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Panel on Financial Affairs

Meeting on 1 June 2020

**Updated background brief on
development of financial technologies in Hong Kong**

Purpose

This paper provides background information on the development of financial technologies ("Fintech") in Hong Kong, and summarizes the views and concerns expressed by the Panel on Financial Affairs ("FA Panel") on the subject since 2016.

Background

2. Fintech refers to the application of information and communication technology in the field of financial services, including such areas as digital payment and remittance, financial product investment and distribution platforms, peer-to-peer financing platforms, cybersecurity and data security technology, big data and data analytics, and distributed ledger application to new asset classes and processes.¹

The Administration's strategies and measures to support Fintech development

3. The Administration established the Steering Group on Fintech ("the Steering Group") in April 2015 to advise it on measures required to develop Hong Kong into a Fintech hub. The Steering Group released its report in February 2016 setting out the broad directions and focused areas for supporting the Fintech sector. The Steering Group's report has identified five parameters that are important in nurturing a conducive ecology for Fintech development,

¹ Page 1 of the Executive Summary of the Report of the Steering Group on Financial Technologies

namely promotion, facilitation, regulations, talents, and funding. The Steering Group's recommendations under the five parameters are set out in **Appendix I**.

4. According to the Administration, it has been adopting a five-pronged approach in facilitating Fintech development following the five parameters identified by the Steering Group with the objectives to:

- (a) encourage existing financial institutions to provide innovative financial products and services as well as enhance its efficiency through applying Fintech;
- (b) collaborate with stakeholders to foster a conducive ecology, and encourage financial institutions and professional bodies to actively invest, share domain knowledge, establish incubation/accelerator programmes or innovation labs, and enhance collaboration with startups;
- (c) encourage the financial industry to collaborate, invest and research in Fintech projects so as to position Hong Kong as a regional platform for Fintech development; and
- (d) uphold the principle of "technology-neutrality" and ensure adequate investor protection.

5. The Financial Secretary ("FS") has announced in his budgets since 2016 a number of initiatives and measures to foster Fintech development in Hong Kong. The Chief Executive has set out in the Policy Addresses in 2017, 2018 and 2019 various measures to promote the development of Fintech. The initiatives relating to the development of Fintech implemented by the Administration in 2016-2017, 2017-2018 and 2018-2019 are set out in **Appendices II to IV** respectively.

Views and concerns expressed by members of the Panel on Financial Affairs

6. FA Panel was briefed on the Administration's strategies and measures to develop Fintech at the meetings on 11 April 2016, 18 April 2017, 3 April 2018 and 1 April 2019. Panel members also discussed the development of Fintech during the briefing on the policy initiatives of the Financial Services and the Treasury Bureau in CE's Policy Addresses of 2017, 2018 and 2019 on 6 February 2017, 20 October 2017, 30 October 2018 and 4 November 2019.

Panel members expressed concern about the e-wallet top-up incident² and the introduction of virtual banking when the Hong Kong Monetary Authority ("HKMA") briefed the Panel on its work at the meetings on 5 November 2018 and 6 May 2019 respectively. The major views and concerns expressed by members at the above meetings are summarized in the ensuing paragraphs.

Development of Fintech in Hong Kong

Regulation of Fintech

7. At the FA Panel meetings on 11 April 2016, 18 April 2017, 20 October 2017, 3 April 2018 and 1 April 2019, some members expressed concern that Hong Kong's Fintech development lagged behind other jurisdictions including the Mainland in areas such as development in electronic payment systems. These members pointed out that the establishment of respective Fintech liaison platforms by HKMA, the Securities and Futures Commission ("SFC") and the Insurance Authority ("IA") was inadequate in addressing Fintech industry's concern about regulatory uncertainty. They called on the Administration and financial regulators to review and relax existing regulatory regimes in order to cope with the rapid development in Fintech. Other members relayed the industry's views that in developing Fintech, the Administration should put in place a clear legislative framework, refrain from adopting a "technology-neutral" approach and avoid over-regulation. There were suggestions from members that the Administration should set concrete targets and devise implementation timetable on the application of Fintech, as well as set up a working group to review and harmonize laws, regulations and guidelines issued by regulators relating to Fintech. The Administration should also take the lead in adopting Fintech in various government operations and processes (including the use of e-wallets in settling Government bills).

8. On the pace of Fintech development in Hong Kong, the Administration advised that consumers in Hong Kong were more cautious in accepting new Fintech services or products when compared with Mainland users. The Administration's strategy was to foster an ecology conducive to Fintech development. The rapid development in stored value facilities and retail payment systems since the enactment of the Payment Systems and Stored Value Facilities Ordinance (Cap. 584) in 2015 had demonstrated that substantial progress in the application of Fintech solutions could be achieved when the corresponding legislative framework was in place. HKMA would continue to promote the adoption of new payment methods including launching the "Faster

² There were a number of fraud cases in October 2018 involving the theft of personal information for setting up e-wallet accounts and making electronic direct debit authorization for account top-up.

Payment System" ("FPS") in 2018 to facilitate peer-to-peer payment. The Administration would promote the use of new payment channels (e.g. smartphone e-wallet) for various Government fees and charges. For instance, members of the public could settle from November 2019 onwards taxes, rates and water charges bills through FPS. The Administration was also exploring the acceptance of payments through FPS at the counters of selected Government departments on a pilot basis.

9. As regards the regulatory framework for Fintech, the Administration advised that drawing from discussions with stakeholders, it was noted that many services provided by Fintech companies could operate under the existing legal framework. The "technology neutral" approach meant that the Administration's regulation of the industry should not result in giving any preference to those using technology. The Administration and financial regulators were mindful of the need to streamline the relevant regulations and rules to facilitate Fintech development. The Administration would review its policy on Fintech development where necessary.

10. Regarding the work of regulators including HKMA, SFC and IA, the Administration pointed out that, apart from establishing dedicated platforms to enhance communication with the Fintech community, these regulators had rolled out a number of measures to promote Fintech development. The regulators had also been engaging relevant stakeholders proactively to gauge their views on Fintech development and help them resolve problems encountered.

Responsibilities of authorities in the development of Fintech

11. At the meeting on 8 April 2018, some members enquired about the division of responsibilities and authorities among the various bureau/departments ("B/Ds") on Fintech development, including whether the Financial Services and the Treasury Bureau ("FSTB") or the Innovation and Technology Bureau ("ITB") was the lead bureau in promoting Fintech development. The Administration advised that as Fintech had a wide scope, a number of B/Ds and regulators were involved. While FSTB was the lead bureau in promoting Fintech development, other B/Ds including ITB were responsible for promoting and supporting upstream research and development. FSTB and financial regulators would collaborate and cooperate with other parties like Cyberport and the Hong Kong Science Park ("HKSP") in taking forward their initiatives.

Fintech development in the securities industry

12. Some members urged the Administration and SFC to strengthen its efforts in promoting the use of Fintech in the securities industry, and explore the feasibility of allowing remote onboarding (including the use of online client identity verification and biometric authentication), which would help the local securities industry to promote business to non-local clients.

13. The Administration advised that SFC had been maintaining close liaison with the securities industry on the use of Fintech. While SFC welcomed the use of Fintech in fulfilling the "know-your-customer" ("KYC") requirement, it had to ensure proper conduct of the KYC process. SFC had issued guidelines to the securities industry on the account opening procedures for non-local clients with a view to facilitating local securities firms in soliciting business from such clients. Development of the KYC Utility would help streamline the process. SFC added that it had to be prudent in imposing more stringent regulatory requirements on first-time remote onboarding. Securities firms would be allowed to rely on certification authorities recognized under the Electronic Transactions Ordinance (Cap. 553) to conduct facial authentication. The Government's smart city initiative would also study the feasibility of using digital authentication in the securities industry.

Investor protection in the development of Fintech

14. Some members stressed the importance for the Administration to strike a proper balance between promoting the development of Fintech and protecting the interests of consumers and investors including ensuring proper protection of personal data privacy during the process. They further called on the Administration and regulators to formulate prudent regulations over Initial Coin Offerings ("ICOs") in order to protect investors including introducing a licensing regime for ICOs and restricting participation of ICOs to certain types of investors (like professional investors). Some members also enquired about the regulatory approach to be adopted for virtual asset trading platforms.

15. The Administration assured members that it attached importance to safeguarding data security in Fintech applications and protection of personal data privacy of consumers and investors, which were vital in maintaining public confidence in using Fintech. For new financial products or services developed by Fintech companies, if general consumers or retail investors were the targets, the Administration had to ensure that the relevant regulatory regime would provide adequate protection to them and the regime would be commensurate with the risks of the Fintech applications concerned.

16. Regarding the regulation of ICOs, the Administration advised that digital tokens were generally regarded as virtual commodities. SFC advised that, depending on terms and conditions, certain digital tokens might be regarded as "securities" under the Securities and Futures Ordinance (Cap. 571). SFC had issued a statement in September 2017 to clarify when digital tokens would be subject to the securities laws of Hong Kong. If issuers of ICOs applied to SFC for licences in launching ICO exercises, SFC could consider imposing conditions on such licences to ensure proper protection for investors including setting eligibility criteria for investors.

17. As for the regulation of virtual asset trading platforms, SFC had issued in November 2018 a conceptual framework for the potential regulation of virtual asset trading platforms with a view to exploring whether such platforms were suitable for regulation. If SFC later decided to implement the proposed licensing regime for virtual assets trading platforms, investors would be able to identify platforms which were under SFC's regulation.

Challenges arising from the development of Fintech

18. At the FA Panel meetings on 11 April 2016, 18 April 2017, 3 April 2018 and 6 May 2019, some members expressed concern that the development of Fintech would inevitably phase out existing jobs in the financial services sector. They urged the Administration to assist the employees concerned in adapting to and preparing themselves for the changes brought by Fintech development in Hong Kong. The Administration should also help change the mindset of some firms in the banking, securities and insurance sectors which regarded Fintech start-ups as their potential competitors. Noting that HKMA started to issue virtual banking licences in 2019, some members were concerned whether the competition for Fintech talents in the banking industry would intensify.

19. The Administration responded that it would collaborate with the industry and stakeholders in stepping up training for existing practitioners to enhance their interest in using Fintech and skill-sets to take advantage of the opportunities provided by applying information technology in the financial services industry. Regulators had also implemented a number of measures (like the Haccelerator programmes) to promote cooperation between the industries and Fintech start-ups. Such measures could help the industries see the start-ups as their partners rather than potential competitors. As for the impact of the introduction of virtual banking, HKMA advised that up to eight virtual banking licenses might be granted in 2019. Even if all of them were taken into account, the total manpower requirement of virtual banks in the coming three years would only account for around 1.7% of the existing manpower of the banking industry.

20. At the FA Panel meetings on 11 October 2017 and 1 April 2019, some members raised concern about cyber attacks on financial infrastructures and stressed the importance for the Administration to accord priority in addressing cybersecurity issues in developing Fintech. They enquired about the measures taken by the Administration and HKMA to enhance cybersecurity of financial infrastructures, in particular traditional mainframe computer systems used by financial institutions, and new infrastructures like FPS.

21. The Administration advised that it attached importance to strengthening cybersecurity in developing Fintech. HKMA had carried out a number of initiatives and studies including a joint study with the Hong Kong Applied Science and Research Institute on blockchain that covered security. Besides, regulators had also been closely monitoring the security threats and vulnerabilities of information technology systems used by the financial services industry including traditional computer systems. According to the assessment of regulators, the traditional computer systems used by the industry were relatively safe.

22. At the FA Panel meetings on 30 October 2018 and 5 November 2018, members expressed concern about the e-wallet top-up incidents in October 2018,² and called on HKMA to learn lesson from the incidents, and consider imposing requirements on the collection and use of personal data, and authentication of electronic direct debit authorization ("eDDA") for both physical banks and virtual banks.

23. HKMA explained that the e-wallet top-up incidents had arisen from a novel practice of fraudsters. HKMA had conducted a thorough review of the incidents and strengthened the procedures for setting up eDDA to prevent similar incidents in the future. Enhanced measures included sending an SMS notification to the e-wallet user to confirm the setting-up of eDDA through FPS, and verification of customer identities via-two-factor authentication with banks.

Strategies for the development of Fintech

24. At the FA Panel meetings on 11 April 2016, 18 April 2017, 3 April 2018, 1 April 2019 and 4 November 2019, members sought details of the Administration's strategies to develop Fintech including measures to attract Fintech talents to Hong Kong and training of local talents through developing Fintech-related degree programmes in local universities, and whether the Administration would examine the feasibility of setting up offices in the Silicon Valley to support local Fintech start-ups in establishing business there. There was also concern about whether the assistance provided by the Administration and financial regulators to Fintech companies in Hong Kong was aimed to help

such companies develop financial applications or products targeting the Mainland market, and how the competitiveness of local Fintech companies in the global Fintech market would be maintained.

25. The Administration advised that it would continue its work in strengthening cooperation with other economies and regulators on Fintech development as well as enhancing market access for Fintech start-ups in Hong Kong. Cyberport and InvestHK had been organizing various activities to enhance cooperation with other economies on Fintech development including launching Cyberport's University Partnership Programme for local university students to join the Entrepreneurship Bootcamp in Silicon Valley. Relevant organizations including local universities, HKMA and Cyberport had been offering relevant programmes/courses to nurture Fintech talents. Cyberport had also set up the Creative Micro Fund to nurture local Fintech talents.

Support measures for Fintech companies in Hong Kong

26. At the FA Panel meetings on 11 April 2016, 30 October 2018 and 1 April 2019, members enquired whether the Administration had examined the difficulties encountered by Fintech companies in Hong Kong, and whether it would consider developing a platform to help Fintech companies to seek funding from private equity funds, offering tax concessions for private equity funds to encourage their investments in Fintech companies, providing loans and affordable office premises to Fintech companies, and assisting Fintech companies in opening bank accounts in Hong Kong. Some members were concerned that the Administration might have overlooked the needs of smaller scale Fintech companies which were located outside Cyberport and HKSP, in particular their needs for recruiting talents.

27. On the challenges faced by Fintech companies in Hong Kong, the Administration advised that a study conducted by InvestHK had revealed that, in general, Fintech companies encountered problems such as recruiting talents, seeking funds and finding clients. It was envisaged that the Talent List of Hong Kong and the Quality Migrant Admission Scheme launched by the Administration would help Fintech companies in Hong Kong, regardless of whether they were located in Cyberport or HKSP, to recruit relevant talents.

28. Regarding tax concession, the Administration advised that given the simple and low taxation regime of Hong Kong, the implications of providing tax incentives to Fintech startups would warrant careful examination. A number of initiatives would be in place to help startups connect with investors. As for the opening of bank accounts by Fintech start-ups, the Administration pointed out that HKMA had required banks to implement measures to enhance

the account opening process and customer experience, and emphasized that they should adopt a risk-based approach in conducting customer due diligence.

Relevant motion passed and questions raised at Council meetings

29. The Council has passed two motions relating to the development of Fintech in Hong Kong since 2016. The details are as follows:

- (a) The motion on "Reforming outdated legislation and promoting the development of innovation and technology" passed at the Council meeting of 5 July 2017 urging the Government, inter alia, to remove various regulations and restrictions for financial innovation and provide relevant legal advice and technical support for financial services enterprises so as to assist the industry in the development and effective use of financial technology products and services; and
- (b) The motion on "Promoting the development of a financial technology hub to reinforce Hong Kong's position as an international financial centre" passed at the Council meeting of 30 January 2019 urging the Government to promote the development of Fintech in Hong Kong on a number of fronts.

30. Furthermore, Members have raised a number of questions at Council meetings since 2016 on the Administration's measures in promoting the development of Fintech in Hong Kong. Issues covered in these questions include support for Fintech start-ups, measures to attract Fintech start-ups to develop businesses in Hong Kong, development of electronic payment services and FPS in Hong Kong, regulation of Fintech and initiatives to facilitate Fintech companies, assistance for the insurance industry using Fintech, enhancing the security of electronic payment systems, regulation of virtual asset investment activities virtual asset investment activities, development of virtual banks, etc.

31. Details of the above motions and questions and the Administration's replies are provided in the hyperlinks in **Appendix V**.

Latest development

32. At the Panel meeting to be held on 1 June 2020, the Administration will update the Panel on the latest development of Fintech in Hong Kong and the initiatives to facilitate the development.

Relevant papers

33. A list of relevant papers is in **Appendix V**.

Council Business Division 1
Legislative Council Secretariat
26 May 2020

Major recommendations set out in the report of the Steering Group on Financial Technologies ("Fintech")

Parameter	Recommendations
Promotion	Formulating a vision on Hong Kong's development in Fintech and organizing an annual premier Fintech event and competitions
Facilitation	Establishing an office to provide targeted assistance to startups, setting up a Fintech-themed programme, attracting accelerator programmes and innovation laboratories, and positioning Hong Kong as a hub for applying and setting standards for cutting-edge Fintech technologies
Regulations	Establishing dedicated contact points at financial regulators
Funding	Improving dissemination of information on funding sources
Talents	Encouraging young talents to consider entering the Fintech sector and enhancing dissemination of information on immigration policy

Source: paragraph 8 of the paper entitled "Strategies and Measures to Develop Financial Technologies" provided by the Administration for the meeting of the Panel on Financial Affairs on 11 April 2016 (LC Paper No. CB(1)736/15-16(02))

**Initiatives relating to the development of Financial Technologies ("Fintech")
Implemented by the Administration in 2016-17**

Measures	Key achievements
(a) Regulation	
(i) Fintech liaison platforms set up by the Hong Kong Monetary Authority ("HKMA"), the Securities and Futures Commission and the Office of the Commissioner of Insurance respectively	<ul style="list-style-type: none"> - More than 200 regulatory-related enquiries received (up to end-March 2017), thus enhancing communications with the Fintech industry - HKMA's Fintech Facilitation Office has so far organised ten events in Hong Kong, gathering about 2 500 stakeholders from financial institutions, investors and Fintech firms to exchange ideas and cultivate collaboration
(ii) Payment Systems and Stored Value Facilities Ordinance	<ul style="list-style-type: none"> - Commenced full operation in November 2016 - 13 store value facility ("SVF") licences granted, with licensees comprising retail payment companies from both within and outside Hong Kong
(iii) HKMA's Fintech Supervisory Sandbox	<ul style="list-style-type: none"> - 14 Fintech projects are currently using or completed testing under the Sandbox (as at March 2017), facilitating pilot trials involving banking services and a limited number of participating customers (such as staff members or focus groups of selected customers) without the need to achieve full compliance with HKMA's usual supervisory requirements during the trial period
(b) Facilitation	
(i) Cyberport's Fintech incubation programme and Smart-Space FinTech	<ul style="list-style-type: none"> - The Fintech community at the Cyberport has grown from about 90 companies a year earlier to more than 180 companies (including incubatees, startups operating in Smart-Space co-working space, office tenants, and service subscribers to its Collaboration Centre)

Measures	Key achievements
	<ul style="list-style-type: none"> - As at end-February 2017, a total of 54 Fintech start-ups have been admitted to Cyberport's designated incubation programme, on track to assist 150 start-ups by 2020 - Smart-Space FinTech has been fully operational from December 2016, providing 4 300 square meters of dedicated co-working space. At least two incubation/accelerator programmes will be held in the Smart-Space in 2017
(ii) Cutting-edge Fintech	<ul style="list-style-type: none"> - HKMA commenced in late March 2017 a research and a proof-of-concept work on central bank digital currency in collaboration with the three note-issuing banks, the Hong Kong Interbank Clearing Limited and R3 (a consortium of financial institutions and other stakeholders to explore the potential of Distributed Ledger Technology ("DLT")) - HKMA and the Hong Kong Applied Science and Technology Research Institute ("ASTRI") collaborated with a number of banks to explore the feasibility of applying DLT, and published a whitepaper on DLT in November 2016 - The Cyber Resilience Assessment Framework, Professional Development Programme and Cyber Intelligence Sharing Platform under HKMA's Cybersecurity Fortification Initiative were implemented in December 2016
(iii) HKMA-ASTRI Fintech Innovation Hub	<ul style="list-style-type: none"> - Since the Hub's formal launch in November 2016, five banks and three technology firms have used the Hub for trial or demonstration of five Fintech solutions that may have potential for industry-wide applications - The Hub supported the banking sector for developing prototypes for the use of DLT in trade financing and other aspects, so as to test how the concept can be applied in different operational scenarios

Measures	Key achievements
(iv) Haccelerator Programme	<ul style="list-style-type: none"> - HKMA launched the Fintech Haccelerator programme in late March 2017 in collaboration with Cyberport, offering banks and SVF licensees a platform for organising Hackathon and Accelerator competitions to explore innovative solutions, recruit talents and identify cooperation opportunities with Fintech startups and innovators
(c) Promotion	
(i) InvestHK dedicated Fintech team	<ul style="list-style-type: none"> - The inaugural Hong Kong Fintech Week was held in November 2016, attracting 2 500 participants from within and outside Hong Kong - Sponsorship for large-scale events such as Finovate Asia, a demo-only conference held in November 2016 alongside the Hong Kong Fintech Week, and the Fintech Finals 2017, a conference and start-up competition which took place in January 2017. The two events together enabled around 60 Fintech companies from around the world to showcase or compete by pitching their businesses in Hong Kong - Assistance rendered to around 40 Fintech startups over the past six months to encourage them to establish presence in Hong Kong
(d) Talents	
(i) Internship and immersion programme	<ul style="list-style-type: none"> - Under the HKMA-ASTRI Fintech Career Accelerator Scheme announced in December 2016, 12 participating banks and HKMA will offer over 100 Fintech-related internships in summer 2017 for undergraduate and postgraduate students from ten local tertiary education institutions - Under the Cyberport University Partnership Programme, 53 university students have already joined the Entrepreneurship Bootcamp in Silicon Valley arranged by the Stanford Graduate School of Business in 2016-17
(e) Funding	
(i) Innovation and Technology Fund	<ul style="list-style-type: none"> - The Enterprise Support Scheme, launched in 2015 by the Innovation and Technology Commission to provide funding support for enterprises to conduct

Measures	Key achievements
	<p>in-house research and development and encourage private sector investment in innovation and technology, received over 20 Fintech-related applications, with two approved in-principle (as at end-February 2017)</p> <ul style="list-style-type: none">- Technology Voucher Programme, which aims to subsidise local small- and medium-sized enterprises in using technological services and solutions to improve productivity, or upgrade or transform their business processes, received nine applications from companies in banking, insurance or other financial services (as at end-February 2017)

Source: Annex to the paper entitled "Development of Financial Technologies" provided by the Administration for the meeting of the Panel on Financial Affairs on 18 April 2017 (LC Paper No. CB(1)777/16-17(03))

**Initiatives relating to the development of Financial Technologies ("Fintech")
Implemented by the Administration in 2017-2018**

Measures	Key achievements
(a) Promotion	
(i) InvestHK and dedicated Fintech team	<ul style="list-style-type: none"> - InvestHK has set up a dedicated Fintech team since 2016 to assist Fintech companies, start-up entrepreneurs, investors, accelerators, incubators and innovation laboratories from all over the world to establish in Hong Kong and expand into the Mainland and Asian markets - InvestHK will continue to organize Hong Kong Fintech Week in 2018, sponsor and participate in major local and overseas Fintech events, such as Fintech Finals 2019
(ii) Collaboration with the Mainland and Overseas	<ul style="list-style-type: none"> - In 2017, the Hong Kong Monetary Authority ("HKMA") agreed with the Office of Financial Development Service, the People's Government of Shenzhen Municipality to strengthen co-operation between Hong Kong and Shenzhen in Fintech, Cyberport is also working with HKMA to set up a network in Shenzhen to facilitate Hong Kong Fintech start-ups to expand into the Bay Area, as well as to bring Mainland Fintech companies to Hong Kong - In 2017, Hong Kong entered into a Fintech Bridge Agreement with the United Kingdom to provide a framework for Fintech companies on both sides to use the facilities and assistance available in the other place to explore new business opportunities
(b) Facilitation	
(i) Cyberport	<ul style="list-style-type: none"> - As announced in the 2018-2019 Budget, \$200 million will be allocated to Cyberport to enhance the support for start-ups, including Fintech start-ups, and promote the development of the digital technology ecosystem. Cyberport will also launch an "easy landing" programme to attract multinational companies to set up offices and research and development units in Hong Kong

Measures	Key achievements
(ii) Faster Payment System	<ul style="list-style-type: none"> - HKMA launched the Faster Payment System ("FPS") in September 2018. FPS will provide a round-the-clock real-time payment platform allowing banks and stored value facilities ("SVF") operators to offer their customers faster, more convenient and comprehensive payment and transfer services - To further facilitate the use of QR code in retail payments, HKMA is working with the industry to introduce a common QR code standard to facilitate merchants in using a single QR code to accept different payment schemes. The Government is also exploring the use of e-wallets in settling Government bills
(iii) Applications of technologies	<ul style="list-style-type: none"> - Riding on the success on the Distributed Ledger Technology ("DLT") proof-of-concept work on trade finance as described in the whitepapers published by HKMA, seven banks in Hong Kong are commercializing the prototype into the Hong Kong Trade Finance Platform ("HKTFP") to digitize and share trade documents, automate processes and reduce risks and frauds. HKMA is also building a cross-border DLT infrastructure, the "Global Trade Connectivity Network", with the Monetary Authority of Singapore to connect the HKTFP to the National Trade Platform in Singapore and to digitalize cross-border trade and trade finance processes - HKMA launched an industry consultation on its proposed Open Application Programming Interface ("API") framework in the first quarter of 2018, with a view to start implementing the first phase of Open API by the end of 2018.
(c) Regulation	
(i) Supervisory sandboxes	<ul style="list-style-type: none"> - HKMA, the Securities and Futures Commission ("SFC") and the Insurance Authority ("IA") launched or improved their respective supervisory sandboxes in 2017. By February 2018, 29 new Fintech solutions had been tested or were being tested in HKMA's supervisory sandbox, and 19 solutions have been subsequently rolled out

Measures	Key achievements
	<ul style="list-style-type: none"> - HKMA introduced the Fintech Supervisory Chatroom ("Chatroom") in November 2017 to further facilitate Fintech companies, so that they can directly access the Chatroom without the need to partner with a bank
(ii) Virtual Banks	<ul style="list-style-type: none"> - HKMA completed a public consultation on its Authorization Guideline of Virtual Banks in March 2018, and issued the revised guideline in mid-2018
(iii) Securities and Futures Industry	<ul style="list-style-type: none"> - SFC issued in 2017 a consultation paper on the proposed guidelines on online distribution and advisory platform, with additional protective measures proposed for the sale of complex products on online platforms.
(iv) Insurance Industry	<ul style="list-style-type: none"> - IA launched in September 2017 the Fast Track for applications for authorization of new insurers owning and operating solely digital distribution channels, without the use of any conventional channels involving agents, banks or brokers
(v) Initial Coin Offerings and Cryptocurrencies	<ul style="list-style-type: none"> - The Financial Services and the Treasury Bureau and the Investor Education Centre, a subsidiary of SFC, jointly launched a public education campaign on the risks associated with ICO and cryptocurrencies in January 2018 - HKMA has repeatedly reminded the public to exercise extra caution regarding virtual commodities given their highly speculative nature. SFC issued a statement in September 2017 to point out that depending on the facts and circumstances of an ICO, the relevant cryptocurrencies may be "securities" and subject to the securities laws of Hong Kong
(d) Talents	
	<ul style="list-style-type: none"> - The Chinese University of Hong Kong and the Hong Kong Polytechnic University launched, for the first time, dedicated programmes in Fintech starting from the 2017/2018 academic year. The

Measures	Key achievements
	<p>Study Subsidy Scheme for Designated Professionals/Sectors also covers self-financing Fintech-related undergraduate programmes starting from the 2018/2019 academic year</p> <ul style="list-style-type: none"> - In collaboration with Cyberport, the Hong Kong Applied Science and Technology Research Institute and Hong Kong Science and Technology Parks, HKMA launched the upgraded version of the Fintech Career Accelerator Scheme ("FCAS") in January 2018 as FCAS 2.0. Cyberport also collaborated with the Stanford Graduate School of Business in the last three years and sent some 160 university students to Silicon Valley for Fintech entrepreneurship training
(e) Funding	
	<ul style="list-style-type: none"> - Technology firms including Fintech companies are supported by various funding schemes, including: (a) Enterprise Support Scheme; (b) Technology Voucher Programme; and (c) various funding and support programmes offered by Cyberport (like Cyberport Creative Micro Fund) - The Government launched the \$2 billion Innovation & Technology Venture Fund in September 2017 to encourage investment from venture capital funds into start-ups from the Fintech and other technology sectors

Source: Paragraphs 6-26 of the paper entitled "Development of Financial Technologies" provided by the Administration for the meeting of the Panel on Financial Affairs on 3 April 2018 (LC Paper No. CB(1)724/17-18(03))

**Initiatives relating to the development of Financial Technologies ("Fintech")
Implemented by the Administration in 2018-2019**

Measures	Key achievements
(a) Promotion	
(i) InvestHK's Dedicated Fintech Team	<ul style="list-style-type: none"> - In 2018, InvestHK organised a number of Hong Kong Fintech seminars in the Mainland and overseas and participated in overseas Fintech events - InvestHK supported and participated in a series of local Fintech events including the annual flagship, Hong Kong Fintech Week 2018
(ii) Collaboration with the Mainland and Overseas	<ul style="list-style-type: none"> - In 2018, Hong Kong entered into Fintech cooperation agreements with Switzerland, Poland, Abu Dhabi, Gibraltar, etc. - The Global Financial Innovation Network, formed by the Hong Kong Monetary Authority ("HKMA"), the Securities and Futures Commission ("SFC") and 27 international organisations, was formally established in January 2019 and launched a pilot for firms wishing to test innovative financial products, services or business models across more than one jurisdiction.
(b) Regulation	
(i) Virtual Bank	<ul style="list-style-type: none"> - HKMA received around 30 applications following the publication of a revised Guideline on Authorisation of Virtual Banks. HKMA has shortlisted eight applications for final due diligence check and is striving to start issuing virtual bank licences by the end of March 2019
(ii) Open Application Programming Interface ("API")	<ul style="list-style-type: none"> - HKMA published the Open API Framework in July 2018. The Framework adopts a risk-based principle and a four-phased approach to implement various Open API functions
(iii) Know-your-customer ("KYC")	<ul style="list-style-type: none"> - HKMA has been working closely with the Hong Kong Association of Banks to explore how

Measures	Key achievements
	<p>the know-your-customer utility could potentially be used to enhance efficiency of customer (mainly small and medium enterprises and corporates) due diligence processes and customer experience</p> <ul style="list-style-type: none"> - When designing the electronic identity ("eID") system, Innovation and Technology Bureau and the Office of the Government Chief Information Officer have also provided flexibility for supporting future services to be provided by public and private organisations, including facilitating financial institutions to perform KYC procedure
(iv) Stored Value Facilities ("SVF") (e.g. e-wallets)	<ul style="list-style-type: none"> - At the end of 2018, the total number of SVF accounts in use was 56.1 million, representing a 20.1% increase from end 2017. SVF operators are actively expanding their service and customer reach to different sectors - Recently some e-wallet operators have extended the use of their Hong Kong e-wallets for retail payments in the Mainland
(v) New regulatory approach for virtual assets	<ul style="list-style-type: none"> - The Administration launched a public education campaign on the risks associated with initial coin offerings and "cryptocurrencies" in 2018 - SFC set out a conceptual framework for the potential regulation of virtual asset trading platforms in November 2018, with a view to exploring whether virtual asset trading platforms were suitable for regulation. It also issued guidance on the regulatory standards expected of virtual asset portfolio managers and fund distributors
(vi) Fast Track and the Insurtech Facilitation Team	<ul style="list-style-type: none"> - The Insurance Authority ("IA")'s Fast Track offers a dedicated channel for new authorisation applications from insurers using solely digital distribution channels (i.e. without the involvement of intermediaries) to provide insurance products with a simple structure and high protection element. In December 2018, IA

Measures	Key achievements
	<p>granted the first authorisation of a virtual insurer under the Fast Track</p> <ul style="list-style-type: none"> - The Insurtech Facilitation Team established by IA helps insurers, technology companies and start-ups to gain better understanding of the current regulatory landscape and provides a platform for the exchange of ideas related to Insurtech initiatives - The "Embracing Fintech in Hong Kong" working group has been set up under the IA's "Future Task Force" of the insurance industry to promote the application of Fintech in the insurance industry
(vii) Sandboxes and Regtech	<ul style="list-style-type: none"> - Since its launch in September 2016 until end February 2019, 46 new technology products have been tested in HKMA's Fintech Supervisory Sandbox ("FSS") - SFC has granted two companies with licences to operate in SFC's Regulatory Sandbox. Since the launch of Insurtech Sandbox until end February 2019, IA received eight sandbox applications and two were completed and rolled out to the market - HKMA has expanded the scope of "Banking Made Easy Initiative" to facilitate the adoption of Regtech and the development of the Regtech ecosystem in Hong Kong, which aims to enhance the effectiveness and efficiency of banks' internal risk management and compliance efforts - SFC has established an interdepartmental unit for analyzing market intelligence, and has analyzed transaction data from restructuring and investigating licensed corporations on a trial basis and is able to identify regulatory misconduct and non-compliance situations
(c) Facilitation	
(i) Cyberport	<ul style="list-style-type: none"> - Cyberport has launched various programmes to support Fintech start-ups, nurture talents and provide matching service for financial institutions and start-ups. As at end February 2019, 94 Fintech start-ups have participated in the

Measures	Key achievements
	<p>Cyberport Incubation Programme. The Cyberport University Partnership Programme has sponsored more than 210 university students to attend entrepreneurship boot camps organised by renowned universities in the United States.</p>
(ii) Faster Payment System ("FPS") and the Common QR Code Standard	<ul style="list-style-type: none"> - FPS was launched in September 2018. As at end February 2019, FPS has processed over 8.7 million transactions involving an aggregate amount of HK\$180 billion. - HKMA announced the Common QR Code Standard for Retail Payments in Hong Kong together with the launch of an associated mobile application tool for converting multiple QR codes from different payment service providers into a single, combined QR code
(iii) eTradeConnect	<ul style="list-style-type: none"> - The trade finance platform, eTradeConnect, was launched in October 2018. eTradeConnect is the first large-scale multi-bank blockchain project in Hong Kong - A Memorandum of Understanding has been signed between the operator of eTradeConnect and a European trade finance platform to conduct a Proof-of-Concept on connecting the two platforms. HKMA has been proactively looking for opportunities to connect eTradeConnect with trade platforms in other regions
(iv) Insurance Fraud Prevention Claims Database ("IFPCD") and Motor Insurance DLT-based Authentication System ("MIDAS")	<ul style="list-style-type: none"> - Hong Kong insurance sector launched two Insurtech projects in December 2018, namely IFPCD and MIDAS. IFPCD uses big data and artificial intelligence technology to help detect patterns of fraudulent insurance claims, especially those involving multiple claims and syndicates. MIDAS makes use of blockchain to examine the validity of motor insurance policies with ease, which will help address cases of insurance scams
(d) Talents	
(i) Nurturing local talents	<ul style="list-style-type: none"> - Six local universities have rolled out Bachelor's or Master's degree programmes related to Fintech.

Measures	Key achievements
	<p>The Study Subsidy Scheme for Designated Professionals/Sectors also covers self-financing Fintech-related undergraduate programmes starting from the 2018/19 academic year.</p> <ul style="list-style-type: none"> - The University of Hong Kong, together with Cyberport and other industry players, launched Asia's first Fintech Massive Open Online Course in 2018 in which practitioners of the financial services industry can enroll
(ii) Attracting overseas talents	<ul style="list-style-type: none"> - In August 2018, the Government promulgated the first Talent List of Hong Kong. Immigration facilitation is provided to eligible persons under the Talent List through the Quality Migrant Admission Scheme. The Government also rolled out the Technology Talent Admission Scheme to provide a fast-track arrangement for the admission of overseas and Mainland research and development ("R&D") talent to undertake R&D work in Hong Kong
(e) Funding	
	<ul style="list-style-type: none"> - The Innovation and Technology Fund ("ITF") administered by the Innovation and Technology Commission ("ITC") has funding programmes that assist local companies, including those in the financial services sector, to upgrade their technological level. The Enterprise Support Scheme under the ITF supports companies in Hong Kong for their in-house R&D on a dollar-for-dollar matching basis - The Technology Voucher Programme subsidises local companies on a 2:1 matching basis in using technological services and solutions to improve productivity, or upgrade or transform their business processes - Cyberport has various programmes and initiatives providing financial support for its technology start-ups, including the Cyberport Creative Micro Fund, Cyberport Incubation Programme, Cyberport Accelerator Support Programme and Cyberport Macro Fund. Cyberport has also

Measures	Key achievements
	launched the Cyberport Investor Network to connect local starts-ups with worldwide investors to address their fundraising needs at various stages of development

Source: Paragraphs 4-29 of the paper entitled "Development of Financial Technologies" provided by the Administration for the meeting of the Panel on Financial Affairs on 1 April 2019 (LC Paper No. CB(1)760/18-19(04))

List of relevant papers

Date/Period	Event	Paper/Minutes of meeting
26 February 2016	The Steering Group on Financial Technologies released its report	Press Release Report of the Steering Group
11 April 2016	The Panel on Financial Affairs ("FA Panel") was briefed by the Administration on its strategies and measures to develop financial technologies ("Fintech") in Hong Kong	Administration's paper (LC Paper No. CB(1)736/15-16(02)) Minutes (LC Paper No. CB(1)979/15-16)
27 April 2016	Hon Frederick FUNG raised a written question on "Development of Financial Technologies"	Hansard (pages 7851-7854)
29 June 2016	Hon CHAN Kin-por raised a written question on "Attracting Financial Technology Start-up Companies to Develop Their Businesses in Hong Kong"	Hansard (pages 12831- 12834)

Date/Period	Event	Paper/Minutes of meeting
6 February 2017	FA Panel was briefed by the Administration on the policy initiatives of the Financial Services and the Treasury Bureau featured in the Chief Executive's 2017 Policy Address	Administration's paper (LC Paper No. CB(1)459/16-17(04)) Minutes (LC Paper No. CB(1)788/16-17)
8 February 2017	Hon CHAN Chun-ying raised an oral question on "Financial technology development in Hong Kong"	Hansard (pages 3273- 3283)
18 April 2017	FA Panel was briefed by the Administration on the development of Fintech in Hong Kong	Administration's paper (LC Paper No. CB(1)777/16-17(03)) Minutes (LC Paper No. CB(1)1344/16-17)
10 May 2017	Hon CHAN Kin-por raised a written question on "Financial technology development in Hong Kong"	Hansard (pages 6972- 6975)
5 July 2017	The Legislative Council ("LegCo") passed the motion on "Reforming outdated legislation and promoting the development of innovation and technology" moved by Hon Charles Peter MOK	Hansard <u>1</u> and <u>2</u> Wording of the motion passed Progress report
5 July 2017	Hon CHAN Kin-por raised a written question on "Measures to facilitate the development of the insurance industry"	Hansard (pages 11120- 11123)

Date/Period	Event	Paper/Minutes of meeting
20 October 2017	FA Panel was briefed by the Administration on the policy initiatives of the Financial Services and the Treasury Bureau featured in the Chief Executive's 2017 Policy Address	Administration's paper (LC Paper No. CB(1)47/17-18(01)) Minutes (LC Paper No. CB(1)312/17-18)
6 December 2017	Hon Charles Peter MOK raised an oral question on "Regulating and facilitating financial technology development"	Hansard (pages 3537- 3546)
10 January 2018	Hon Chan Chun-ying raised an oral question on "Faster Payment System"	Hansard (pages 4655- 4664)
31 January 2018	Hon Kenneth LAU raised a written question on "Electronic payment services"	Hansard (pages 6162- 6165)
7 February 2018	Dr Hon Elizabeth QUAT raised a written question on "Support for start-up enterprises"	Hansard (pages 6724- 6731)
3 April 2018	FA Panel was briefed by the Administration on the development of Fintech in Hong Kong	Administration's paper (LC Paper No. CB(1)724/17-18(03)) Minutes (LC Paper No. CB(1)1178/17-18)
30 October 2018	FA Panel was briefed by the Administration on the policy initiatives of the Financial Services and the Treasury Bureau featured in the Chief Executive's 2018 Policy Address	Administration's paper (LC Paper No. CB(1)12/18-19(01)) Minutes (LC Paper No. CB(1)306/18-19)

Date/Period	Event	Paper/Minutes of meeting
5 November 2018	The Hong Kong Monetary Authority ("HKMA") briefed FA Panel on its work	HKMA's paper (LC Paper No. CB(1)101/18-19(02)) Minutes (LC Paper No. CB(1)552/18-19)
21 November 2018	Hon Charles Peter MOK raised a written question on "Plugging loopholes in electronic payment services"	Hansard (pages 2832- 2835)
30 January 2019	LegCo passed the motion on "Promoting the development of a financial technology hub to reinforce Hong Kong's position as an international financial centre" moved by Hon CHAN Chun-ying	Hansard <u>1</u> and <u>2</u> (pages 6289- 6364) Wording of the motion passed Progress report
1 April 2019	FA Panel was briefed by the Administration on the development of Fintech in Hong Kong	Administration's paper (LC Paper No. CB(1)760/18-19(04)) Minutes (LC Paper No. CB(1)1212/18-19)
3 April 2019	Hon Dennis KWOK raised a written question on "Regulation of financial technology applications"	Hansard (pages 8401- 8405)
3 April 2019	Hon WU Chi-Wai raised a written question on "Regulation of virtual asset investment activities"	Hansard (pages 8416- 8420)

Date/Period	Event	Paper/Minutes of meeting
6 May 2019	HKMA briefed FA Panel on its work	HKMA's paper (LC Paper No. CB(1)954/18-19(03)) Minutes (LC Paper No. CB(1)1315/18-19)
4 November 2019	FA Panel was briefed by the Administration on the policy initiatives of the Financial Services and the Treasury Bureau featured in the Chief Executive's 2019 Policy Address	Administration's paper (LC Paper No. CB(1)53/19-20(02)) Minutes (LC Paper No. CB(1)280/19-20)
29 April 2020	Hon CHAN Chun-ying raised a written question on "Virtual banks"	Hansard (floor) (pages 29- 30)