



## Analysis and Outlook of Fintech Development in Hong Kong and Singapore

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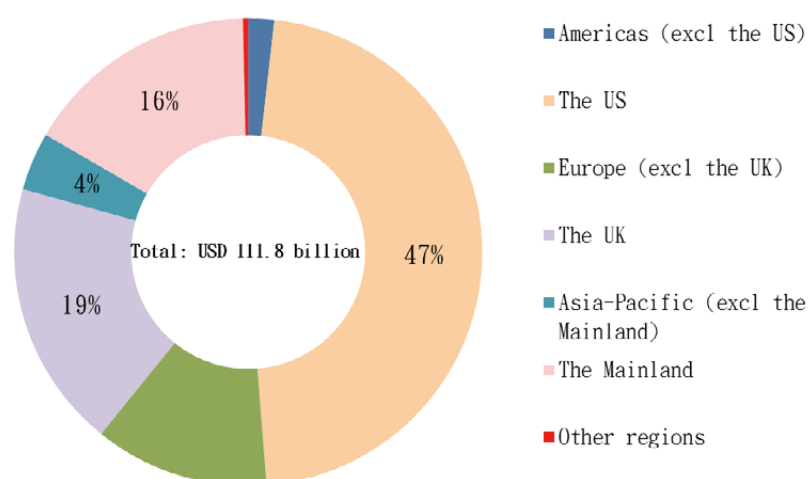
In recent years, Hong Kong and Singapore have been competing fiercely in becoming a fintech center. The two places started their journeys at a similar time and have made some progress. This article outlines the landscape of global fintech development, analyzes how Hong Kong and Singapore develop the ecosystem in their respective markets, and explores the next development direction for Hong Kong.

### I. Hong Kong and Singapore are only getting started

Global fintech developed rapidly over the past six years, with rising investment amount and activities. According to KPMG, there were 2,196 deals investing in fintech companies across the globe in 2018, or 31 deals more than the previous year. However, investment amount surged 1.2 times to USD 111.8 billion during the same period, led by three mega deals with over USD 10 billion per investment. As such, the rise of investment amount considerably outpaced the number of deals. As new competitors enter the market, existing fintech companies need to increase investment to maintain competitiveness or expand their businesses. Hence, global fintech is likely to maintain relatively fast growth in the near future.

Fintech investment activities are most active in the US among different countries and regions. Investment in the US reached USD 52.5 billion in 2018, accounting for 47% of global total. In Europe, most of the fintech investment activities came from the UK which accounted for 19% of global total. Besides the UK, there were fintech investments in Germany, France and Ireland. In Asia-Pacific region, vast majority of investment activities came from the Mainland, hitting USD 18.2 billion with 16% of global total. Nevertheless, investment amounts in Singapore and Hong Kong were USD 370 million and USD 190 million respectively, merely 0.3% and 0.2% of global total. Fintech development in these two places is only getting started judging from a global perspective, and there is tremendous room for development in the future.

**Fintech investment among different countries and regions in 2018**



Sources: KPMG, The Pulse of Fintech 2018, BOCHK Research

### II. Hong Kong and Singapore promote market development in various aspects

The Hong Kong and Singapore governments play an important role in promoting fintech, establishing a robust ecosystem by enhancing regulation, operating environment and market expansion potential.

#### 1. Regulatory environment

There are two major approaches for fintech regulation across the globe. The first one, represented by the US, is functional

supervision enforced by multiple authorities. In other words, the division of supervision among regulatory authorities is based on business nature of fintech companies. The second one, represented by the UK, is integrated supervision enforced by a single authority. The regulatory frameworks of Hong Kong and Singapore are similar to the UK approach, mainly coordinated by their respective central banks. In addition, protection of consumer rights, as well as balancing risk management and flexibility are core values of fintech regulation. In the process of legislation, regulators maintain adequate communication with different stakeholders. Hong Kong and Singapore also follow these international regulatory principles.

In terms of content, Hong Kong and Singapore have already introduced regulatory sandbox, open application programming interface (API), and granted licenses to stored value facilities (SVF), areas with relatively mature development. Moreover, introduction of these regulations have achieved good results. For example, Hong Kong implemented the first phase of open API in January this year, and there were over 300 registrations from third-party service providers in just over three months.

### **Fintech regulations have been introduced in Hong Kong and Singapore**

	<b>Hong Kong</b>	<b>Singapore</b>
Regulatory sandbox	<ul style="list-style-type: none"> <li>• Launched in September 2016 and upgraded a year later</li> <li>• Securities and Futures Commission and Insurance Authority also launched sandboxes following Hong Kong Monetary Authority (HKMA), and the sandboxes are linked up</li> <li>• As of February 2019, 46 new technology products have been allowed in the sandbox</li> </ul>	<ul style="list-style-type: none"> <li>• Launched in November 2016</li> <li>• Monetary Authority of Singapore (MAS) introduced “Fast-Track Approvals” to streamline approval procedure</li> <li>• As of November 2018, over 150 companies were benefited from the scheme</li> </ul>
SVF	<ul style="list-style-type: none"> <li>• Issued first batch of licenses in August 2016</li> <li>• 18 companies have been granted licenses so far</li> </ul>	<ul style="list-style-type: none"> <li>• Issued first batch of licenses in January 2007</li> <li>• 5 companies have been granted licenses so far</li> </ul>
Open API	<ul style="list-style-type: none"> <li>• Announced Open API Framework in July 2018</li> <li>• Deployment in 4 phases since January 2019</li> <li>• Product and service information is included in the first phase of open API</li> <li>• Over 300 registrations from third-party service providers</li> </ul>	<ul style="list-style-type: none"> <li>• Published “Regulatory Sandbox Guidelines” in 2016</li> <li>• 313 APIs have been opened as of November 2017. It is estimated that over 500 APIs have been opened nowadays</li> </ul>

Source: HKMA, MAS, BOCHK Research

For fintech regulation, Hong Kong and Singapore have advantages in different areas. Hong Kong takes the lead in granting virtual financial institution licenses. In May 2018, the HKMA published a revised Guideline on Authorization of Virtual Banks, refining the content in some areas and listing the conditions for licenses application. At present, the HKMA has granted eight virtual bank licenses. Apart from banking sector, the Insurance Authority also granted the first virtual insurer license in December 2018.

On the other hand, Singapore moved faster in developing cybersecurity regulation. Singapore passed Cybersecurity Act in February 2018, establishing a regulatory framework for monitoring and reporting cybersecurity as well as licensing system. In Hong Kong, the HKMA launched the Cybersecurity Fortification Initiative at the end of 2016 to be implemented in three phases. The HKMA will consult the banking sector in summer this year and is expected to complete the revision by the end of this year.

With references from international experience, Hong Kong and Singapore are able to establish comprehensive regulatory framework efficiently. In terms of content, the focuses of the two sides are slightly different, and they also respond to the progress of each other. The two places both established robust regulation first, providing a good foundation for promoting

market development in an orderly manner.

## 2. Operating environment

With the global upsurge of innovation and technology, along with fierce competition between economies, the governments of Hong Kong and Singapore examine market situation, review regulation and tax system and introduce supporting measures from a strategic perspective, in order to create a favorable operating environment.

**The first one is providing tax incentive.** Singapore has introduced tax incentive for research and development (R&D) expenses earlier than Hong Kong, and there is tax deduction for costs on intellectual property. Hong Kong has long been adopting the principle of “small government, big market”, and its low and simple tax system is a core advantage. As Singapore and surrounding countries have introduced tax incentive to encourage R&D, Hong Kong proposed a change on tax system in the 2017 Policy Address. The first HKD 2 million in eligible R&D expenditure could enjoy a 300% tax deduction and 200% for the remainder without limitation. The tax incentive could encourage the private sector to increase expenditure on R&D. In response to Hong Kong’s measures, Singapore also increased tax deduction on R&D from 150% to 250% in 2018.

**The second one is developing infrastructure.** Hong Kong and Singapore attach great importance to developing high quality infrastructure for attracting innovation and technology (I&T) talents as well as facilitating the operation of I&T enterprises. Cyberport and the Hong Kong Science and Technology Park (HKSTP) are the two largest I&T bases in Hong Kong. The Hong Kong Government has earmarked HKD 5.5 billion and HKD 3 billion respectively for expanding and optimizing infrastructure. In the future, the Lok Ma Chau Loop will be developed as the Hong Kong-Shenzhen Innovation and Technology Park. On the other hand, the Singapore Science Park focuses on research in biotechnology, robotics, etc. In addition, the Singapore-Sichuan Hi-Tech Innovation Park, jointly developed by Singapore and Sichuan Province, includes various projects such as the Artificial Intelligence Innovation Center, the Life Science Incubation Park, etc.

**The third one is developing digital infrastructure and promoting technology.** Hong Kong and Singapore are promoting digital personal identity. Both Hong Kong’s Electronic Identification (eID) and Singapore’s National Digital Identify (NDI) will be launched in 2020. In terms of payment infrastructure, Hong Kong launched the Faster Payment System (FPS) in September 2018. As of end-April this year, the FPS had 270 registrations with cumulative transaction value of HKD 272 billion. Meanwhile, Singapore is working with Thailand on developing cross-border P2P payments.

The two places attach great importance to the application of blockchain in technology promotion. In Hong Kong, the HKMA would jointly develop the Global Trade Connectivity Network with the MAS. In addition, a similar platform jointly developed by banks in Hong Kong was launched in October 2018. The banking industry in Hong Kong also has applied blockchain technology in the mortgage business. By comparison, Singapore is leading the way in blockchain application. Singapore launched Project Ubin in November 2016, which is a collaborative project between the MAS and the banking industry to explore the use of blockchain for payments, settlement of securities, etc. Singapore will cooperate with Canada to apply blockchain in cross-border interbank payments and settlement.

**The fourth one is supporting enterprises.** The Hong Kong Government supports local startups via expanding funds injection into investment funds of Cyberport and HKSTP respectively. Meanwhile, Singapore is expected to invest USD 158 million through the Financial Sector Technology and Innovation Scheme by 2020, including a funding support of 50-70% towards each new fintech project, up to a maximum of SGD 200,000. Furthermore, in order to encourage private investments in local startups, both governments co-invest with venture capital funds. For example, Hong Kong has set up the HKD 2 billion Innovation and Technology Venture Fund, while Singapore has established schemes such as SPRING SEEDS, Business Angel Scheme, etc.

**The fifth one is talent recruitment and training.** Hong Kong and Singapore have eased immigration requirements to attract overseas technology talents. At the same time, both places nurture professionals with fintech knowledge via establishing financial colleges, offering programs and collaborating with financial sector or overseas startups to provide internship opportunities.

Clearly, Hong Kong and Singapore create a favorable operating environment by spending efforts on optimizing taxation, improving infrastructure, supporting the industry and nurturing talents, so as to strengthen local enterprises and attract overseas enterprises in order to promote market development.

### **3. Market expansion potential**

Market expansion potential can be analyzed from two perspectives, namely the industry and the government.

In traditional industries, there are more well-known large enterprises in Hong Kong than in Singapore. However, the situation is reversed in fintech industry. Since 2014, KMPG and H2 Ventures have selected global top 100 fintech enterprises every year based on the amount and speed of capital raised, geographic diversity, sectoral diversity and other factors. In 2018, there were 6 Singaporean fintech enterprises on the list. Grab, the one with the highest ranking among them, was in the 3rd place globally. In contrast, there was only one Hong Kong-based enterprise, WeLab, on the list, ranked 23rd in the world.

Given great diversity of development among ASEAN countries and strong demand for financial inclusion, fintech enterprises in Singapore are able to grow quickly. Many fintech enterprises engaged in different fields, such as Grab (a comprehensive mobile platform) and InstraReM (a cross-border digital payment provider), are market leaders in ASEAN. By contrast, Hong Kong-based fintech companies are still focusing on domestic market, such as WeLend (an online lending platform), TNG (one of the first batch of SVF licensees in Hong Kong), etc.

Although Hong Kong's local fintech enterprises must strengthen, Hong Kong is well equipped as an operating base, attracting well-known overseas fintech enterprises to set up businesses here. For example, Revolut and TransferWise from the UK, as well as Stripe from the US with rankings of 13th, 37th and 15th respectively among global top 100, have operations in Hong Kong.

From the government perspective, Singapore has signed 22 cooperation agreements with different countries and cities in Asia-Pacific and Europe, including Japan, South Korea, Malaysia, Andhra Pradesh of India, Australia, Hong Kong, the UK, France, etc. It is worth noting that India is a developing nation with strong demand for financial inclusion, and there is huge development potential. Fintech enterprises in Singapore could extensively develop ASEAN market by expanding businesses to neighboring nations. Furthermore, a sizable market in India has yet to be explored.

In addition to its international network, Hong Kong also has a great advantage of deepening collaboration with the Mainland. At present, the HKMA has signed 10 cooperation agreements with different countries in Asia-Pacific, Europe and the Americas. Regarding the collaboration with the Mainland, the HKMA and the Office of Financial Development Service of Shenzhen have agreed to strengthen fintech collaboration between the two places in 2017. Moreover, the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area issued in February this year also proposed to establish an international I&T center. It is believed that Hong Kong will fully utilize its strength and realize its development potential as an international I&T operating platform with tremendous opportunities in the Greater Bay Area.

### **III. Outlook of developing fintech in Hong Kong**

In general, Hong Kong and Singapore are moving in a similar direction in terms of regulation, tax reform, infrastructure, enterprise support and talent resource, while certain areas have unique characteristics. However, Hong Kong's local fintech enterprises are relatively weak. Their businesses focus on domestic market with limited market size. Therefore, Hong Kong can take the opportunity of the Greater Bay Area development to strengthen its integration with the Mainland's I&T ecosystem, so as to breakthrough its own market limitations.

In fact, Hong Kong and other cities in the Greater Bay Area have different comparative advantages in developing fintech. Hong Kong's strength lies in its position as an international financial center, sound judicial and intellectual property systems, and strong research fundamentals. While cities in the Greater Bay Area, especially in Shenzhen, also have strong applied research capability with competitive operating costs and a liveable environment. As a result, Hong Kong and the cities in the Greater Bay Area can explore ways to deepen collaboration and distribution of responsibilities, combine their respective strengths to attract global capital and talents, and jointly establish an international fintech hub.

To conclude, Hong Kong and Singapore are committed to building a fintech center by creating a comprehensive and robust ecosystem. As long as we seize the development opportunities in the Greater Bay Area, Hong Kong is expected to stand out from the regional competition and develop as a major fintech operating center in Asia-Pacific region.

# 主要經濟指標 (Key Economic Indicators)

	2017	2018	2018/Q4	2019/Q1
<b>一. 本地生產總值 GDP</b>				
總量 (億元) GDP(\$100 Million)	25,432	26,644	7,550	7,140
升幅 (%) Change(%)	3.8	3.0	1.2	0.6
<b>二. 對外貿易 External Trade</b>			<b>2019/3</b>	<b>2019/1-3</b>
外貿總值 (億元) Total trade(\$100 Million)				
總出口 Total exports	38,759	41,581	3,436	9,204
進口 Total imports	43,570	47,214	4,029	10,391
貿易差額 Trade balance	-4,811	-5,633	-592	-1,187
年增長率 (%) YOY Growth(%)				
總出口 Total exports	8.0	7.3	-1.2	-2.4
進口 Imports	8.7	8.4	-0.1	-3.2
<b>三. 消費物價 Consumer Price</b>				
綜合消費物價升幅 (%) Change in Composite CPI(%)	1.5	2.4	2.1	2.2
<b>四. 樓宇買賣 Sale &amp; Purchase of Building Units</b>			<b>2019/4</b>	<b>2019/1-4</b>
合約宗數 (宗) No. of agreements	83,815	79,193	9,911	26,927
年升幅 (%) Change(%)	14.8	-5.5	13.4	-9.7
<b>五. 勞動就業 Employment</b>			<b>2019/1-2019/3</b>	<b>2019/2-2019/4</b>
失業人數 (萬人) Unemployed(ten thousands)	11	10.5	11	11.2
失業率 (%) Unemployment rate(%)	2.9	2.8	2.8	2.8
就業不足率 (%) Underemployment rate(%)	1.1	1.1	1.0	1.0
<b>六. 零售市場 Retail Market</b>			<b>2019/3</b>	<b>2019/1-3</b>
零售額升幅 (%) Change in value of total sales(%)	2.2	8.8	-0.2	-1.2
零售量升幅 (%) Change in volume of total sales(%)	1.9	7.6	-0.8	-1.6
<b>七. 訪港遊客 Visitors</b>				
總人數 (萬人次) arrivals (ten thousands)	5,847	6,515	586.0	1,823.0
年升幅 (%) Change(%)	3.2	11.4	17.3	16.8
<b>八. 金融市場 Financial Market</b>			<b>2019/2</b>	<b>2019/3</b>
港幣匯價 (US\$100=HK\$)				
H.K. Dollar Exchange Rate (US\$100 = HK\$)	781.4	783.6	785.0	784.9
貨幣供應量升幅 (%) change in Money Supply(%)				
M1	9.8	-0.4	-1.8	-2.2
M2	10	4.3	3.2	3.9
M3	10	4.3	3.3	4.0
存款升幅 (%) Change in deposits(%)				
總存款 Total deposits	8.7	5.0	4.1	5.0
港元存款 In HK\$	11.6	3.6	1.2	3.0
外幣存款 In foreign currency	5.9	6.4	7.2	7.2
放款升幅 (%) in loans & advances(%)				
總放款 Total loans & advances	16.1	4.4	3.0	3.1
當地放款 use in HK	15.5	4.0	2.6	2.6
海外放款 use outside HK	17.4	5.3	4.0	4.2
貿易有關放款 Trade financing	8.7	-7.7	-7.4	-6.7
最優惠貸款利率 (%) Best lending rate (%)	5.0000	5.1250	5.1250	5.1250
恆生指數 Hang Seng index	29,919	25,846	28,633	29,051