With technology becoming undeniably imperative in modern society, it is important for businesses to integrate it into their daily operations to become more competitive, and the banking industry is no exception. One of the ways in which we see banking industries across the world adopting modern technology is via the launch of virtual banks.

A virtual bank is defined as a bank which delivers retail banking services primarily through the internet or other digital channels instead of physical branches. As such, the main difference between virtual and traditional banks is that virtual banks do not have physical brick-and-mortar branches.
The rise of virtual banking around the world

We see this virtual banking ecosystem spreading across the world - and this phenomenon has recently expanded to the Hong Kong’s banking industry. In May 2018, the Hong Kong Monetary Authority (HKMA) announced the new ‘Guideline on Authorization of Virtual Banks’ that authorises the establishment of virtual banks and sets out the guidelines for firms seeking to apply for a virtual banking license. The objectives of the HKMA include the promotion of application of financial technology and innovation in Hong Kong, the offering of a new type of customer experience and financial inclusion.

The notion of a virtual bank is not something new. For instance, virtual banks (or similar concepts such as internet banks), have been active in many parts of the world for quite a while and they have been gaining a lot of attention with their fast customer acquisition, better customer experience and the amount of funds that they were able to raise. Examples include Atom Bank, a digital bank that provides banking services through a smartphone app only, was founded in 2014 in the UK and has raised almost 470mm USD thus far. N26, a fintech providing mobile banking services was founded in 2013 in Germany and has raised more than 212mm USD. Ally Bank, an online bank, was launched in the US in 2001, and WeBank (partly owned by Tencent) launched as China’s first online bank in 2015.

The success of these virtual banks can often be attributed to their cheaper banking services, simpler business models, advanced technology and superior customer experience offerings. These virtual banks also do not have the burden of legacy IT systems that traditional banks typically have to deal with. Furthermore, virtual banks can often reach underserved consumer segments such as new start-ups, SMEs and individuals with insufficient employment or credit history. Traditional banks that usually incur high overhead and operating costs are often not interested (or able) to provide the necessary banking services, loans or other financial products to these customers.

In addition to virtual banks often providing more efficient technology and customer experiences, the global consumer’s expectations have been dynamically changing as well in favour of these virtual banks. More consumers are now requiring their banks to offer access to their accounts and provide the functionalities to do banking transactions via mobile and online services on a 24h per day basis. According to a study conducted by EFMA (a global non-profit organization established in 1971 by banks and insurance companies) and Wavestone (a global management consulting firm), 80% of banking customer’s requests are indeed basic (e.g. general information, technical issues, transaction explanations, etc.) and can be addressed digitally.1

As a result, because of the need to address financial exclusion, combined with changing customer expectations from one that preferred incumbent banking methods to one that prefers efficient, user-friendly and tech-savvy banking methods, we see more countries embracing virtual banking regulations and virtual banks making rapid inroads in the banking ecosystems of those countries.

1. “Building the future of mobile banking, Part II: Organisation and Processes” – Efma and Wavestone, pg. 4
HONG KONG VIRTUAL BANKING LICENSE GUIDELINE

The guideline set by HKMA lists a set of criteria that must be fulfilled for a company to be considered for the license, which includes the following:

- **Providing Value to Hong Kong**
- **Local Incorporation and Ownership**
- **Demonstration of Knowledge and Experience and Continuous Supervision**
- **No Branches Needed, But Some Physical Presence Required**
- **Risk Management**
- **Robust Cyber-Resilient Technology**
- **Credible Business Plan**
- **Capital Requirements**
- **Outsourcing Requirements**
- **Viable Exit Plan**

This necessitates companies applying for a virtual banking license to promote financial inclusion, providing any services and needs to their customers while also maintaining the management of credit, liquidity and interest rates risk. They are also restricted from imposing any minimum account balance requirements or charging low-balance fees on customers.

All virtual banks must operate under a locally-incorporated bank. Any existing or new financial firms and banks as well as technology companies can apply for the license. More specifically, any applicants who are majorly owned by a bank or financial institution and supervised by a recognised authority or held through a holding company incorporated in Hong Kong, subjected to conditions relating to capital adequacy, risk management and additional financial information, can apply for the license.

In addition to having prerequisite knowledge in the operations and supervisory requirements applicable to traditional banks, the board of directors and senior management should also have some knowledge and experience in the technology required to launch and operate their virtual banks effectively. HKMA acknowledges that virtual banks use more technology within their business operations, therefore some adaptations will be made to suit the virtual bank’s business model, but they are subjected to the same supervisory requirements that are applicable to traditional banks.

It is not a requirement for firms seeking to establish a virtual bank to have a physical branch, but they are required to have some form of physical presence in Hong Kong to address and manage customer enquiries and communicate with HKMA.

Virtual banks must show that they are able to address and handle all 8 risks identified by HKMA. These risks include credit, interest rate, market, liquidity, operational, reputational, legal and strategic risk.

Virtual banks must clearly institute customer’s terms and conditions as well as distinguish respective rights between customers and themselves in order for customers to be aware of what information is disclosed to them and to the public, when and what they should be accountable of, and how and when will they be informed when a pressing situation arises, etc.

Since the creation of a virtual bank heavily relies on technology, the virtual banking license applicant must commission an independent assessment report on its IT governance solution, computer hardware, systems, security, procedures and controls from a qualified expert.

Virtual bank applicants must have at least a minimum of HK$300 million (US$38.2 million, €33.7 million) in capital. This minimum capital requirement is imposed to equalize with the operational and banking risks the applicant is undertaking in creating a virtual bank.

Should a virtual bank require any outsourcing, it should first be approved by HKMA and abide to HKMA’s outsourcing policies.

Since virtual banking is new to Hong Kong, applicants are required to provide a viable exit plan that ensures that business operations can dissipate in an orderly manner that does not disturb existing customers and financial system should the virtual bank be deemed unsuccessful.

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WHO IS APPLYING FOR THE VIRTUAL BANKING LICENSE AND WHY?

Hong Kong seems to follow the upward trend of virtual banking that can be noticed across many parts of the world. There is a significant interest of companies to apply for the virtual banking license in Hong Kong. As of today, there are approximately 60 entities from Hong Kong and abroad reported to have either shown interest or have already submitted an application for the virtual banking license in Hong Kong. These entities can be classified in the following categories: Hong Kong fintech providers, Mainland China fintech providers, overseas fintech providers, traditional banks in Hong Kong and offshore banks. Perhaps it is important to decipher what the virtual banking license can offer to these entities and what the reasons may be that these entities are applying:

**Hong Kong Fintech Providers**

Hong Kong fintech providers are amongst the majority of the 60 entities that applied or have shown interest in the virtual banking license in Hong Kong. These fintech companies such as YedPay!, Neat HK Limited, WeLab, TNG Asia Limited, Geoswift, Chong Sing Holdings Fintech Group and Octopus Cards Limited (that is collaborating with Ping An Insurance) just to name a few, mainly provide, but are not limited to, the following digitalised services:

/ **Payment solution**

This includes opening a current account with little to no KYC processes for transactions, providing a prepaid credit card and/or debit card, providing point-of-sale (POS) payment solution or accepting online and/or other forms of digital payments.

/ **Lending solution**

This includes providing either P2P, B2B or B2C unsecured personal loans and other financing products with attractive rates and instalments by integrating AI and big data analytics to make credit and lending decisions.

/ **Cross border settlement solution**

This entails providing domestic or international P2P, B2B or B2C payment or transfer services for businesses or individual customers, enabling seamless conversion of local currency to foreign currency (and vice versa) and creating a remittance platform.

It should be noted that the fintech providers in Hong Kong already provide interesting online or mobile financial products using superb technology, and/or serve underserved customers (such as startups, small-medium enterprises or foreigners without credit or employment history). Obtaining a banking license will enable those firms to provide complimentary banking products on top of their current product suite. Therefore, a virtual banking license can be seen as an asset by a fintech that facilitates them in becoming a one-stop solution that amalgamates technology with banking services. With the virtual banking license and their technology, these fintech providers may be able to provide more efficient banking products and enlighten customer experience at lower operational costs. This could potentially translate into offering more competitive rates for some banking products or international transfers. However, it should be noted that the HKMA has indicated that predatory tactics should not be used by virtual banks in order to rapidly capture market share. Also, with the virtual banking license, these fintech providers could potentially grow their customer base, take in deposits and build a long-term capital base.

Another reason to apply for the virtual banking license lies within the fact Hong Kong is an internationally recognized city that offers world renowned financial services that meet international standards. The fact that the fintech was reviewed by a prominent regulator can cater legitimacy to the fintech provider’s business model not only within the virtual banking ecosystem in Hong Kong and to their potential consumers in Hong Kong, but internationally as well.

Overall, the main change that fintechs are expected to deliver when obtaining the virtual banking license is the transformation from traditional banking services into ‘lifestyle services’ which would combine banking services with all the other consumer services such as telecommunication transactions, e-commerce behaviour and social behaviours. As Matthew Dooley, Managing Director of Connected Thinking and Board Member of Fintech Association of Hong Kong, stated: “Data is the new oil. With the virtual banking license, new companies and partnerships will be formed. These new financial services companies will focus on understanding their customer’s lifestyle. Then they will go about ways to embed financial services moments within it. What this license does it to transform traditional banking methods into an enhancement of a customer’s lifestyle. This is the new wave of disruption.”

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Mainland China Fintech Providers

Mainland Chinese fintech providers, such as Ant Financial and Ping An Technology, are also another major category of applicants that applied or have shown interest in applying for the virtual banking license.

For these fintech providers, they already have the brand presence in China and massive amounts of data they can leverage on and therefore have an asymmetric advantage relative to other applicants. These Mainland China fintech providers have built their technology and products based on massive amount of consumer and transaction data coming from Mainland China. As Matthew Dooley puts it: “Consumer data entails payment, transaction and other types of data. If this data is the blood of the ecosystem, Mainland Chinese fintech providers can leverage on this data to acquire, or partner with other strategic players within the virtual banking ecosystem.”4 Mainland China fintech providers may look at the virtual banking license in Hong Kong as another way to start accumulating and understanding consumer behaviour and data in a city that aligns more with international standards.

As aforementioned, Hong Kong has long been characterized as one of the top cities in finance and banking, and therefore these Mainland fintech providers see Hong Kong as a great legitimate market to experiment with. As Kristi Schwartz, Managing Partner of Bryan Cave LLP in Hong Kong, summarized it: “One of the main reasons why there is a significant number of fintech companies applying for the virtual banking license is because Hong Kong has internationally accepted regulations. Hence, fintech providers, especially Mainland China fintech players, want to be regulated, such that when they abide to Hong Kong’s regulations, they will be globally seen as a legitimate company.”5

Another reason may be the international strategy of expansion adopted by the Mainland China fintech providers. In expanding their presence to Hong Kong, they start their journey towards internationalisation across Asia and the world. Matthew Dooley indicates: “Hong Kong is well positioned as a natural launch pad for startups into Asia and beyond. The virtual banking license gives Mainland Chinese fintech providers a great growth strategy to leverage Hong Kong’s strong regulatory environment for testing propositions before entering new markets.”6 Their international strategy of expansion may also extend to evaluation of potential acquisition targets.

Overseas Fintech Providers

Overseas fintech providers, such as Airwallex headquartered in Melbourne, Australia, are also another major category of applicants that applied or have shown interest in applying for the virtual banking license.

For these fintech providers, regionalisation and saleability are key elements in understanding their interest in Hong Kong’s virtual banking license. Asia is often seen as the leading growth market in the world, thus, overseas fintech providers can capitalize on the virtual banking license in Hong Kong to scale up across the APAC region. Moreover, the license can be seen as a saleable asset, as Kristi Swartz evaluates: “One of the reasons why overseas fintech providers, or fintech providers in general, want to apply for the virtual banking license is because it is a saleable asset. The virtual banking license creates an added value to the fintech firm, and may make it a potential target for acquisition in the future.”7

4- ibid
Traditional Banks

As of today, only Standard Chartered has reported to have submitted an application for the license and that other traditional banks like that of HSBC, DBS and Citibank have not shown any interest in applying for the license. 8

Therefore, it can be assumed that traditional banks are the minority in those 60 entities that applied for a virtual banking license in Hong Kong. There may be several reasons why traditional banks in Hong Kong are not applying for the virtual banking license at this moment in time.

Firstly, three traditional banks in Hong Kong (HSBC, Bank of China Hong Kong and Hang Seng Bank) are currently having 65-70% market share in Hong Kong (based on lending and deposits). As such, they have access to a considerable amount of consumer data and, in theory, have full visibility in the way consumers are using banking services such that they can adjust their banking products and the supporting technologies accordingly. However, the problem with traditional banks today is that they are not always able to efficiently leverage on their customer data due to legacy systems.

Secondly, most, if not all, traditional banks in Hong Kong may be adopting a wait and see approach as they are already heavily investing in their technological infrastructure, such as the development of their own mobile app and online offerings. Hence, building a virtual bank from scratch may not bring much added value to their businesses and could be seen as a redundant operation. However, the efficacy of their technological infrastructure is questionable, as Steve Monaghan, chairman and CEO of Gen.Life Limited, stated: “Although we do see traditional banks in Hong Kong investing in their digital infrastructure, they are not as agile and effective compared to fintech providers or other technology providers.” 9 Thus, investing in virtual banks may help traditional banks achieve in providing agile and effective banking solutions.

Their ‘Wait and See’ approach on the virtual banking license may also be a way for traditional banks to evaluate first the success of a new virtual bank in Hong Kong. Some traditional banks may not believe that the virtual banking license could become a major disruptor.

While the overall interest from traditional banks for the virtual banking license seems fairly low, there are still a few incumbent banks planning to establish a virtual bank. Their reasons may include capturing new customers or lowering their operational costs.

Establishing a virtual bank could help traditional banks address the issue of financial exclusion, in which they can expand their brand towards new customer segments that include millennials, SMEs, start-ups, and migrant and foreign populations, diversifying their client-base.

For example, Standard Chartered Bank indicated that the virtual banking licence would be a new engine to help traditional banks achieve in providing agile and effective banking solutions.

Furthermore, by investing in virtual banking, it could drive their cost-income ratio down further. For instance, DBS bank reported that their digitally engaged customers were able to deliver “a cost-income ratio that is 20 percentage point lower than traditional clients.” 10

However, despite these aforementioned benefits, why is it that only Standard and Chartered have publicly announced their virtual banking license application, and why aren’t more traditional banks applying or showing interest for the virtual banking license?

Offshore Banks

Offshore banks may see the establishment of a virtual bank in Hong Kong as a way to get their footstep into the Hong Kong banking market. Since Hong Kong’s banking and financial industry are internationally acknowledged as already aforementioned, offshore banks may want to take this element to their advantage and set up a virtual bank that can help them gain credibility and recognition, both within Hong Kong and internationally. This approved license can also help these offshore banks provide existing customers with more services, ensuring that they can retain their current customers and simultaneously grow their customer base in a regulated market.

11- Write, Chris; “Why DBS’s cost-income ratio is going up.” Euromoney, Thursday, February 8th 2018
The initial setup of a virtual bank may include significant financial investments in technology which could contribute to financial burdens that could be higher than forecasted. Digital banks in other parts of the world often focus gaining market share versus profitability. A detailed cost model and efficient Program Management Office (PMO) that tracks the program plan, technology rollout, and performance KPIs on a regular basis will be required.

Virtual banks may also consider offering special incentives to attract new customers (e.g. cash credit with account opening, retail coupons, etc.) in the retail sector, users in the Hong Kong community have shown to be keen on trying new products when freebies or other incentives are being offered. However, offering incentives should only be considered as a way to sign up new customers in the short term; virtual banks will need to identify other ways to retain these customers in the long term.

While a virtual bank is based on a pure digital platform without any physical branches, it will be imperative to assess the cybersecurity risks during the initial stages of setting up a virtual bank. A comprehensive business continuity plan should cover cybersecurity risks and include detailed mitigation activities in case of a cyber crisis.

Virtual banks will face the challenge of distributing their products to the Hong Kong community and as such will need to identify innovative ways to scale up quickly; e.g. by partnering with other firms that have access to a larger amount of customers.

We believe that regardless of the type of entity that is applying for the license - either it be fintech providers, traditional banks, off-shore banks or others - the key to building a successful virtual bank is to consider and anticipate these issues in order to ensure long-term operational sustainability and success.
CONCLUSION

Whilst Hong Kong does have 1,129\textsuperscript{13} physical banking branches, 3,330 ATMs\textsuperscript{14}, and 157 licensed banks\textsuperscript{15}, the city has now finally entered the virtual banking landscape. As Steve Monaghan stated: “

“Hong Kong has finally confirmed the virtual banking license guidelines. As any new concept typically goes through 3 phases of learning, venturing and capital, we can now say that Hong Kong has finally transitioned from the learning phase to the venturing phase.”\textsuperscript{16}

But why go into virtual banking when Hong Kong already has an abundance of banks? Having large amounts of banks does not necessarily mean customers are well-banked. Therefore, the interest surrounding Hong Kong’s virtual banking licenses can be understood as an effort by fintech providers to disrupt Hong Kong’s banking industry by providing more customer-centric digital banking channels via leveraging lifestyle data and promoting financial inclusion.

As of today, Hong Kong sees a high number of non-banking entities either showing interest or applying for the virtual banking license. A large number of these non-banking entities who have shown interest or applied for the virtual banking license are fintech providers. These fintech providers believe that they can offer a more innovative way to serve clients with their banking needs leveraging on data and technology. These firms also believe that a virtual banking license can cater legitimacy to their business model and serve as a platform to expand their business across Asia.

In contrast, traditional banks are not applying in mass as they already have been investing heavily in their own digital channels, have significant market share or do not believe that a virtual bank will be a game changer.

That being said, regardless of the entity that is applying for the virtual banking license, all interested applicants have to evaluate how to ensure a success story. This means entities have to consider what banking products to provide; how to create a unique yet innate customer experience relevant to their business; how to effectively and efficiently distribute their products and services to the Hong Kong community; what technologies and partnering solutions to capitalise on; what operational model to engage in; what cybersecurity issues they may encounter; and what cost models and metrics they should use to evaluate their financials.

It is not a surprise that Hong Kong has only recently ventured out to virtual banking as it has always been considered a top financial services hub in the world. Due to this, Hong Kong essentially disregarded the need to incubate and integrate technology into their banking and financial operations. The problem with sticking to this conventional way of banking is that it creates a lot of friction in banking operations. Only time can tell whether the introduction of virtual banks will revolutionize Hong Kong’s orthodox banking sector, and whether or not more traditional banks will start realising the need to establish a virtual bank. At least Hong Kong has finally realized its need to transform and made its first attempt with the virtual banking license, and this is what matters.

\textsuperscript{13} Yiu, Enoch; “Hong Kong prepares to usher in virtual banks, as 60 firms apply to be pioneers in financial revolution.” South China Morning Post, July 28th 2018. <https://www.scmp.com/business/banking-finance/article/2157936/hong-kong-prepares-usher-virtual-banks-60-firms-apply-be> Accessed on August 7th 2018
\textsuperscript{14} Ibid
\textsuperscript{15} Hong Kong Fact Sheet, Information Services Department of Hong Kong Special Administrative Region Government. <https://www.gov.hk/en/about/abouthk/factsheets/docs/financial-services.pdf> Accessed on August 17th 2018