs of other affluent clients (those who hold between USD 500,000 and 5 million in assets). This fast-growing segment in the region is increasingly demanding greater access to offshore global products.

However, banks will need further clarity on the expansion of channels for mainland China and Hong Kong residents to invest in financial products in each other's markets. The Development Plan has laid the foundations for achieving this with regards to insurance by supporting insurance institutions in the GBA to jointly develop innovative cross-border motor vehicle and medical insurance products (subject to compliance with the legal and regulatory requirements). The plan also proposes to provide facilitation services for cross-border policy holders in areas such as underwriting, investigation and claims.

The creation of more integrated insurance products for the GBA will also extend to wealth management over time, with more overseas products being allowed to be sold to investors onshore in mainland China. Once this is achieved, we believe that conduct should remain a key regulatory priority to ensure that customers and investors that are exposed to new financial products are protected and treated fairly.

[33] 'Connecting opportunities in the Greater Bay Area', KPMG China and the Australian Chamber of Commerce in Hong Kong, October 2018, https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2018/11/connecting-opportunities-in-the-greater-bay-area.pdf

## The need for greater regulatory harmonisation

Following on from the Development Plan, we expect to see further clarity from local governments and regulators in the GBA on how to harmonise the different regulations and tax regimes in the region. Further financial regulatory coordination between the key regulators will enable banks to benefit from reduced tax and compliance costs and increased operational efficiency.

Overall, the ongoing development of the GBA is expected to increase demand for financial services, stimulate cross-border investment and further relax restrictions on capital flows between mainland China, Hong Kong and Macau. This is likely to lead to the creation of innovative products and opportunities for banks in Hong Kong to grow their presence in the GBA.

The short and long-term business opportunities for banks in the GBA are clear, and as the regulatory landscape becomes more transparent, operationalising a strategy for the region will become easier. We believe that the banks that are able to gain a first mover advantage in the GBA, while ensuring that they create a truly seamless experience for all their customers, will be the ones that will enjoy more long-term success in the region.

> *"The ultimate aim for banks should be to create a seamless and integrated experience for their customers across the three jurisdictions of Guangdong, Hong Kong and Macau. The optimal model entails having one centralised relationship manager who manages account opening and management, as well as a seamless approach to KYC and transactions."*

# Financial highlights

## Performance rankings:

- Licensed banks
- Restricted licence banks
- Deposit-taking companies
- Foreign bank branches

# Performance rankings

## Licensed banks

| Ranking | Total assets | HK$ millions | Ranking | Net profit after tax | HK$ millions | Ranking | Cost/income ratio | |
|---|---|---|---|---|---|---|---|---|
| 1. | Hongkong And Shanghai Banking Corporation Limited (The) | 8,263,454 | 1. | Hongkong And Shanghai Banking Corporation Limited (The) | 112,116 | 1. | Industrial And Commercial Bank of China (Asia) Limited | 22.9% |
| 2. | Bank of China (Hong Kong) Limited | 2,820,684 | 2. | Bank of China (Hong Kong) Limited | 31,615 | 2. | Bank of China (Hong Kong) Limited | 27.8% |
| 3. | Hang Seng Bank, Limited | 1,571,297 | 3. | Hang Seng Bank, Limited | 24,188 | 3. | Hang Seng Bank, Limited | 29.5% |
| 4. | Standard Chartered Bank (Hong Kong) Limited | 1,176,234 | 4. | Standard Chartered Bank (Hong Kong) Limited | 9,668 | 4. | Shanghai Commercial Bank Limited | 31.6% |
| 5. | Industrial And Commercial Bank of China (Asia) Limited | 893,618 | 5. | Industrial And Commercial Bank of China (Asia) Limited | 8,278 | 5. | Chiyu Banking Corporation Limited | 33.2% |
| 6. | Bank of East Asia, Limited (The) | 839,451 | 6. | Bank of East Asia, Limited (The) | 6,554 | 6. | CMB Wing Lung Bank Limited | 35.1% |
| 7. | China Construction Bank (Asia) Corporation Limited | 480,970 | 7. | DBS Bank (Hong Kong) Limited | 5,128 | 7. | Nanyang Commercial Bank, Limited | 35.9% |
| 8. | Nanyang Commercial Bank, Limited | 466,022 | 8. | Nanyang Commercial Bank, Limited | 3,978 | 8. | China Construction Bank (Asia) Corporation Limited | 39.0% |
| 9. | DBS Bank (Hong Kong) Limited | 445,661 | 9. | China Construction Bank (Asia) Corporation Limited | 3,574 | 9. | China CITIC Bank International Limited | 40.2% |
| 10. | China CITIC Bank International Limited | 362,945 | 10. | CMB Wing Lung Bank Limited | 3,218 | 10. | Hongkong And Shanghai Banking Corporation Limited (The) | 41.5% |

## Restricted licence banks

| Ranking | Total assets | HK$ millions | Ranking | Net profit after tax | HK$ millions | Ranking | Cost/income ratio | |
|---|---|---|---|---|---|---|---|---|
| 1. | Bank of Shanghai (Hong Kong) Limited | 28,590 | 1. | Citicorp International Limited | 2,070 | 1. | Siam Commercial Bank Public Company Limited (The) | 14.9% |
| 2. | Morgan Stanley Asia International Limited | 27,134 | 2. | J.P. Morgan Securities (Asia Pacific) Limited | 762 | 2. | Scotiabank (Hong Kong) Limited | 26.1% |
| 3. | Scotiabank (Hong Kong) Limited | 16,480 | 3. | Morgan Stanley Asia International Limited | 582 | 3. | Bank of Shanghai (Hong Kong) Limited | 33.4% |
| 4. | Siam Commercial Bank Public Company Limited (The) | 14,108 | 4. | Bank of Shanghai (Hong Kong) Limited | 218 | 4. | KDB Asia Limited | 35.0% |
| 5. | KDB Asia Limited | 13,693 | 5. | KDB Asia Limited | 124 | 5. | Kasikornbank Public Company Limited | 36.0% |
| 6. | J.P. Morgan Securities (Asia Pacific) Limited | 12,994 | 6. | Scotiabank (Hong Kong) Limited | 115 | 6. | Citicorp International Limited | 44.1% |
| 7. | Kasikornbank Public Company Limited | 11,861 | 7. | ORIX Asia Limited | 72 | 7. | Allied Banking Corporation (Hong Kong) Limited | 47.4% |
| 8. | Bank of China International Limited | 10,330 | 8. | Siam Commercial Bank Public Company Limited (The) | 68 | 8. | ORIX Asia Limited | 63.6% |
| 9. | Citicorp International Limited | 7,676 | 9. | Allied Banking Corporation (Hong Kong) Limited | 35 | 9. | Morgan Stanley Asia International Limited | 72.2% |
| 10. | ORIX Asia Limited | 6,517 | 10. | Bank of China International Limited | 23 | 10. | Habib Bank Zurich (Hong Kong) Limited | 72.5% |

## Deposit-taking companies

| Ranking | Total assets | HK$ millions | Ranking | Net profit after tax | HK$ millions | Ranking | Cost/income ratio | |
|---|---|---|---|---|---|---|---|---|
| 1. | Public Finance Limited | 7,136 | 1. | Public Finance Limited | 255 | 1. | BCOM Finance (Hong Kong) Limited | 11.1% |
| 2. | Woori Global Markets Asia Limited | 3,624 | 2. | Shinhan Asia Limited | 125 | 2. | Shinhan Asia Limited | 21.6% |
| 3. | Kexim Asia Limited | 3,252 | 3. | Woori Global Markets Asia Limited | 36 | 3. | Woori Global Markets Asia Limited | 40.3% |
| 4. | KEB Hana Global Finance Limited | 1,667 | 4. | KEB Hana Global Finance Limited | 33 | 4. | KEB Hana Global Finance Limited | 43.1% |
| 5. | Vietnam Finance Company Limited | 947 | 5. | BPI International Finance Limited | 27 | 5. | Kexim Asia Limited | 45.2% |
| 6. | Shinhan Asia Limited | 809 | 6. | Kexim Asia Limited | 17 | 6. | Public Finance Limited | 48.7% |
| 7. | Gunma Finance (Hong Kong) Limited | 494 | 7. | BCOM Finance (Hong Kong) Limited | 7 | 7. | Henderson International Finance Limited | 50.0% |
| 8. | BPI International Finance Limited | 456 | 8. | Vietnam Finance Company Limited | 6 | 8. | Vietnam Finance Company Limited | 50.0% |
| 9. | Commonwealth Finance Corporation Limited | 340 | 9. | Commonwealth Finance Corporation Limited | 3 | 9. | Corporate Finance (D.T.C.) Limited | 57.1% |
| 10. | Corporate Finance (D.T.C.) Limited | 329 | 10. | Gunma Finance (Hong Kong) Limited | 3 | 10. | Commonwealth Finance Corporation Limited | 64.7% |

## Foreign bank branches

| Ranking | Total assets | HK$ millions | Ranking | Net profit after tax | HK$ millions | Ranking | Cost/income ratio | |
|---|---|---|---|---|---|---|---|---|
| 1. | Agricultural Bank of China Limited | 560,404 | 1. | Bank of Communications Co., Ltd. | 4,116 | 1. | China Development Bank | 7.9% |
| 2. | MUFG Bank, Ltd. | 513,520 | 2. | Citibank, N.A. | 3,792 | 2. | Agricultural Bank of China Limited | 8.6% |
| 3. | Bank of China Limited | 511,426 | 3. | Agricultural Bank of China Limited | 3,391 | 3. | Axis Bank Limited | 9.7% |
| 4. | Mizuho Bank, Ltd. | 506,600 | 4. | DBS Bank Ltd. | 2,846 | 4. | Punjab National Bank | 9.7% |
| 5. | Bank of Communications Co., Ltd. | 468,093 | 5. | UBS AG | 2,655 | 5. | Bank of China Limited | 10.6% |
| 6. | Citibank, N.A. | 424,428 | 6. | China Merchants Bank Co., Ltd. | 2,450 | 6. | Chang Hwa Commercial Bank, Ltd. | 11.0% |
| 7. | China Construction Bank Corporation | 405,025 | 7. | Industrial Bank Co., Ltd. | 2,119 | 7. | Shinhan Bank | 11.1% |
| 8. | China Development Bank | 370,650 | 8. | United Overseas Bank Ltd. | 1,634 | 8. | Allahabad Bank | 11.3% |
| 9. | DBS Bank Ltd. | 326,617 | 9. | China Construction Bank Corporation | 1,611 | 9. | First Commercial Bank, Ltd. | 11.5% |
| 10. | BNP Paribas | 321,227 | 10. | China Minsheng Banking Corp., Ltd. | 1,456 | 10. | China Merchants Bank Co., Ltd. | 11.9% |

Source: Extracted from individual banks' financial and public statements

## Licensed banks

| Ranking | Return on equity | | Ranking | Growth in assets | | Ranking | Growth in net profit after tax | |
|---|---|---|---|---|---|---|---|---|
| 1. | Hang Seng Bank, Limited | 15.4% | 1. | Citibank (Hong Kong) Limited | 23.8% | 1. | Fubon Bank (Hong Kong) Limited | 41.2% |
| 2. | Hongkong And Shanghai Banking Corporation Limited (The) | 14.3% | 2. | Chiyu Banking Corporation Limited | 22.3% | 2. | Chiyu Banking Corporation Limited | 33.4% |
| 3. | Citibank (Hong Kong) Limited | 13.7% | 3. | Chong Hing Bank Limited | 16.4% | 3. | DBS Bank (Hong Kong) Limited | 31.8% |
| 4. | DBS Bank (Hong Kong) Limited | 13.3% | 4. | DBS Bank (Hong Kong) Limited | 12.0% | 4. | Citibank (Hong Kong) Limited | 30.6% |
| 5. | Bank of China (Hong Kong) Limited | 12.7% | 5. | Bank of China (Hong Kong) Limited | 11.9% | 5. | Nanyang Commercial Bank, Limited | 22.2% |
| 6. | Standard Chartered Bank (Hong Kong) Limited | 12.5% | 6. | Standard Chartered Bank (Hong Kong) Limited | 9.4% | 6. | Hang Seng Bank, Limited | 20.9% |
| 7. | Shanghai Commercial Bank Limited | 10.6% | 7. | Nanyang Commercial Bank, Limited | 7.1% | 7. | Shanghai Commercial Bank Limited | 17.1% |
| 8. | Chiyu Banking Corporation Limited | 9.5% | 8. | Shanghai Commercial Bank Limited | 7.1% | 8. | Hongkong And Shanghai Banking Corporation Limited (The) | 16.8% |
| 9. | Chong Hing Bank Limited | 8.8% | 9. | Hang Seng Bank, Limited | 6.3% | 9. | OCBC Wing Hang Bank Limited | 14.7% |
| 10. | Public Bank (Hong Kong) Limited | 8.7% | 10. | China CITIC Bank International Limited | 5.4% | 10. | Standard Chartered Bank (Hong Kong) Limited | 14.0% |

## Restricted licence banks

| Ranking | Return on equity | | Ranking | Growth in assets | | Ranking | Growth in net profit after tax | |
|---|---|---|---|---|---|---|---|---|
| 1. | Morgan Stanley Asia International Limited | 27.4% | 1. | KDB Asia Limited | 26.7% | 1. | Goldman Sachs Asia Bank Limited | 200.0% |
| 2. | Citicorp International Limited | 26.5% | 2. | Scotiabank (Hong Kong) Limited | 12.0% | 2. | Morgan Stanley Asia International Limited | 196.9% |
| 3. | J.P. Morgan Securities (Asia Pacific) Limited | 10.1% | 3. | Bank of Shanghai (Hong Kong) Limited | 10.9% | 3. | Nippon Wealth Limited | 38.6% |
| 4. | Allied Banking Corporation (Hong Kong) Limited | 7.2% | 4. | J.P. Morgan Securities (Asia Pacific) Limited | 10.3% | 4. | ORIX Asia Limited | 35.8% |
| 5. | KDB Asia Limited | 5.3% | 5. | Allied Banking Corporation (Hong Kong) Limited | 4.8% | 5. | Citicorp International Limited | 26.0% |
| 6. | Kasikornbank Public Company Limited | 5.0% | 6. | Nippon Wealth Limited | 3.9% | 6. | Siam Commercial Bank Public Company Limited (The) | 9.7% |
| 7. | Bank of Shanghai (Hong Kong) Limited | 4.9% | 7. | Banc of America Securities Asia Limited | 1.2% | 7. | Bank of China International Limited | 4.5% |
| 8. | Habib Bank Zurich (Hong Kong) Limited | 3.4% | 8. | Goldman Sachs Asia Bank Limited | -0.6% | 8. | Bank of Shanghai (Hong Kong) Limited | -1.4% |
| 9. | ORIX Asia Limited | 3.4% | 9. | Kasikornbank Public Company Limited | -1.9% | 9. | Kasikornbank Public Company Limited | -4.2% |
| 10. | Scotiabank (Hong Kong) Limited | 2.1% | 10. | Siam Commercial Bank Public Company Limited (The) | -2.7% | 10. | Allied Banking Corporation (Hong Kong) Limited | -7.9% |

## Deposit-taking companies

| Ranking | Return on equity | | Ranking | Growth in assets | | Ranking | Growth in net profit after tax | |
|---|---|---|---|---|---|---|---|---|
| 1. | Public Finance Limited | 16.4% | 1. | Woori Global Markets Asia Limited | 70.7% | 1. | KEB Hana Global Finance Limited | 450.0% |
| 2. | BPI International Finance Limited | 15.3% | 2. | KEB Hana Global Finance Limited | 19.8% | 2. | BPI International Finance Limited | 350.0% |
| 3. | Shinhan Asia Limited | 10.8% | 3. | Chau's Brothers Finance Company Limited | 8.2% | 3. | Woori Global Markets Asia Limited | 157.1% |
| 4. | KEB Hana Global Finance Limited | 7.2% | 4. | Kexim Asia Limited | 5.6% | 4. | Vietnam Finance Company Limited | 100.0% |
| 5. | Vietnam Finance Company Limited | 5.6% | 5. | Commonwealth Finance Corporation Limited | 4.9% | 5. | Corporate Finance (D.T.C.) Limited | 50.0% |
| 6. | Woori Global Markets Asia Limited | 4.3% | 6. | Public Finance Limited | 4.1% | 6. | Gunma Finance (Hong Kong) Limited | 50.0% |
| 7. | Kexim Asia Limited | 3.8% | 7. | BCOM Finance (Hong Kong) Limited | 2.4% | 7. | BCOM Finance (Hong Kong) Limited | 40.0% |
| 8. | Corporate Finance (D.T.C.) Limited | 3.0% | 8. | Chong Hing Finance Limited | 2.2% | 8. | Shinhan Asia Limited | 30.2% |
| 9. | BCOM Finance (Hong Kong) Limited | 2.8% | 9. | Henderson International Finance Limited | 1.8% | 9. | Chong Hing Finance Limited | 1.8% |
| 10. | Commonwealth Finance Corporation Limited | 2.7% | 10. | Fubon Credit (Hong Kong) Limited | 1.0% | 10. | Henderson International Finance Limited | 0.8% |

## Foreign bank branches

| Ranking | Growth in assets | | Ranking | Growth in net profit after tax | |
|---|---|---|---|---|---|
| 1. | Barclays Bank PLC | 132.1% | 1. | Woori Bank | 571.4% |
| 2. | Erste Group Bank AG | 105.0% | 2. | Bank of India | 535.0% |
| 3. | Royal Bank of Canada | 78.5% | 3. | JPMorgan Chase Bank, National Association | 210.8% |
| 4. | Bank of Montreal | 65.7% | 4. | Bank of America, National Association | 208.8% |
| 5. | Union Bancaire Privée, UBP SA | 56.7% | 5. | First Abu Dhabi Bank PJSC | 202.2% |
| 6. | Shinhan Bank | 47.5% | 6. | Allahabad Bank | 170.0% |
| 7. | Bank of China Limited | 46.5% | 7. | CIMB Bank Berhad | 163.6% |
| 8. | Bank of New York Mellon (The) | 45.7% | 8. | Kookmin Bank | 160.5% |
| 9. | Taiwan Shin Kong Commercial Bank Co., Ltd. | 43.3% | 9. | Societe Generale | 153.9% |
| 10. | UniCredit Bank AG | 43.2% | 10. | Taipei Fubon Commercial Bank Co., Ltd. | 137.3% |

Source: Extracted from individual banks' financial and public statements

# Licensed banks - Financial highlights

| | HK$ millions | Year ended | Income statement | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items | Profit before tax |
| 1 | Bank of China (Hong Kong) Limited | 31-Dec-18 | 36,370 | 16,483 | 14,696 | 38,157 | 1,108 | 885 | 37,934 |
| 2 | Bank of Communications (Hong Kong) Limited | 31-Dec-18 | 1,857 | 1,111 | 1,504 | 1,464 | 125 | (87) | 1,252 |
| 3 | Bank of East Asia, Limited (The) | 31-Dec-18 | 12,959 | 4,113 | 8,563 | 8,509 | 1,188 | 739 | 8,060 |
| 4 | China CITIC Bank International Limited | 31-Dec-18 | 6,400 | 2,010 | 3,385 | 5,025 | 1,268 | (133) | 3,624 |
| 5 | China Construction Bank (Asia) Corporation Limited | 31-Dec-18 | 6,120 | 2,102 | 3,206 | 5,016 | 626 | (34) | 4,356 |
| 6 | Chiyu Banking Corporation Limited | 31-Dec-18 | 1,559 | 461 | 671 | 1,349 | 148 | 4 | 1,205 |
| 7 | Chong Hing Bank Limited | 31-Dec-18 | 2,880 | 806 | 1,549 | 2,137 | 174 | 142 | 2,105 |
| 8 | Citibank (Hong Kong) Limited | 31-Dec-18 | 3,538 | 4,288 | 4,192 | 3,634 | 117 | - | 3,517 |
| 9 | CMB Wing Lung Bank Limited | 31-Dec-18 | 4,765 | 1,423 | 2,169 | 4,019 | 169 | (78) | 3,772 |
| 10 | Dah Sing Bank, Limited | 31-Dec-18 | 4,153 | 1,248 | 2,711 | 2,690 | 225 | 103 | 2,568 |
| 11 | DBS Bank (Hong Kong) Limited | 31-Dec-18 | 7,857 | 4,067 | 5,315 | 6,609 | 597 | 30 | 6,042 |
| 12 | Fubon Bank (Hong Kong) Limited | 31-Dec-18 | 1,356 | 332 | 965 | 723 | 49 | 250 | 924 |
| 13 | Hang Seng Bank, Limited | 31-Dec-18 | 30,047 | 11,168 | 12,168 | 29,047 | 996 | 381 | 28,432 |
| 14 | Hongkong And Shanghai Banking Corporation Limited (The) | 31-Dec-18 | 126,463 | 84,006 | 87,424 | 123,045 | 4,611 | 16,149 | 134,583 |
| 15 | Industrial And Commercial Bank of China (Asia) Limited | 31-Dec-18 | 11,625 | 3,441 | 3,454 | 11,612 | 1,136 | (85) | 10,391 |
| 16 | Nanyang Commercial Bank, Limited | 31-Dec-18 | 6,666 | 2,519 | 3,299 | 5,886 | 1,135 | (72) | 4,679 |
| 17 | OCBC Wing Hang Bank Limited | 31-Dec-18 | 5,039 | 1,507 | 3,071 | 3,475 | 245 | 57 | 3,287 |
| 18 | Public Bank (Hong Kong) Limited | 31-Dec-18 | 1,417 | 231 | 873 | 775 | 168 | - | 607 |
| 19 | Shanghai Commercial Bank Limited | 31-Dec-18 | 3,608 | 1,351 | 1,569 | 3,390 | 20 | 131 | 3,501 |
| 20 | Standard Chartered Bank (Hong Kong) Limited | 31-Dec-18 | 14,860 | 12,709 | 16,242 | 11,327 | 445 | 379 | 11,261 |
| 21 | Tai Sang Bank Limited | 31-Dec-18 | 17 | 13 | 24 | 6 | - | 18 | 24 |
| 22 | Tai Yau Bank, Limited | 31-Dec-18 | 30 | - | 14 | 16 | - | - | 16 |
| | **TOTAL[N1]** | **2018** | **259,539** | **144,221** | **164,896** | **238,864** | **13,554** | **18,398** | **243,708** |
| | **Total excluding HSBC[N2]** | **2018** | **163,123** | **71,383** | **89,640** | **144,866** | **9,939** | **2,630** | **137,557** |
| | **Total excluding BOCHK & HSBC[N2]** | **2018** | **126,753** | **54,900** | **74,944** | **106,709** | **8,831** | **1,745** | **99,623** |

* This is Liquidity Coverage Ratio.
\# This is Liquidity Maintenance Ratio.
N1 This does not include Hang Seng Bank, as it is already included in the results of The Hongkong and Shanghai Banking Corporation.
N2 This includes Hang Seng Bank.

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Size and strength measures | | | | | | | |
| Net profit after tax | Total assets | Risk-weighted assets ("RWA") | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Total equity | Total capital ratio | Liquidity ratio |
| 31,615 | 2,820,684 | 1,030,815 | 1,283,358 | 5,416 | 1,896,663 | 266,238 | 23.1% | 160.2%* |
| 983 | 207,877 | 115,005 | 67,921 | 232 | 162,075 | 18,633 | 18.1% | 182.7%* |
| 6,554 | 839,451 | 475,714 | 503,517 | 2,351 | 574,114 | 103,575 | 20.8% | 180.5%* |
| 3,008 | 362,945 | 260,769 | 201,820 | 2,659 | 285,493 | 45,981 | 19.3% | 258.5%* |
| 3,574 | 480,970 | 353,507 | 256,825 | 2,070 | 354,130 | 62,478 | 19.7% | 276.5%* |
| 1,003 | 102,872 | 50,696 | 50,282 | 348 | 78,330 | 11,603 | 21.0% | 244.7%* |
| 1,760 | 190,576 | 132,007 | 101,825 | 545 | 143,690 | 22,542 | 19.0% | 46.5%# |
| 3,035 | 223,928 | 75,766 | 82,856 | 341 | 169,383 | 22,994 | 30.2% | 51.7%# |
| 3,218 | 314,478 | 212,680 | 162,466 | 724 | 221,329 | 40,015 | 18.0% | 166.3%* |
| 2,141 | 231,138 | 150,452 | 133,308 | 916 | 173,910 | 26,366 | 18.1% | 47.7%# |
| 5,128 | 445,661 | 233,890 | 164,469 | 2,298 | 363,658 | 37,952 | 17.7% | 155.0%* |
| 823 | 102,787 | 63,608 | 48,838 | 231 | 68,248 | 14,024 | 20.6% | 60.0%# |
| 24,188 | 1,571,297 | 611,885 | 877,134 | 2,678 | 1,154,415 | 162,107 | 20.2% | 209.1%* |
| 112,116 | 8,263,454 | 2,813,912 | 3,545,258 | 16,556 | 5,207,666 | 812,920 | 19.8% | 161.0%* |
| 8,278 | 893,618 | 621,103 | 472,847 | 5,067 | 533,532 | 117,317 | 19.8% | 185.9%* |
| 3,978 | 466,022 | 270,692 | 255,828 | 2,898 | 344,205 | 55,195 | 18.7% | 147.7%* |
| 2,762 | 318,621 | 214,419 | 195,055 | 624 | 221,854 | 40,017 | 16.9% | 39.3%# |
| 501 | 42,182 | 28,185 | 29,708 | 193 | 35,298 | 5,829 | 19.2% | 44.5%# |
| 2,846 | 197,620 | 151,368 | 87,088 | 363 | 154,615 | 27,902 | 18.6% | 45.7%# |
| 9,668 | 1,176,234 | 353,507 | 507,213 | 1,675 | 907,083 | 79,754 | 19.7% | 276.5%* |
| 23 | 1,720 | 658 | 174 | - | 965 | 724 | 82.8% | 70.8%# |
| 13 | 2,922 | 572 | 1 | - | 2,120 | 795 | 139.1% | 79.4%# |
| **203,027** | **17,685,760** | **7,609,325** | **8,150,657** | **45,507** | **11,898,361** | **1,812,854** | **-** | **-** |
| **115,099** | **10,993,603** | **5,407,298** | **5,482,533** | **31,629** | **7,845,110** | **1,162,041** | **-** | **-** |
| **83,484** | **8,172,919** | **4,376,483** | **4,199,175** | **26,213** | **5,948,447** | **895,803** | **-** | **-** |

| | HK$ millions | Year ended | Key ratios — Performance measures: Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/income ratio | ROA[N3] | ROE[N4] |
|---|---|---|---|---|---|---|---|---|
| 1 | Bank of China (Hong Kong) Limited | 31-Dec-18 | 67.4% | 1.4% | 31.2% | 27.8% | 1.2% | 12.7% |
| 2 | Bank of Communications (Hong Kong) Limited | 31-Dec-18 | 41.8% | 0.5% | 37.4% | 50.7% | 0.3% | 3.5% |
| 3 | Bank of East Asia, Limited (The) | 31-Dec-18 | 87.3% | 1.6% | 24.1% | 50.2% | 0.8% | 6.4% |
| 4 | China CITIC Bank International Limited | 31-Dec-18 | 69.8% | 1.8% | 23.9% | 40.2% | 0.9% | 6.7% |
| 5 | China Construction Bank (Asia) Corporation Limited | 31-Dec-18 | 71.9% | 1.2% | 25.6% | 39.0% | 0.7% | 5.9% |
| 6 | Chiyu Banking Corporation Limited | 31-Dec-18 | 63.7% | 1.7% | 22.8% | 33.2% | 1.1% | 9.5% |
| 7 | Chong Hing Bank Limited | 31-Dec-18 | 70.5% | 1.6% | 21.9% | 42.0% | 1.0% | 8.8% |
| 8 | Citibank (Hong Kong) Limited | 31-Dec-18 | 48.7% | 1.7% | 54.8% | 53.6% | 1.5% | 13.7% |
| 9 | CMB Wing Lung Bank Limited | 31-Dec-18 | 73.1% | 1.6% | 23.0% | 35.1% | 1.0% | 8.3% |
| 10 | Dah Sing Bank, Limited | 31-Dec-18 | 76.1% | 1.8% | 23.1% | 50.2% | 0.9% | 8.2% |
| 11 | DBS Bank (Hong Kong) Limited | 31-Dec-18 | 44.6% | 1.9% | 34.1% | 44.6% | 1.2% | 13.3% |
| 12 | Fubon Bank (Hong Kong) Limited | 31-Dec-18 | 71.2% | 1.3% | 19.7% | 57.2% | 0.8% | 5.8% |
| 13 | Hang Seng Bank, Limited | 31-Dec-18 | 75.7% | 2.0% | 27.1% | 29.5% | 1.6% | 15.4% |
| 14 | Hongkong And Shanghai Banking Corporation Limited (The) | 31-Dec-18 | 67.8% | 1.6% | 39.9% | 41.5% | 1.4% | 14.3% |
| 15 | Industrial And Commercial Bank of China (Asia) Limited | 31-Dec-18 | 87.7% | 1.3% | 22.8% | 22.9% | 0.9% | 7.9% |
| 16 | Nanyang Commercial Bank, Limited | 31-Dec-18 | 73.5% | 1.5% | 27.4% | 35.9% | 0.9% | 7.4% |
| 17 | OCBC Wing Hang Bank Limited | 31-Dec-18 | 87.6% | 1.6% | 23.0% | 46.9% | 0.9% | 7.2% |
| 18 | Public Bank (Hong Kong) Limited | 31-Dec-18 | 83.6% | 3.4% | 14.0% | 53.0% | 1.2% | 8.7% |
| 19 | Shanghai Commercial Bank Limited | 31-Dec-18 | 56.1% | 1.9% | 27.2% | 31.6% | 1.5% | 10.6% |
| 20 | Standard Chartered Bank (Hong Kong) Limited | 31-Dec-18 | 55.7% | 1.3% | 46.1% | 58.9% | 0.9% | 12.5% |
| 21 | Tai Sang Bank Limited | 31-Dec-18 | 18.0% | 0.9% | 43.3% | 80.0% | 1.3% | 3.2% |
| 22 | Tai Yau Bank, Limited | 31-Dec-18 | 0.0% | 1.0% | 0.0% | 46.7% | 0.5% | 1.6% |
| | **TOTAL[N1]** | **2018** | **68.1%** | **1.5%** | **35.7%** | **40.8%** | **1.2%** | **11.6%** |
| | **Total excluding HSBC[N2]** | **2018** | **69.5%** | **1.5%** | **30.4%** | **38.2%** | **1.1%** | **10.3%** |
| | **Total excluding BOCHK & HSBC[N2]** | **2018** | **70.2%** | **1.6%** | **30.2%** | **41.3%** | **1.0%** | **9.6%** |

* This is Liquidity Coverage Ratio.
\# This is Liquidity Maintenance Ratio.
N1 This does not include Hang Seng Bank, as it is already included in the results of The Hongkong and Shanghai Banking Corporation.
N2 This includes Hang Seng Bank.
N3 ROA is calculated as net profit after tax divided by average total assets.
N4 ROE is calculated as net profit after tax divided by average total equity.

Source: Extracted from individual banks' financial and public statements

| Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|
| Impaired advances (stage 3) | | | | | Advances (stage 2) | | |
| Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance as a percentage of gross impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| 2,387 | 0.2% | 1,130 | 47.3% | 2,988 | 8,152 | 546 | 6.7% |
| 64 | 0.1% | 24 | 37.5% | 39 | 281 | 32 | 11.4% |
| 3,491 | 0.7% | 1,062 | 30.4% | 2,414 | 31,160 | 855 | 2.7% |
| 1,716 | 0.9% | 399 | 23.3% | 1,588 | 15,250 | 1,628 | 10.7% |
| 792 | 0.3% | 200 | 25.3% | 550 | 14,979 | 780 | 5.2% |
| 257 | 0.5% | 190 | 73.9% | 318 | 947 | 18 | 1.9% |
| 353 | 0.3% | 154 | 43.6% | 268 | 573 | 12 | 2.1% |
| 45 | 0.1% | 30 | 66.7% | 16 | 222 | 160 | 72.1% |
| 848 | 0.5% | 549 | 64.7% | 461 | 9,618 | 56 | 0.6% |
| 970 | 0.7% | 363 | 37.4% | 504 | 4,522 | 127 | 2.8% |
| 2,505 | 1.5% | 1,107 | 44.2% | 1,069 | 17,828 | 800 | 4.5% |
| 233 | 0.5% | 197 | 84.5% | 26 | 1,431 | 7 | 0.5% |
| 2,154 | 0.2% | 959 | 44.5% | N/A | 48,782 | 987 | 2.0% |
| 19,024 | 0.5% | 9,549 | 50.2% | 5,676 | 180,142 | 3,713 | 2.1% |
| 3,896 | 0.8% | 2,129 | 54.6% | 2,322 | 57,992 | 667 | 1.2% |
| 1,610 | 0.6% | 1,256 | 78.0% | 655 | 2,106 | 176 | 8.4% |
| 1,165 | 0.6% | 249 | 21.4% | 618 | 14,010 | 52 | 0.4% |
| 198 | 0.7% | 56 | 28.3% | 119 | 172 | 30 | 17.4% |
| 613 | 0.7% | 32 | 5.2% | 1,487 | 3,529 | 52 | 1.5% |
| 2,527 | 0.5% | 921 | 36.4% | 1,151 | 14,548 | 327 | 2.2% |
| - | 0.0% | - | N/A | - | - | - | 0.0% |
| - | 0.0% | - | N/A | - | N/A | N/A | N/A |
| **42,694** | **0.5%** | **19,597** | **45.9%** | **22,269** | **377,462** | **10,038** | **2.7%** |
| **25,824** | **0.5%** | **11,007** | **42.6%** | **16,593** | **246,102** | **7,312** | **3.0%** |
| **23,437** | **0.6%** | **9,877** | **42.1%** | **13,605** | **237,950** | **6,766** | **2.8%** |

# Restricted licence banks - Financial highlights

| | HK$ millions | Year ended | Income statement | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items | Profit before tax |
| 1 | Allied Banking Corporation (Hong Kong) Limited | 31-Dec-18 | 58 | 18 | 36 | 40 | - | - | 40 |
| 2 | Banc of America Securities Asia Limited | 31-Dec-18 | 27 | 61 | 93 | (5) | - | - | (5) |
| 3 | Bank of China International Limited | 31-Dec-18 | 122 | 134 | 228 | 28 | - | - | 28 |
| 4 | Bank of Shanghai (Hong Kong) Limited | 31-Dec-18 | 518 | 150 | 223 | 445 | 141 | (35) | 269 |
| 5 | Citicorp International Limited | 31-Dec-18 | 75 | 4,354 | 1,953 | 2,476 | - | - | 2,476 |
| 6 | Goldman Sachs Asia Bank Limited | 31-Dec-18 | 12 | 54 | 55 | 11 | - | - | 11 |
| 7 | Habib Bank Zurich (Hong Kong) Limited | 31-Dec-18 | 62 | 47 | 79 | 30 | 8 | 1 | 23 |
| 8 | J.P. Morgan Securities (Asia Pacific) Limited | 31-Dec-18 | 153 | 7,445 | 6,669 | 929 | - | - | 929 |
| 9 | Kasikornbank Public Company Limited | 31-Dec-18 | 38 | 12 | 18 | 32 | 4 | - | 28 |
| 10 | KDB Asia Limited | 31-Dec-18 | 147 | 70 | 76 | 141 | (7) | 1 | 149 |
| 11 | Morgan Stanley Asia International Limited | 31-Dec-18 | 409 | 2,056 | 1,779 | 686 | - | - | 686 |
| 12 | Nippon Wealth Limited | 31-Dec-18 | 2 | 12 | 75 | (61) | - | - | (61) |
| 13 | ORIX Asia Limited | 31-Mar-18 | 177 | 37 | 136 | 78 | (5) | - | 83 |
| 14 | Scotiabank (Hong Kong) Limited | 31-Oct-18 | 162 | 22 | 48 | 136 | (1) | - | 137 |
| 15 | Siam Commercial Bank Public Company Limited (The) | 31-Dec-18 | 65 | 22 | 13 | 74 | - | - | 74 |
| | **TOTAL** | **2018** | **2,027** | **14,494** | **11,481** | **5,040** | **140** | **(33)** | **4,867** |

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Size and strength measures | | | | | | | |
| Net profit after tax | Total assets | Risk-weighted assets ("RWA") | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Total equity | Total capital ratio | Liquidity ratio |
| 35 | 1,757 | 1,442 | 1,179 | 1 | 1,206 | 507 | 31.1% | 44.2% |
| (5) | 5,051 | 1,457 | - | - | - | 4,187 | 287.0% | 215.7% |
| 23 | 10,330 | 4,216 | 4,300 | 1 | 8,627 | 1,580 | 37.5% | 50.9% |
| 218 | 28,590 | 19,416 | 15,121 | 291 | 9,503 | 4,483 | 22.0% | 72.3% |
| 2,070 | 7,676 | 8,322 | - | - | - | 6,862 | 82.2% | 160.0% |
| 9 | 1,030 | 555 | - | - | 8 | 899 | 160.8% | 160.0% |
| 19 | 2,168 | 1,685 | 1,387 | 26 | 1,328 | 554 | 32.5% | 85.3% |
| 762 | 12,994 | 18,452 | - | - | - | 7,977 | 42.1% | 227.9% |
| 23 | 11,861 | N/A | 923 | 9 | 13 | 469 | 18.3% | 290.0% |
| 124 | 13,693 | 10,179 | 8,928 | 37 | 16 | 2,375 | 23.5% | 83.2% |
| 582 | 27,134 | 8,900 | 12,522 | - | 23,730 | 2,420 | 26.0% | 61.0% |
| (61) | 320 | 90 | - | - | 119 | 192 | 171.3% | 160.0% |
| 72 | 6,517 | 6,367 | 5,917 | 34 | 805 | 2,150 | 33.8% | 53.3% |
| 115 | 16,480 | 13,010 | 12,078 | 2 | - | 5,424 | 41.7% | 49.3% |
| 68 | 14,108 | N/A | 1,843 | 6 | 957 | - | 17.1% | 69.1% |
| **4,054** | **159,709** | **94,091** | **64,198** | **407** | **46,312** | **40,079** | **-** | **-** |

| | HK$ millions | Year ended | Key ratios | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | | |
| | | | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/income ratio | ROA | ROE |
| 1 | Allied Banking Corporation (Hong Kong) Limited | 31-Dec-18 | 97.7% | 3.4% | 23.7% | 47.4% | 2.0% | 7.2% |
| 2 | Banc of America Securities Asia Limited | 31-Dec-18 | 0.0% | 0.5% | 69.3% | 105.7% | -0.1% | -0.1% |
| 3 | Bank of China International Limited | 31-Dec-18 | 49.8% | 1.1% | 52.3% | 89.1% | 0.2% | 1.5% |
| 4 | Bank of Shanghai (Hong Kong) Limited | 31-Dec-18 | 156.1% | 1.9% | 22.5% | 33.4% | 0.8% | 4.9% |
| 5 | Citicorp International Limited | 31-Dec-18 | 0.0% | 0.8% | 98.3% | 44.1% | 22.5% | 26.5% |
| 6 | Goldman Sachs Asia Bank Limited | 31-Dec-18 | 0.0% | 1.2% | 81.8% | 83.3% | 0.9% | 1.0% |
| 7 | Habib Bank Zurich (Hong Kong) Limited | 31-Dec-18 | 102.5% | 2.8% | 43.1% | 72.5% | 0.9% | 3.4% |
| 8 | J.P. Morgan Securities (Asia Pacific) Limited | 31-Dec-18 | 0.0% | 1.2% | 98.0% | 87.8% | 6.2% | 10.1% |
| 9 | Kasikornbank Public Company Limited | 31-Dec-18 | 7,030.8% | 0.3% | 24.0% | 36.0% | 0.2% | 5.0% |
| 10 | KDB Asia Limited | 31-Dec-18 | 55,568.8% | 1.2% | 32.3% | 35.0% | 1.0% | 5.3% |
| 11 | Morgan Stanley Asia International Limited | 31-Dec-18 | 52.8% | 1.4% | 83.4% | 72.2% | 2.0% | 27.4% |
| 12 | Nippon Wealth Limited | 31-Dec-18 | 0.0% | 0.6% | 85.7% | 535.7% | -19.4% | -33.2% |
| 13 | ORIX Asia Limited | 31-Mar-18 | 730.8% | 2.6% | 17.3% | 63.6% | 1.1% | 3.4% |
| 14 | Scotiabank (Hong Kong) Limited | 31-Oct-18 | 0.0% | 1.0% | 12.0% | 26.1% | 0.7% | 2.1% |
| 15 | Siam Commercial Bank Public Company Limited (The) | 31-Dec-18 | 192.0% | 0.5% | 25.3% | 14.9% | 0.5% | N/A |
| | **TOTAL** | **2018** | **137.7%** | **2.5%** | **87.7%** | **69.5%** | **5.1%** | **20.2%** |

Source: Extracted from individual banks' financial and public statements

| | Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Impaired advances / Stage 3 advances | | | | | Stage 2 Advances (HKFRS 9) | | |
| | Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance as a percentage of gross impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| | 2 | 0.2% | - | 0.0% | N/A | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | 1 | 0.0% | 1 | 100.0% | - | - | - | 0.0% |
| | 226 | 1.5% | 146 | 64.6% | 1 | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | 33 | 2.4% | 9 | 27.3% | 18 | 147 | 13 | 8.8% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| | 125 | 1.4% | 32 | 25.6% | - | 47 | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | 12,522 | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | 38 | 0.6% | 28 | 73.7% | 13 | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| | **425** | **0.7%** | **216** | **50.8%** | **32** | **12,716** | **13** | **0.1%** |

# Deposit-taking companies – Financial highlights

| | HK$ millions | Year ended | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items | Profit before tax |
|---|---|---|---|---|---|---|---|---|---|
| | | | Income statement | | | | | | |
| 1 | BCOM Finance (Hong Kong) Limited | 31-Dec-18 | 1 | 8 | 1 | 8 | - | - | 8 |
| 2 | BPI International Finance Limited | 31-Dec-18 | 6 | 36 | 33 | 9 | - | 18 | 27 |
| 3 | Chau's Brothers Finance Company Limited | 31-Dec-18 | 5 | - | 5 | - | - | - | - |
| 4 | Chong Hing Finance Limited | 31-Dec-18 | 1 | - | 1 | - | - | - | - |
| 5 | Commonwealth Finance Corporation Limited | 31-Dec-18 | 13 | 4 | 11 | 6 | 1 | (1) | 4 |
| 6 | Corporate Finance (D.T.C.) Limited | 31-Dec-18 | 7 | - | 4 | 3 | - | - | 3 |
| 7 | Fubon Credit (Hong Kong) Limited | 31-Dec-18 | - | - | 1 | (1) | (2) | - | 1 |
| 8 | Gunma Finance (Hong Kong) Limited | 31-Dec-18 | 11 | - | 8 | 3 | (100) | - | 3 |
| 9 | Habib Finance International Limited | 31-Dec-18 | 1 | 1 | 9 | (7) | - | - | (7) |
| 10 | Henderson International Finance Limited | 31-Dec-18 | 1 | - | 1 | 1 | - | - | 1 |
| 11 | KEB Hana Global Finance Limited | 31-Dec-18 | 30 | 28 | 25 | 33 | (6) | - | 39 |
| 12 | Kexim Asia Limited | 31-Dec-18 | 35 | 7 | 19 | 23 | 2 | - | 21 |
| 13 | Public Finance Limited | 31-Dec-18 | 808 | 120 | 452 | 476 | 170 | - | 306 |
| 14 | Shinhan Asia Limited | 31-Dec-18 | 101 | 98 | 43 | 156 | 9 | (1) | 146 |
| 15 | Vietnam Finance Company Limited | 31-Dec-18 | 11 | 3 | 7 | 7 | - | - | 7 |
| 16 | Woori Global Markets Asia Limited | 31-Dec-18 | 50 | 27 | 31 | 46 | 4 | - | 42 |
| | **TOTAL** | **2018** | **1,081** | **332** | **651** | **763** | **78** | **16** | **601** |

Source: Extracted from individual banks' financial and public statements

## Financial highlights

| Net profit after tax | Size and strength measures | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total assets | Risk-weighted assets ("RWA") | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Total equity | Total capital ratio | Liquidity ratio |
| 7 | 254 | N/A | - | - | 1 | 252 | N/A | N/A |
| 27 | 456 | 211 | 43 | - | 288 | 165 | 78.3% | 403.6% |
| - | 79 | N/A | 66 | - | 9 | 69 | 98.0% | 160.4% |
| - | 46 | N/A | - | - | - | 46 | N/A | N/A |
| 3 | 340 | N/A | 247 | 3 | 156 | 112 | 60.1% | 92.4% |
| 3 | 329 | N/A | 136 | - | 228 | 100 | N/A | N/A |
| 1 | 97 | N/A | 2 | - | - | 91 | N/A | N/A |
| 3 | 494 | N/A | 205 | - | 21 | 315 | N/A | N/A |
| (7) | 151 | N/A | - | - | - | 148 | 216.9% | 393.5% |
| 1 | 58 | N/A | - | - | 3 | 54 | N/A | N/A |
| 33 | 1,667 | 879 | 1,435 | 3 | - | 475 | 53.5% | 1,195.5% |
| 17 | 3,252 | 2,931 | 1,809 | 5 | - | 449 | 19.4% | 145.8% |
| 255 | 7,136 | 5,670 | 6,062 | 181 | 5,465 | 1,519 | 22.3% | 48.5% |
| 125 | 809 | 453 | - | - | - | 809 | 178.4% | 1,000.0% |
| 6 | 947 | N/A | 2 | - | - | 111 | N/A | N/A |
| 36 | 3,624 | N/A | 1,903 | 5 | - | 850 | 26.2% | N/A |
| **510** | **19,739** | **10,144** | **11,910** | **197** | **6,171** | **5,565** | **-** | **-** |

| | | | Key ratios | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | | |
| | HK$ millions | Year ended | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/ total operating income | Cost/income ratio | ROA | ROE |
| 1 | BCOM Finance (Hong Kong) Limited | 31-Dec-18 | 0.0% | 0.4% | 88.9% | 11.1% | 2.8% | 2.8% |
| 2 | BPI International Finance Limited | 31-Dec-18 | 14.9% | 1.3% | 85.7% | 78.6% | 5.9% | 15.3% |
| 3 | Chau's Brothers Finance Company Limited | 31-Dec-18 | 733.3% | 6.6% | 0.0% | 100.0% | 0.0% | 0.0% |
| 4 | Chong Hing Finance Limited | 31-Dec-18 | 0.0% | 2.2% | 0.0% | 100.0% | 0.0% | 0.0% |
| 5 | Commonwealth Finance Corporation Limited | 31-Dec-18 | 156.4% | 3.9% | 23.5% | 64.7% | 0.9% | 2.7% |
| 6 | Corporate Finance (D.T.C.) Limited | 31-Dec-18 | 59.6% | 2.1% | 0.0% | 57.1% | 0.9% | 3.0% |
| 7 | Fubon Credit (Hong Kong) Limited | 31-Dec-18 | N/A | 0.0% | N/A | N/A | 1.0% | 1.1% |
| 8 | Gunma Finance (Hong Kong) Limited | 31-Dec-18 | 976.2% | 2.0% | 0.0% | 72.7% | 0.6% | 1.0% |
| 9 | Habib Finance International Limited | 31-Dec-18 | 0.0% | 0.6% | 50.0% | 450.0% | -4.4% | -4.6% |
| 10 | Henderson International Finance Limited | 31-Dec-18 | 0.0% | 1.7% | 0.0% | 50.0% | 1.7% | 1.9% |
| 11 | KEB Hana Global Finance Limited | 31-Dec-18 | N/A | 2.0% | 48.3% | 43.1% | 2.2% | 7.2% |
| 12 | Kexim Asia Limited | 31-Dec-18 | N/A | 1.1% | 16.7% | 45.2% | 0.5% | 3.8% |
| 13 | Public Finance Limited | 31-Dec-18 | 107.6% | 11.5% | 12.9% | 48.7% | 3.6% | 16.4% |
| 14 | Shinhan Asia Limited | 31-Dec-18 | 0.0% | 4.2% | 49.2% | 21.6% | 5.2% | 10.8% |
| 15 | Vietnam Finance Company Limited | 31-Dec-18 | N/A | 1.1% | 21.4% | 50.0% | 0.6% | 5.6% |
| 16 | Woori Global Markets Asia Limited | 31-Dec-18 | N/A | 1.7% | 35.1% | 40.3% | 1.3% | 4.3% |
| | **TOTAL** | **2018** | **189.8%** | **11.0%** | **23.5%** | **46.0%** | **5.2%** | **18.3%** |

Source: Extracted from individual banks' financial and public statements

| | Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Impaired advances (stage 3) | | | | | Advances (stage 2) | | |
| | Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance as a percentage of gross impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | N/A | N/A | 1 | N/A | N/A | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | 85 | 1 | 1.2% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | 119 | 2.2% | 52 | 43.7% | 7 | 58 | 29 | 50.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | **119** | **1.0%** | **53** | **44.5%** | **7** | **143** | **30** | **21.0%** |

# Foreign bank branches - Financial highlights

| | | | Income statement | | | | | |
|---|---|---|---|---|---|---|---|---|
| | HK$ millions | Year ended | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items |
| 1 | ABN AMRO Bank N.V. | 31-Dec-18 | 334 | 160 | 297 | 197 | 539 | 15 |
| 2 | Agricultural Bank of China Limited | 31-Dec-18 | 3,399 | 1,118 | 387 | 4,130 | 43 | (24) |
| 3 | Allahabad Bank | 31-Mar-18 | 111 | 13 | 14 | 110 | 51 | - |
| 4 | Australia And New Zealand Banking Group Limited | 30-Sep-18 | 772 | 740 | 1,372 | 140 | 49 | - |
| 5 | Axis Bank Limited | 31-Mar-18 | 130 | 190 | 31 | 289 | 661 | - |
| 6 | Banco Bilbao Vizcaya Argentaria S.A. | 31-Dec-18 | 225 | 168 | 206 | 187 | 72 | - |
| 7 | Banco Santander, S.A. | 31-Dec-18 | (134) | 696 | 511 | 51 | 1 | - |
| 8 | Bangkok Bank Public Company Limited | 31-Dec-18 | 409 | 68 | 145 | 332 | 273 | - |
| 9 | Bank J. Safra Sarasin AG | 31-Dec-18 | 213 | 203 | 310 | 106 | 3 | - |
| 10 | Bank Julius Baer & Co. Ltd. | 31-Dec-18 | 661 | 1,469 | 1,609 | 521 | (1) | - |
| 11 | Bank of America, National Association | 31-Dec-18 | 1,421 | 1,456 | 2,050 | 827 | (33) | - |
| 12 | Bank of Baroda | 31-Mar-18 | 47 | 55 | 24 | 78 | 84 | - |
| 13 | Bank of China Limited | 31-Dec-18 | 419 | 603 | 108 | 914 | - | 3 |
| 14 | Bank of Communications Co., Ltd. | 31-Dec-18 | 4,208 | 2,003 | 1,389 | 4,822 | (56) | 26 |
| 15 | Bank of India | 31-Mar-18 | 153 | 28 | 28 | 153 | 656 | 1 |
| 16 | Bank of Montreal | 31-Oct-18 | 150 | 250 | 441 | (41) | 11 | - |
| 17 | Bank of New York Mellon (The) | 31-Dec-18 | 264 | 656 | 622 | 298 | - | - |
| 18 | Bank of Nova Scotia (The) | 31-Oct-18 | 85 | 372 | 287 | 170 | - | - |
| 19 | Bank of Singapore Limited | 31-Dec-18 | 98 | 613 | 664 | 47 | - | - |
| 20 | Bank of Taiwan | 31-Dec-18 | 250 | 16 | 46 | 220 | 17 | (9) |
| 21 | Bank Sinopac | 31-Dec-18 | 359 | 125 | 160 | 324 | 33 | 9 |
| 22 | Barclays Bank PLC | 31-Dec-18 | 121 | 1,585 | 1,790 | (84) | (1) | - |
| 23 | BNP Paribas | 31-Dec-18 | 2,489 | 2,612 | 4,248 | 853 | 215 | (1) |
| 24 | CA Indosuez (Switzerland) SA | 31-Dec-18 | 28 | 389 | 346 | 71 | - | - |
| 25 | Canadian Imperial Bank of Commerce | 31-Oct-18 | 62 | 294 | 222 | 134 | - | - |
| 26 | Canara Bank | 31-Mar-18 | 63 | 30 | 15 | 78 | 43 | - |
| 27 | Cathay Bank | 31-Dec-18 | 65 | 14 | 44 | 35 | 4 | - |
| 28 | Cathay United Bank Company, Limited | 31-Dec-18 | 278 | 211 | 223 | 266 | 71 | - |
| 29 | Chang Hwa Commercial Bank, Ltd. | 31-Dec-18 | 268 | 50 | 35 | 283 | (5) | - |
| 30 | China Construction Bank Corporation | 31-Dec-18 | 1,775 | 992 | 540 | 2,227 | 300 | - |
| 31 | China Development Bank | 31-Dec-18 | 4,023 | (406) | 284 | 3,333 | 2,391 | - |
| 32 | China Everbright Bank Co., Ltd. | 31-Dec-18 | 825 | 528 | 293 | 1,060 | 22 | - |
| 33 | China Merchants Bank Co., Ltd. | 31-Dec-18 | 2,531 | 782 | 393 | 2,920 | (2) | - |
| 34 | China Minsheng Banking Corp., Ltd. | 31-Dec-18 | 1,564 | 31 | 484 | 1,111 | (581) | - |
| 35 | China Zheshang Bank Co., Ltd. | 31-Dec-18 | 198 | (2) | 240 | (44) | 49 | - |
| 36 | CIMB Bank Berhad | 31-Dec-18 | 49 | 82 | 77 | 54 | 3 | - |

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | | | | | |
|---|---|---|---|---|---|---|
| | | Size and strength measures | | | | |
| Profit before tax | Net profit after tax | Total assets | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Liquidity ratio |
| (342) | (294) | 42,292 | 14,938 | 563 | 1,562 | 47.2% |
| 4,063 | 3,392 | 560,404 | 251,384 | 1,195 | 123,521 | 64.8% |
| 59 | 54 | 15,639 | 6,894 | 165 | 1,340 | 970.6% |
| 91 | 65 | 165,730 | 51,836 | 303 | 59,763 | 41.1% |
| (372) | (372) | 15,787 | 10,527 | 819 | 1,003 | 66.5% |
| 115 | 103 | 31,052 | 22,968 | 111 | 1,836 | 48.3% |
| 50 | 26 | 64,723 | 18,712 | 7 | 896 | 56.8% |
| 59 | 51 | 82,792 | 17,350 | 1,816 | 10,516 | 40.7% |
| 103 | 86 | 15,367 | 8,540 | 2 | 8,602 | 50.3% |
| 522 | 458 | 90,134 | 39,466 | 1 | 54,541 | 41.1% |
| 860 | 735 | 122,924 | 56,173 | 1,251 | 38,352 | 54.8% |
| (6) | 3 | 8,103 | 4,986 | 511 | 2,250 | 62.9% |
| 917 | 763 | 511,426 | - | - | - | 9,664.4% |
| 4,904 | 4,116 | 468,093 | 152,404 | 1,054 | 278,349 | 130.3% |
| (502) | (508) | 23,991 | 10,719 | 1,429 | 3,205 | 72.8% |
| (52) | (53) | 36,193 | 11,894 | 34 | 8,798 | 59.6% |
| 298 | 242 | 73,196 | 1,552 | - | 3,225 | 364.4% |
| 170 | 137 | 43,668 | 15,177 | - | 16,513 | 47.1% |
| 47 | 40 | 30,044 | 11,990 | - | 15,691 | 46.9% |
| 194 | 194 | 15,072 | 5,640 | 100 | 6,985 | 55.3% |
| 300 | 246 | 27,061 | 8,134 | 139 | 20,476 | 44.6% |
| (83) | (67) | 13,765 | 114 | 1 | 992 | 194.0% |
| 637 | 587 | 321,227 | 129,455 | 663 | 178,052 | 39.3% |
| 71 | 61 | 8,372 | 2,114 | - | 4,886 | 55.5% |
| 134 | 106 | 18,865 | 3,800 | 1 | 5,043 | 74.7% |
| 35 | 37 | 16,585 | 14,172 | 356 | 2,303 | 109.3% |
| 31 | 24 | 3,954 | 2,236 | 22 | 2,695 | 45.2% |
| 195 | 160 | 24,015 | 11,823 | 164 | 12,648 | 53.1% |
| 288 | 247 | 15,206 | 5,899 | 78 | 8,919 | 44.0% |
| 1,927 | 1,611 | 405,025 | 125,818 | 1,357 | 137,134 | 477.8% |
| 942 | 878 | 370,650 | 260,411 | 17,697 | 22,097 | 188.8% |
| 1,038 | 858 | 149,067 | 59,147 | 269 | 57,303 | 50.8% |
| 2,922 | 2,450 | 182,478 | 62,815 | 353 | 105,351 | 46.7% |
| 1,692 | 1,456 | 193,196 | 69,002 | 359 | 86,663 | 70.1% |
| (93) | (94) | 24,151 | 8,892 | 49 | 15 | 4,544.7% |
| 51 | 58 | 9,146 | 4,712 | 3 | 2,983 | 66.9% |

| | HK$ millions | Year ended | Income statement | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items |
| 37 | Citibank, N.A. | 31-Dec-18 | 5,531 | 2,021 | 3,024 | 4,528 | (8) | - |
| 38 | Commerzbank AG | 31-Dec-18 | 138 | 399 | 448 | 89 | 1 | - |
| 39 | Commonwealth Bank of Australia | 30-Jun-18 | 291 | 33 | 218 | 106 | - | - |
| 40 | Coöperatieve Rabobank U.A. | 31-Dec-18 | 731 | 314 | 652 | 393 | 816 | - |
| 41 | Coutts & Co AG | 31-Dec-18 | - | 1 | 38 | (37) | - | - |
| 42 | Credit Agricole Corporate And Investment Bank | 31-Dec-18 | 152 | 1,444 | 1,164 | 432 | 57 | (9) |
| 43 | Crédit Industriel et Commercial | 31-Dec-18 | 49 | 26 | 51 | 24 | 6 | - |
| 44 | Credit Suisse AG | 31-Dec-18 | 1,425 | 2,405 | 2,641 | 1,189 | 41 | - |
| 45 | CTBC Bank Co., Ltd. | 31-Dec-18 | 1,265 | 420 | 503 | 1,182 | (8) | (3) |
| 46 | DBS Bank Ltd. | 31-Dec-18 | 2,831 | 1,129 | 707 | 3,253 | (149) | - |
| 47 | Deutsche Bank Aktiengesellschaft | 31-Dec-18 | 875 | 6,086 | 6,589 | 372 | 27 | - |
| 48 | DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt Am Main | 31-Dec-18 | 137 | 54 | 92 | 99 | (36) | - |
| 49 | E.Sun Commercial Bank, Ltd. | 31-Dec-18 | 561 | 280 | 200 | 641 | 38 | - |
| 50 | East West Bank | 31-Dec-18 | 200 | 38 | 157 | 81 | 2 | - |
| 51 | EFG Bank AG | 31-Dec-18 | 110 | 568 | 625 | 53 | - | (8) |
| 52 | Erste Group Bank AG | 31-Dec-18 | 159 | (36) | 57 | 66 | 1 | - |
| 53 | Far Eastern International Bank | 31-Dec-18 | 80 | 18 | 31 | 67 | 7 | - |
| 54 | First Abu Dhabi Bank PJSC | 31-Dec-18 | 116 | 131 | 129 | 118 | - | - |
| 55 | First Commercial Bank, Ltd. | 31-Dec-18 | 369 | 38 | 47 | 360 | 36 | - |
| 56 | HDFC Bank Limited | 31-Mar-18 | 49 | - | 13 | 36 | (13) | - |
| 57 | HSBC Private Bank (Suisse) SA | 31-Dec-18 | - | - | 1 | (1) | - | - |
| 58 | Hua Nan Commercial Bank, Ltd. | 31-Dec-18 | 377 | 29 | 63 | 343 | 60 | - |
| 59 | ICBC Standard Bank Plc | 31-Dec-18 | - | 80 | 75 | 5 | - | - |
| 60 | ICICI Bank Limited | 31-Mar-18 | 253 | 263 | 110 | 406 | 210 | - |
| 61 | Indian Overseas Bank | 31-Mar-18 | 88 | 141 | 38 | 191 | 160 | (2) |
| 62 | Industrial And Commercial Bank of China Limited | 31-Dec-18 | 1,328 | 198 | 303 | 1,223 | 237 | - |
| 63 | Industrial Bank Co., Ltd. | 31-Dec-18 | 1,455 | 1,820 | 569 | 2,706 | 182 | - |
| 64 | Industrial Bank of Korea | 31-Dec-18 | 85 | 84 | 32 | 137 | 12 | - |
| 65 | ING Bank N.V. | 31-Dec-18 | 518 | 372 | 410 | 480 | 7 | - |
| 66 | Intesa Sanpaolo S.p.A. | 31-Dec-18 | 328 | 171 | 139 | 360 | 40 | 1 |
| 67 | JPMorgan Chase Bank, National Association | 31-Dec-18 | 506 | 8,236 | 7,471 | 1,271 | - | 18 |
| 68 | KBC Bank N.V. | 31-Dec-18 | 92 | 34 | 70 | 56 | (7) | - |

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | Size and strength measures | | | | |
|---|---|---|---|---|---|---|
| Profit before tax | Net profit after tax | Total assets | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Liquidity ratio |
| 4,536 | 3,792 | 424,428 | 134,960 | 219 | 306,586 | 34.6% |
| 88 | 84 | 20,875 | 7,108 | 8 | 2,204 | 56.0% |
| 106 | 89 | 29,858 | 13,339 | - | 7,776 | 165.2% |
| (423) | (351) | 119,806 | 42,947 | 914 | 14,799 | 52.2% |
| (37) | (37) | 74 | - | - | 50 | 96.5% |
| 366 | 315 | 179,274 | 32,987 | 375 | 20,991 | 56.9% |
| 18 | 16 | 13,067 | 9,292 | 11 | 926 | 40.7% |
| 1,148 | 949 | 193,380 | 70,854 | 259 | 125,965 | 195.6% |
| 1,187 | 1,005 | 75,394 | 24,279 | 259 | 65,835 | 59.5% |
| 3,402 | 2,846 | 326,617 | 213,727 | 454 | 51,307 | 42.1% |
| 345 | 427 | 101,265 | 45,530 | 75 | 28,733 | 94.4% |
| 135 | 135 | 24,278 | 7,047 | 59 | 431 | 164.4% |
| 603 | 482 | 34,571 | 14,075 | 343 | 31,869 | 43.3% |
| 79 | 66 | 9,744 | 5,164 | 82 | 8,688 | 44.8% |
| 45 | 38 | 33,700 | 19,018 | - | 30,215 | 56.1% |
| 65 | 54 | 29,932 | 63 | 4 | - | 55.3% |
| 60 | 50 | 6,206 | 2,756 | 37 | 4,102 | 50.0% |
| 118 | 139 | 41,538 | 11,225 | 12 | 6,732 | 62.4% |
| 324 | 266 | 19,211 | 8,881 | 113 | 13,504 | 42.0% |
| 49 | 48 | 4,285 | 2,915 | 33 | 856 | 67.3% |
| (1) | (1) | 15 | - | - | - | 99,999,999% |
| 283 | 238 | 22,528 | 6,467 | 92 | 19,770 | 56.8% |
| 5 | 5 | 96 | - | - | 41 | 160.0% |
| 196 | 169 | 29,061 | 10,450 | 422 | 1,926 | 48.1% |
| 29 | 35 | 13,213 | 9,491 | 556 | 3,948 | 75.7% |
| 986 | 831 | 223,092 | 84,840 | 623 | - | 56.5% |
| 2,524 | 2,119 | 229,905 | 79,112 | (917) | 100,339 | 62.0% |
| 125 | 100 | 11,447 | 1,500 | 12 | 1,503 | 75.8% |
| 473 | 398 | 88,821 | 35,790 | 14 | 6,764 | 34.4% |
| 321 | 277 | 44,839 | 13,618 | 519 | 1,355 | 39.0% |
| 1,289 | 1,069 | 169,830 | 12,205 | - | 49,191 | 65.1% |
| 63 | 53 | 10,005 | 3,471 | 20 | 2,125 | 46.0% |

| | HK$ millions | Year ended | Income statement | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items |
| 69 | KEB Hana Bank | 31-Dec-18 | 255 | 149 | 52 | 352 | (94) | 1 |
| 70 | Kookmin Bank | 31-Dec-18 | 90 | 38 | 44 | 84 | (25) | - |
| 71 | LGT Bank AG | 31-Dec-18 | 302 | 1,359 | 1,573 | 88 | (2) | - |
| 72 | Macquarie Bank Limited | 31-Mar-18 | (33) | 714 | 814 | (133) | - | - |
| 73 | Malayan Banking Berhad | 31-Dec-18 | 386 | 157 | 219 | 324 | (184) | (4) |
| 74 | Mega International Commercial Bank Co., Ltd. | 31-Dec-18 | 537 | 99 | 123 | 513 | 62 | - |
| 75 | Mitsubishi UFJ Trust And Banking Corporation | 31-Mar-18 | 163 | 31 | 55 | 139 | - | - |
| 76 | Mizuho Bank, Ltd. | 31-Mar-18 | 582 | 1,352 | 811 | 1,123 | (69) | (51) |
| 77 | MUFG Bank, Ltd. | 31-Mar-18 | 858 | 1,064 | 1,289 | 633 | 290 | (1) |
| 78 | National Australia Bank Limited | 30-Sep-18 | 295 | 395 | 399 | 291 | (10) | - |
| 79 | Natixis | 31-Dec-18 | 127 | (518) | 1,482 | (1,873) | (11) | - |
| 80 | NatWest Markets Plc | 31-Dec-18 | - | 72 | 77 | (5) | - | - |
| 81 | O-Bank Co., Ltd. | 31-Dec-18 | 263 | 47 | 151 | 159 | - | - |
| 82 | Oversea-Chinese Banking Corporation Limited | 31-Dec-18 | 875 | 218 | 287 | 806 | 556 | 56 |
| 83 | Pictet & Cie (Europe) S.A. | 31-Dec-18 | 98 | 280 | 337 | 41 | 3 | - |
| 84 | Punjab National Bank | 31-Mar-18 | 191 | 45 | 23 | 213 | 249 | - |
| 85 | Royal Bank of Canada | 31-Oct-18 | (83) | 802 | 653 | 66 | - | - |
| 86 | Shanghai Commercial & Savings Bank, Ltd. (The) | 31-Dec-18 | 114 | 36 | 38 | 112 | 6 | - |
| 87 | Shanghai Pudong Development Bank Co., Ltd. | 31-Dec-18 | 1,307 | 553 | 332 | 1,528 | 114 | - |
| 88 | Shinhan Bank | 31-Dec-18 | 142 | 92 | 26 | 208 | (15) | - |
| 89 | Societe Generale | 31-Dec-18 | 179 | 2,865 | 1,995 | 1,049 | (91) | (1) |
| 90 | State Bank of India | 31-Mar-18 | 370 | 211 | 285 | 296 | 232 | - |
| 91 | State Street Bank And Trust Company | 31-Dec-18 | 242 | 1,467 | 1,491 | 218 | - | - |
| 92 | Sumitomo Mitsui Banking Corporation | 31-Mar-18 | 1,287 | 361 | 603 | 1,045 | - | - |
| 93 | Sumitomo Mitsui Trust Bank, Limited | 31-Mar-18 | (318) | 575 | 70 | 187 | - | - |
| 94 | Taipei Fubon Commercial Bank Co., Ltd. | 31-Dec-18 | 650 | 377 | 186 | 841 | 9 | (30) |
| 95 | Taishin International Bank Co., Ltd | 31-Dec-18 | 163 | 110 | 111 | 162 | (2) | - |
| 96 | Taiwan Business Bank, Ltd | 31-Dec-18 | 138 | 12 | 29 | 121 | 9 | - |
| 97 | Taiwan Cooperative Bank, Ltd. | 31-Dec-18 | 222 | 15 | 32 | 205 | 11 | - |
| 98 | Taiwan Shin Kong Commercial Bank Co., Ltd. | 31-Dec-18 | 103 | 11 | 37 | 77 | 17 | (3) |

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | | | | | |
|---|---|---|---|---|---|---|
| | | Size and strength measures | | | | |
| Profit before tax | Net profit after tax | Total assets | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Liquidity ratio |
| 447 | 395 | 28,963 | 17,730 | 69 | 4,621 | 44.7% |
| 109 | 99 | 12,484 | 9,212 | 19 | 1,348 | 115.1% |
| 90 | 74 | 56,589 | 16,624 | 1 | 40,142 | 56.9% |
| (133) | (135) | 35,065 | - | - | - | 580.5% |
| 504 | 453 | 43,297 | 16,201 | 78 | 21,857 | 58.8% |
| 451 | 385 | 30,919 | 9,208 | 107 | 29,639 | 53.8% |
| 139 | 139 | 32,524 | 3,765 | - | 1,068 | 65.2% |
| 1,141 | 998 | 506,600 | 186,263 | 77 | 150,712 | 54.1% |
| 342 | 260 | 513,520 | 244,756 | 2,468 | 138,312 | 38.6% |
| 301 | 242 | 40,478 | 6,074 | 42 | 15,855 | 106.4% |
| (1,862) | (1,553) | 89,203 | 42,898 | 14 | 6,459 | 62.7% |
| (5) | (5) | 132 | - | - | - | 312.4% |
| 159 | 136 | 14,297 | 9,915 | 114 | 11,132 | 52.0% |
| 306 | 278 | 107,642 | 46,031 | 869 | 20,369 | 45.9% |
| 38 | 38 | 9,990 | 5,313 | 1 | 2,993 | 41.4% |
| (36) | 15 | 41,967 | 24,074 | 1,300 | 2,435 | 43.9% |
| 66 | 66 | 39,042 | 133 | - | 805 | 5,672.0% |
| 106 | 93 | 6,206 | 3,851 | 58 | 4,955 | 39.9% |
| 1,414 | 1,188 | 187,263 | 78,810 | 493 | 73,843 | 79.1% |
| 223 | 197 | 26,328 | 14,619 | 38 | 3,803 | 145.3% |
| 1,139 | 998 | 178,065 | 58,737 | 139 | 8,905 | 54.7% |
| 64 | 45 | 124,410 | 34,591 | 379 | 4,798 | 64.1% |
| 218 | 184 | 44,445 | 47 | - | 15,037 | 65.3% |
| 1,045 | 907 | 308,716 | 125,748 | 68 | 80,374 | 32.9% |
| 187 | 145 | 109,900 | 20,980 | - | 22,212 | 92.1% |
| 802 | 662 | 50,330 | 20,094 | 284 | 37,231 | 41.6% |
| 164 | 164 | 15,126 | 5,681 | 18 | 11,034 | 43.8% |
| 112 | 97 | 5,660 | 3,206 | 36 | 4,429 | 40.1% |
| 194 | 160 | 9,395 | 6,880 | 70 | 6,307 | 37.7% |
| 57 | 57 | 6,672 | 2,972 | 46 | 4,673 | 48.1% |

| | HK$ millions | Year ended | Income statement | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Net interest income | Non-interest income | Operating expenses | Operating profit before impairment charges | Change in expected credit loss against customer advances | Other items |
| 99 | UBS AG | 31-Dec-18 | 1,814 | 12,840 | 11,107 | 3,547 | 45 | - |
| 100 | UCO Bank | 31-Mar-18 | 169 | 32 | 38 | 163 | 147 | - |
| 101 | UniCredit Bank AG | 31-Dec-18 | 522 | (147) | 325 | 50 | (1) | - |
| 102 | Union Bancaire Privée, UBP SA | 31-Dec-18 | 186 | 287 | 432 | 41 | - | - |
| 103 | Union Bank of India | 31-Mar-18 | 190 | 26 | 57 | 159 | 782 | - |
| 104 | United Overseas Bank Ltd. | 31-Dec-18 | 1,625 | 1,326 | 763 | 2,188 | 288 | 58 |
| 105 | Wells Fargo Bank, National Association | 31-Dec-18 | 104 | 1,211 | 1,180 | 135 | - | - |
| 106 | Westpac Banking Corporation | 30-Sep-18 | 26 | 134 | 146 | 14 | 8 | (1) |
| 107 | Woori Bank | 31-Dec-18 | 123 | 53 | 30 | 146 | (58) | - |
| 108 | Yuanta Commercial Bank Co., Ltd. | 31-Dec-18 | 79 | 22 | 44 | 57 | 9 | - |
| | **TOTAL** | **2018** | **62,355** | **73,764** | **74,348** | **61,771** | **8,906** | **41** |

Source: Extracted from individual banks' financial and public statements

| Financial highlights | | | | | | |
|---|---|---|---|---|---|---|
| | | Size and strength measures | | | | |
| Profit before tax | Net profit after tax | Total assets | Gross advances to customers | Expected credit loss allowance against customer advances | Total deposits from customers | Liquidity ratio |
| 3,502 | 2,655 | 263,753 | 149,728 | 15 | 160,380 | 84.5% |
| 16 | 5 | 16,240 | 11,920 | 494 | 6,172 | 105.1% |
| 51 | 51 | 72,723 | 5,511 | - | 1,208 | 488.4% |
| 41 | 34 | 23,805 | 10,265 | - | 13,361 | 62.2% |
| (623) | (623) | 30,043 | 19,916 | 1,543 | 1,352 | 67.0% |
| 1,958 | 1,634 | 191,458 | 132,907 | 510 | 70,411 | 38.1% |
| 135 | 99 | 36,298 | 9,142 | - | 1,122 | 322.7% |
| 5 | 4 | 35,568 | 18,974 | 62 | 16,016 | 70.2% |
| 204 | 188 | 17,398 | 13,015 | 43 | 1,636 | 64.1% |
| 48 | 38 | 4,956 | 2,679 | 38 | 3,670 | 72.1% |
| **52,891** | **44,429** | **10,097,218** | **3,793,275** | **44,963** | **3,193,715** | **-** |

# Foreign bank branches - Financial highlights

*(Continued)*

| | | | Key ratios | | | | |
|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | |
| | HK$ millions | Year ended | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/ income ratio | ROA |
| 1 | ABN AMRO Bank N.V. | 31-Dec-18 | 920.3% | 0.7% | 32.4% | 60.1% | -0.6% |
| 2 | Agricultural Bank of China Limited | 31-Dec-18 | 202.5% | 0.6% | 24.8% | 8.6% | 0.6% |
| 3 | Allahabad Bank | 31-Mar-18 | 502.2% | 0.7% | 10.5% | 11.3% | 0.3% |
| 4 | Australia And New Zealand Banking Group Limited | 30-Sep-18 | 86.2% | 0.5% | 48.9% | 90.7% | 0.0% |
| 5 | Axis Bank Limited | 31-Mar-18 | 967.9% | 0.9% | 59.4% | 9.7% | -2.4% |
| 6 | Banco Bilbao Vizcaya Argentaria S.A. | 31-Dec-18 | 1,244.9% | 0.8% | 42.7% | 52.4% | 0.4% |
| 7 | Banco Santander, S.A. | 31-Dec-18 | 2,087.6% | -0.2% | 123.8% | 90.9% | 0.0% |
| 8 | Bangkok Bank Public Company Limited | 31-Dec-18 | 147.7% | 0.5% | 14.3% | 30.4% | 0.1% |
| 9 | Bank J. Safra Sarasin AG | 31-Dec-18 | 99.3% | 1.3% | 48.8% | 74.5% | 0.5% |
| 10 | Bank Julius Baer & Co. Ltd. | 31-Dec-18 | 72.4% | 0.8% | 69.0% | 75.5% | 0.5% |
| 11 | Bank of America, National Association | 31-Dec-18 | 143.2% | 1.1% | 50.6% | 71.3% | 0.6% |
| 12 | Bank of Baroda | 31-Mar-18 | 198.9% | 0.4% | 53.9% | 23.5% | 0.0% |
| 13 | Bank of China Limited | 31-Dec-18 | 0.0% | 0.1% | 59.0% | 10.6% | 0.2% |
| 14 | Bank of Communications Co., Ltd. | 31-Dec-18 | 54.4% | 0.8% | 32.2% | 22.4% | 0.8% |
| 15 | Bank of India | 31-Mar-18 | 289.9% | 0.7% | 15.5% | 15.5% | -2.2% |
| 16 | Bank of Montreal | 31-Oct-18 | 134.8% | 0.5% | 62.5% | 110.3% | -0.2% |
| 17 | Bank of New York Mellon (The) | 31-Dec-18 | 48.1% | 0.4% | 71.3% | 67.6% | 0.4% |
| 18 | Bank of Nova Scotia (The) | 31-Oct-18 | 91.9% | 0.2% | 81.4% | 62.8% | 0.3% |
| 19 | Bank of Singapore Limited | 31-Dec-18 | 76.4% | 0.4% | 86.2% | 93.4% | 0.2% |
| 20 | Bank of Taiwan | 31-Dec-18 | 79.3% | 1.6% | 6.0% | 17.3% | 1.2% |
| 21 | Bank Sinopac | 31-Dec-18 | 39.0% | 1.4% | 25.8% | 33.1% | 1.0% |
| 22 | Barclays Bank PLC | 31-Dec-18 | 11.4% | 1.2% | 92.9% | 104.9% | -0.7% |
| 23 | BNP Paribas | 31-Dec-18 | 72.3% | 0.7% | 51.2% | 83.3% | 0.2% |
| 24 | CA Indosuez (Switzerland) SA | 31-Dec-18 | 43.3% | 0.4% | 93.3% | 83.0% | 0.8% |
| 25 | Canadian Imperial Bank of Commerce | 31-Oct-18 | 75.3% | 0.3% | 82.6% | 62.4% | 0.5% |
| 26 | Canara Bank | 31-Mar-18 | 599.9% | 0.4% | 32.3% | 16.1% | 0.2% |
| 27 | Cathay Bank | 31-Dec-18 | 82.2% | 1.8% | 17.7% | 55.7% | 0.7% |
| 28 | Cathay United Bank Company, Limited | 31-Dec-18 | 92.2% | 1.3% | 43.1% | 45.6% | 0.7% |
| 29 | Chang Hwa Commercial Bank, Ltd. | 31-Dec-18 | 65.3% | 1.8% | 15.7% | 11.0% | 1.6% |
| 30 | China Construction Bank Corporation | 31-Dec-18 | 90.8% | 0.4% | 35.9% | 19.5% | 0.3% |
| 31 | China Development Bank | 31-Dec-18 | 1,098.4% | 1.1% | -11.2% | 7.9% | 0.2% |
| 32 | China Everbright Bank Co., Ltd. | 31-Dec-18 | 102.7% | 0.6% | 39.0% | 21.7% | 0.6% |
| 33 | China Merchants Bank Co., Ltd. | 31-Dec-18 | 59.3% | 1.4% | 23.6% | 11.9% | 1.4% |
| 34 | China Minsheng Banking Corp., Ltd. | 31-Dec-18 | 79.2% | 0.8% | 1.9% | 30.3% | 0.8% |
| 35 | China Zheshang Bank Co., Ltd. | 31-Dec-18 | 58,953.3% | 0.8% | -1.0% | 122.4% | -0.4% |
| 36 | CIMB Bank Berhad | 31-Dec-18 | 157.9% | 0.6% | 62.6% | 58.8% | 0.7% |

Source: Extracted from individual banks' financial and public statements

| Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|
| Impaired advances / Stage 3 advances | | | | | Stage 2 Advances (HKFRS 9) | | |
| Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance made against impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| 568 | 3.8% | 541 | 95.2% | 30 | N/A | N/A | N/A |
| 117 | 0.0% | 113 | 96.6% | 1 | N/A | N/A | N/A |
| 166 | 2.4% | 110 | 66.3% | 133 | N/A | N/A | N/A |
| 74 | 0.1% | 74 | 100.0% | - | N/A | N/A | N/A |
| 1,486 | 14.1% | - | 0.0% | - | N/A | N/A | N/A |
| 227 | 1.0% | 9 | 4.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 41 | 0.2% | 41 | 100.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 620 | 1.1% | 620 | 100.0% | - | N/A | N/A | N/A |
| 442 | 8.9% | 425 | 96.2% | 6 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| N/A | N/A | 395 | N/A | 386 | N/A | N/A | N/A |
| 2,308 | 21.5% | 1,349 | 58.4% | 1,603 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 33 | 0.6% | 23 | 69.7% | 10 | N/A | N/A | N/A |
| 38 | 0.5% | 31 | 81.6% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 479 | 0.4% | 383 | 80.0% | 497 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 2 | 0.1% | - | 0.0% | 2 | N/A | N/A | N/A |
| 39 | 0.3% | 39 | 100.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.9% | - | N/A | N/A | N/A |
| - | 0.0% | - | 91.9% | - | N/A | N/A | N/A |
| 9,575 | 3.7% | 8,770 | 91.6% | 112 | N/A | N/A | N/A |
| 9 | 0.0% | 9 | 100.0% | - | N/A | N/A | N/A |
| 234 | 0.4% | 234 | 100.0% | - | N/A | N/A | N/A |
| 14 | 0.0% | 14 | 100.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |

| | HK$ millions | Year ended | Key ratios | | | | |
|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | |
| | | | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/ income ratio | ROA |
| 37 | Citibank, N.A. | 31-Dec-18 | 43.9% | 1.4% | 26.8% | 40.0% | 0.9% |
| 38 | Commerzbank AG | 31-Dec-18 | 322.1% | 0.7% | 74.3% | 83.4% | 0.5% |
| 39 | Commonwealth Bank of Australia | 30-Jun-18 | 171.5% | 0.8% | 10.2% | 67.3% | 0.3% |
| 40 | Coöperatieve Rabobank U.A. | 31-Dec-18 | 284.0% | 0.7% | 30.0% | 62.4% | -0.3% |
| 41 | Coutts & Co AG | 31-Dec-18 | 0.0% | 0.0% | 100.0% | 3800.0% | -46.5% |
| 42 | Credit Agricole Corporate And Investment Bank | 31-Dec-18 | 155.4% | 0.1% | 90.5% | 72.9% | 0.2% |
| 43 | Crédit Industriel et Commercial | 31-Dec-18 | 1,002.2% | 0.4% | 34.7% | 68.0% | 0.1% |
| 44 | Credit Suisse AG | 31-Dec-18 | 56.0% | 0.8% | 62.8% | 69.0% | 0.5% |
| 45 | CTBC Bank Co., Ltd. | 31-Dec-18 | 36.5% | 1.7% | 24.9% | 29.9% | 1.4% |
| 46 | DBS Bank Ltd. | 31-Dec-18 | 415.7% | 0.9% | 28.5% | 17.9% | 0.9% |
| 47 | Deutsche Bank Aktiengesellschaft | 31-Dec-18 | 158.2% | 0.9% | 87.4% | 94.7% | 0.4% |
| 48 | DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt Am Main | 31-Dec-18 | 1,621.3% | 0.6% | 28.3% | 48.2% | 0.6% |
| 49 | E.Sun Commercial Bank, Ltd. | 31-Dec-18 | 43.1% | 1.8% | 33.3% | 23.8% | 1.6% |
| 50 | East West Bank | 31-Dec-18 | 58.5% | 2.2% | 16.0% | 66.0% | 0.7% |
| 51 | EFG Bank AG | 31-Dec-18 | 62.9% | 0.3% | 83.8% | 92.2% | 0.1% |
| 52 | Erste Group Bank AG | 31-Dec-18 | N/A | 0.7% | -29.3% | 46.3% | 0.2% |
| 53 | Far Eastern International Bank | 31-Dec-18 | 66.3% | 1.4% | 18.4% | 31.6% | 0.9% |
| 54 | First Abu Dhabi Bank PJSC | 31-Dec-18 | 166.6% | 0.3% | 53.0% | 52.2% | 0.4% |
| 55 | First Commercial Bank, Ltd. | 31-Dec-18 | 64.9% | 2.0% | 9.3% | 11.5% | 1.4% |
| 56 | HDFC Bank Limited | 31-Mar-18 | 336.7% | 1.0% | 0.0% | 26.5% | 0.9% |
| 57 | HSBC Private Bank (Suisse) SA | 31-Dec-18 | 0.0% | 0.0% | N/A | N/A | -6.5% |
| 58 | Hua Nan Commercial Bank, Ltd. | 31-Dec-18 | 32.2% | 1.6% | 7.1% | 15.5% | 1.0% |
| 59 | ICBC Standard Bank Plc | 31-Dec-18 | 0.0% | 0.0% | 100.0% | 93.8% | 5.3% |
| 60 | ICICI Bank Limited | 31-Mar-18 | 520.7% | 0.8% | 51.0% | 21.3% | 0.5% |
| 61 | Indian Overseas Bank | 31-Mar-18 | 226.3% | 0.7% | 61.6% | 16.6% | 0.3% |
| 62 | Industrial And Commercial Bank of China Limited | 31-Dec-18 | N/A | 0.6% | 13.0% | 19.9% | 0.4% |
| 63 | Industrial Bank Co., Ltd. | 31-Dec-18 | 79.8% | 0.7% | 55.6% | 17.4% | 1.0% |
| 64 | Industrial Bank of Korea | 31-Dec-18 | 99.0% | 0.8% | 49.7% | 18.9% | 0.9% |
| 65 | ING Bank N.V. | 31-Dec-18 | 528.9% | 0.6% | 41.8% | 46.1% | 0.4% |
| 66 | Intesa Sanpaolo S.p.A. | 31-Dec-18 | 966.7% | 0.7% | 34.3% | 27.9% | 0.6% |
| 67 | JPMorgan Chase Bank, National Association | 31-Dec-18 | 24.8% | 0.3% | 94.2% | 85.5% | 0.7% |
| 68 | KBC Bank N.V. | 31-Dec-18 | 162.4% | 1.0% | 27.0% | 55.6% | 0.6% |

Source: Extracted from individual banks' financial and public statements

| Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|
| Impaired advances / Stage 3 advances | | | | | Stage 2 Advances (HKFRS 9) | | |
| Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance made against impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 1,356 | 3.2% | 897 | 66.2% | 467 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 434 | 1.3% | 333 | 76.7% | N/A | N/A | N/A | N/A |
| - | 0.0% | N/A | N/A | - | N/A | N/A | N/A |
| 266 | 0.4% | 249 | 93.6% | 21 | N/A | N/A | N/A |
| 196 | 0.8% | - | 0.0% | 2 | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 413 | 0.9% | 27 | 6.5% | 381 | N/A | N/A | N/A |
| 85 | 1.2% | 59 | 69.4% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 28 | 0.5% | 28 | 98.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| N/A | N/A | - | N/A | N/A | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 19 | 0.2% | 19 | 100.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | N/A | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| N/A | N/A | - | N/A | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 1,640 | 15.7% | 311 | 19.0% | 1,605 | N/A | N/A | N/A |
| 1,003 | 10.6% | 479 | 47.8% | 891 | N/A | N/A | N/A |
| 30 | 0.0% | 30 | 100.0% | - | N/A | N/A | N/A |
| N/A | N/A | 8 | N/A | N/A | N/A | N/A | N/A |
| 6 | 0.4% | N/A | N/A | N/A | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 848 | 6.2% | 452 | 53.3% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 12 | 0.3% | 12 | 100.0% | - | N/A | N/A | N/A |

| | HK$ millions | Year ended | Key ratios | | | | |
|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | |
| | | | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/ income ratio | ROA |
| 69 | KEB Hana Bank | 31-Dec-18 | 382.2% | 0.8% | 36.9% | 12.9% | 1.3% |
| 70 | Kookmin Bank | 31-Dec-18 | 682.0% | 0.8% | 29.7% | 34.4% | 0.9% |
| 71 | LGT Bank AG | 31-Dec-18 | 41.4% | 0.5% | 81.8% | 94.7% | 0.1% |
| 72 | Macquarie Bank Limited | 31-Mar-18 | 0.0% | -0.1% | 104.8% | 119.5% | -0.4% |
| 73 | Malayan Banking Berhad | 31-Dec-18 | 73.8% | 0.8% | 28.9% | 40.3% | 1.0% |
| 74 | Mega International Commercial Bank Co., Ltd. | 31-Dec-18 | 30.7% | 1.6% | 15.6% | 19.3% | 1.1% |
| 75 | Mitsubishi UFJ Trust And Banking Corporation | 31-Mar-18 | 352.5% | 0.5% | 16.0% | 28.4% | 0.5% |
| 76 | Mizuho Bank, Ltd. | 31-Mar-18 | 123.5% | 0.1% | 69.9% | 41.9% | 0.2% |
| 77 | MUFG Bank, Ltd. | 31-Mar-18 | 175.2% | 0.2% | 55.4% | 67.1% | 0.1% |
| 78 | National Australia Bank Limited | 30-Sep-18 | 38.0% | 0.6% | 57.2% | 57.8% | 0.5% |
| 79 | Natixis | 31-Dec-18 | 663.9% | 0.2% | 132.5% | -379.0% | -1.9% |
| 80 | NatWest Markets Plc | 31-Dec-18 | 0.0% | 0.0% | 100.0% | 106.9% | -3.4% |
| 81 | O-Bank Co., Ltd. | 31-Dec-18 | 88.0% | 2.0% | 15.2% | 48.7% | 1.0% |
| 82 | Oversea-Chinese Banking Corporation Limited | 31-Dec-18 | 221.7% | 0.8% | 19.9% | 26.3% | 0.2% |
| 83 | Pictet & Cie (Europe) S.A. | 31-Dec-18 | 177.5% | 1.1% | 74.1% | 89.2% | 0.4% |
| 84 | Punjab National Bank | 31-Mar-18 | 935.3% | 0.4% | 19.1% | 9.7% | 0.0% |
| 85 | Royal Bank of Canada | 31-Oct-18 | 16.5% | -0.3% | 111.5% | 90.8% | 0.2% |
| 86 | Shanghai Commercial & Savings Bank, Ltd. (The) | 31-Dec-18 | 76.5% | 1.8% | 24.0% | 25.3% | 1.4% |
| 87 | Shanghai Pudong Development Bank Co., Ltd. | 31-Dec-18 | 106.1% | 0.7% | 29.7% | 17.8% | 0.7% |
| 88 | Shinhan Bank | 31-Dec-18 | 383.4% | 0.6% | 39.3% | 11.1% | 0.9% |
| 89 | Societe Generale | 31-Dec-18 | 658.0% | 0.1% | 94.1% | 65.5% | 0.5% |
| 90 | State Bank of India | 31-Mar-18 | 713.0% | 0.3% | 36.3% | 49.1% | 0.0% |
| 91 | State Street Bank And Trust Company | 31-Dec-18 | 0.3% | 0.3% | 85.8% | 87.2% | 0.2% |
| 92 | Sumitomo Mitsui Banking Corporation | 31-Mar-18 | 156.4% | 0.4% | 21.9% | 36.6% | 0.3% |
| 93 | Sumitomo Mitsui Trust Bank, Limited | 31-Mar-18 | 94.5% | -0.3% | 223.7% | 27.2% | 0.1% |
| 94 | Taipei Fubon Commercial Bank Co., Ltd. | 31-Dec-18 | 53.2% | 1.3% | 36.7% | 18.1% | 1.3% |
| 95 | Taishin International Bank Co., Ltd | 31-Dec-18 | 51.3% | 1.2% | 40.3% | 40.7% | 1.2% |
| 96 | Taiwan Business Bank, Ltd | 31-Dec-18 | 71.6% | 2.4% | 8.0% | 19.3% | 1.7% |
| 97 | Taiwan Cooperative Bank, Ltd. | 31-Dec-18 | 108.0% | 2.3% | 6.3% | 13.5% | 1.7% |
| 98 | Taiwan Shin Kong Commercial Bank Co., Ltd. | 31-Dec-18 | 62.6% | 1.8% | 9.6% | 32.5% | 1.0% |

Source: Extracted from individual banks' financial and public statements

| Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|
| Impaired advances / Stage 3 advances | | | | | Stage 2 Advances (HKFRS 9) | | |
| Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance made against impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 11 | 0.1% | 11 | 100.0% | N/A | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 211 | 0.1% | 77 | 36.5% | - | N/A | N/A | N/A |
| 52 | 0.0% | 28 | 53.8% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 1,331 | 2.9% | 779 | 58.5% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 1,177 | 4.9% | 1,132 | 96.2% | 428 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 17 | 0.4% | 8 | 47.1% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | 114 | 114 | 100.0% |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 149 | 0.3% | 91 | 61.1% | - | N/A | N/A | N/A |
| 394 | 1.1% | 221 | 56.1% | 384 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 68 | 0.1% | 68 | 100.0% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| 388 | 1.9% | 88 | 22.7% | 62 | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 15 | 0.5% | 4 | 26.7% | - | N/A | N/A | N/A |
| - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| 12 | 0.4% | 6 | 50.0% | - | N/A | N/A | N/A |

| | HK$ millions | Year ended | Key ratios | | | | |
|---|---|---|---|---|---|---|---|
| | | | Performance measures | | | | |
| | | | Net customer loan/deposit ratio | Net interest income/ average total assets | Non-interest income/total operating income | Cost/ income ratio | ROA |
| 99 | UBS AG | 31-Dec-18 | 93.3% | 0.7% | 87.6% | 75.8% | 1.0% |
| 100 | UCO Bank | 31-Mar-18 | 185.1% | 0.9% | 15.9% | 18.9% | 0.0% |
| 101 | UniCredit Bank AG | 31-Dec-18 | 456.2% | 0.8% | -39.2% | 86.7% | 0.1% |
| 102 | Union Bancaire Privée, UBP SA | 31-Dec-18 | 76.8% | 1.0% | 60.7% | 91.3% | 0.2% |
| 103 | Union Bank of India | 31-Mar-18 | 1,358.9% | 0.6% | 12.0% | 26.4% | -2.0% |
| 104 | United Overseas Bank Ltd. | 31-Dec-18 | 188.0% | 0.9% | 44.9% | 25.9% | 0.9% |
| 105 | Wells Fargo Bank, National Association | 31-Dec-18 | 814.8% | 0.3% | 92.1% | 89.7% | 0.3% |
| 106 | Westpac Banking Corporation | 30-Sep-18 | 118.1% | 0.1% | 83.8% | 91.3% | 0.0% |
| 107 | Woori Bank | 31-Dec-18 | 792.9% | 0.7% | 30.1% | 17.0% | 1.1% |
| 108 | Yuanta Commercial Bank Co., Ltd. | 31-Dec-18 | 72.0% | 1.6% | 21.8% | 43.6% | 0.8% |
| | **TOTAL** | **2018** | **117.4%** | **0.7%** | **54.2%** | **54.6%** | **0.5%** |

Source: Extracted from individual banks' financial and public statements

| | Loan asset quality | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Impaired advances / Stage 3 advances | | | | | Stage 2 Advances (HKFRS 9) | | |
| | Gross impaired advances | Gross impaired advances/ Advances to customers | Stage 3 expected credit loss allowance made against impaired advances | Stage 3 expected credit loss allowance made against impaired advances | Collaterals for impaired advances | Gross advances in Stage 2 | Expected credit loss allowance made against Stage 2 advances | Stage 2 expected credit loss allowances as a percentage of gross stage 2 advances |
| | 15 | 0.0% | 15 | 100.0% | - | N/A | N/A | N/A |
| | 532 | 4.5% | 382 | 71.8% | 442 | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | 3,232 | 16.2% | 1,377 | 42.6% | N/A | N/A | N/A | N/A |
| | 280 | 0.2% | 243 | 86.8% | 2 | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | - | - | 0.0% |
| | - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| | - | 0.0% | - | 0.0% | - | N/A | N/A | N/A |
| | **30,692** | **0.8%** | **20,614** | **67.2%** | **7,465** | **114** | **114** | 100.0% |

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