For discussion
on 8 July 2016

FCR(2016-17)67

ITEM FOR FINANCE COMMITTEE

INNOVATION AND TECHNOLOGY FUND
HEAD 111 – INNOVATION AND TECHNOLOGY
New Subhead "Innovation and Technology Venture Fund Corporation"

HEAD 184 – TRANSFERS TO FUNDS
Subhead 992 "Payment to the Innovation and Technology Fund"

Members are invited to approve –

(a) the creation of a new subhead with a commitment of $2 billion under the Innovation and Technology Fund for financing the proposed Innovation and Technology Venture Fund; and

(b) to give effect to (a) above, a supplementary provision of $2 billion under Head 184 Subhead 992 Payment to the Innovation and Technology Fund, to be offset by deletion of the same amount under Head 106 Miscellaneous Services Subhead 789 Additional Commitments.

PROBLEM

Innovation and technology (I&T) start-ups in Hong Kong are generally encountering difficulties in obtaining sufficient private investment in the growth stage. We need to encourage more private organisations, venture capital (VC) funds and angel investors to invest in I&T in order to create a vibrant start-up ecosystem.

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PROPOSAL

2. The Commissioner for Innovation and Technology, with the support of the Secretary for Innovation and Technology, proposes to inject $2 billion into the Innovation and Technology Fund (ITF) for financing the proposed Innovation and Technology Venture Fund (ITVF).

JUSTIFICATION

Funding Gaps for Technology Start-ups

3. In 2013, the gross expenditure on research and development (GERD) in Hong Kong was $15.6 billion. The total expenditure on research and development (R&D) in the private sector was $7 billion or 45% of GERD, with the public sector taking up the remaining 55%. This contrasts with the observed international norm of about 40:60 whereby the private sector makes the majority contribution to R&D expenditure. Inadequate private sector investment in technology is a major challenge for I&T development in Hong Kong.

4. I&T start-ups normally need to go through many stages of growth and development in their initial years, and they require increasing level of investment as they grow. The various stages of investment are typically known as pre-seed, seed, pre-Series A, Series A, B, C, etc[1]. The investment size in each funding round would vary by industry and country, and also change with market conditions. Most investors in start-ups see an eventual Initial Public Offering or acquisition by other companies or subsequent funding rounds as the exit avenue.

5. In Hong Kong, there is no lack of funding support for I&T start-ups at the pre-seed to seed stages. For example, under the Technology Start-up Support Scheme for Universities (TSSSU) of the ITF, each start-up can be funded for not more than three years with a maximum annual funding of $1.2 million. The funding can serve as seed money and be used for setting up and operating I&T start-ups, carrying out R&D as well as promotion and marketing. The Cyberport Creative Micro Fund provides funding of $100,000 each for companies to develop innovative information and communications technology-related prototypes. Various university funding schemes also provide seed-stage funding to staff/students to commercialise research results through setting up I&T start-ups.

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[1] Pre-seed to seed funding broadly ranges from $100,000 to $800,000, and is mainly for developing initial business proposals. Pre-Series A funding ranges from $800,000 up to about $8 million. Series A funding is in the range of $8 million to $40 million, while Series B funding is $40 million to $80 million. The amount of investment in the subsequent funding rounds would generally increase further.

6. For pre-Series A funding, the Hong Kong Science and Technology Parks Corporation (HKSTPC) has set up a $50 million Corporate Venture Fund to focus on early-stage investment for high-potential technology start-ups which are tenants or incubatees in the Science Park. HKSTPC would co-invest up to $8 million in each company on a matching basis with private funds. Cyberport also plans to allocate $200 million to set up a Cyberport Macro Fund to invest in its information and communications technology start-ups to assist them attract more investment funding. This fund is expected to be rolled out in the second half of 2016. The Enterprise Support Scheme (ESS) under the ITF is also providing funding to I&T enterprises directly. With the ESS, the Government is matching public funding with private investment in R&D by I&T enterprises on a project basis up to a ceiling of $10 million. A summary of these funding schemes
Encl. 1 are set out at Enclosure 1.

7. In the private sector, there are a number of private or family endowments that fund early stage ventures. They are collectively referred to as ‘angels’. While the number of angels is growing, most of them only provide seed to pre-Series A funding and many do not provide full-range support in terms of networking, business operation and marketing to the start-ups. As regards venture funds, while Hong Kong does have venture capitalists, most of them cover the entire Mainland or Asian market for investment opportunities. Banks and financial institutions in Hong Kong generally prefer collateral lending rather than financing I&T start-ups.

8. Taking into account the above funding landscape, funding sources available to I&T start-ups in Hong Kong, particularly those in Series A to B stages, are relatively inadequate.

Blossoming Start-up Scene in Hong Kong

9. Hong Kong is ranked the top five fastest growing start-up ecosystems and one of the world’s top 25 start-up hubs, according to the Global Start-up Ecosystem Ranking 2015 study by a San Francisco based research firm Compass. This study reconciles with the findings of Invest Hong Kong’s survey on Hong Kong’s start-up ecosystem completed in August 2015. In 2015, Hong Kong saw a significant increase in the number of start-ups (+46%), staff (+56%) and workstations (+60%) from a year ago. As at August 2015, there were some 1 600 start-ups, involving more than 3 700 staff and 4 500 workstations, operating

in 24 co-working spaces and six incubators/accelerators surveyed[2]. Over half of these start-ups are in the I&T sector. According to the Compass study, while Hong Kong is still lagging behind in access to VC, the growth in exits is improving and there are signs that traditionally conservative investors are showing more interest in Hong Kong start-ups. It is opportune for the Government to introduce corresponding measures to catalyse equity investments by venture capitalists in our I&T start-ups.

Establishment of ITVF

10. In light of the above, the 2016 Policy Address announced that the Government would set aside $2 billion to set up an ITVF to encourage investment from VC funds in local I&T start-ups. The key considerations, institutional arrangements and management framework[3] for the proposed ITVF are set out in paragraphs 11 to 14 below.

Key Considerations

11. The main purpose of the ITVF is not to generate monetary returns for the Government but to stimulate private investments in local I&T start-ups and to increase deal flow. The key considerations are as follows –

(a) **Risk control by casting a wider net**

Risk exposure of the Government can be controlled by partnering with more high quality VC funds instead of engaging only one or two fund houses. To ensure that the partner VC funds will exercise prudence, they should be required to contribute a larger share of investment. We aim to achieve an overall matching investment ratio of Government fund to VC funds of approximately 1:2;

(b) **Pre-determined investment horizon and maximum commitmen**t

To attract private sector investment and create a critical mass of deal flow of investment in technology start-ups, it is necessary to have a pre-determined investment horizon and maximum funding commitment for matching with each VC fund by the Government;

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2 The Invest Hong Kong survey included both public and privately operated incubators/accelerators and co-working spaces. However, these figures do not reflect the full picture as there were incubators/accelerators outside the survey or not responding to the survey.

3 We have made reference to the experience of our Applied Research Fund (ARF) and some Government's co-investment schemes in overseas economies such as Israel and Singapore in devising the framework arrangement for the proposed Innovation and Technology Venture Fund.

(c) **Stronger incentives for VC funds**

Upside incentives in the form of carried interest and the option to purchase the Government's shares at a pre-agreed price should be provided to encourage participation of professional VC firms as co-investors;

(d) **Flexibility to adjust the scheme and partner with fund managers**

We consider it desirable to allow flexibility in partnering with VCs, rather than being locked with individual VCs for a long duration. We also consider it necessary for the Government to retain the flexibility to refuse investing in businesses that are in conflict with Government policies (e.g. businesses that may be illegal in Hong Kong) without affecting the operations and original investment strategy of the partner VC funds; and

(e) **Minimal bureaucracy**

The Government should leverage on the business acumen of the VC funds when making investment decisions. Proposed investment deals must be processed expeditiously, with minimal internal process and procedures.

Institutional Arrangements

12. The Government would incorporate a limited company, namely Innovation and Technology Venture Fund Corporation (ITVFC), under the Companies Ordinance to facilitate control and administration of the ITVF. This company will serve as a special-purpose vehicle (SPV), i.e. a vehicle to carry out disbursement of co-investment fund, holding of equity stakes in the investee companies, receipt of dividends from the investee companies, and receipt of any sale proceeds following the sale of such equity stakes. A dedicated team will be set up in the Innovation and Technology Commission (ITC) to serve as the Secretariat of the SPV to launch the ITVF. An Advisory Panel comprising veterans in the business and investment sectors, professionals and academics will be appointed to provide independent advice on the selection of partner VC funds and operations of the ITVF at the strategic policy level. However, this Advisory Panel will not make any investment decisions on individual deals.

13. The Government will invite applications for cooperation from VC funds, which would be evaluated by the Advisory Panel based on the background and experience of the investment team, investment track record in I&T enterprises,

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business network and value-added services that can be provided, etc. The fund managers of the selected partner VC funds would be responsible for identifying and conducting commercial and legal due diligence on the potential investee companies. The fund managers, in addition to looking after the investment from a business perspective, should also play a role in assisting the investees to grow and expand their business. The Government will have the right of first refusal of co-investment in respect of any proposed investment by the VC fund. The Government will be a passive investor, making direct investment in the start-ups concurrently with the VC fund upon invitation of the latter. We however envisage that we will not make an investment under the circumstances mentioned in paragraph 14(e). The proposed institutional arrangements are illustrated at
Encl. 2 Enclosure 2.

Framework for Management of Investments

14. The Government would sign with the partner VC funds a master agreement (MA), which sets out the details of cooperation as well as the rights and obligations of each party. We plan to draw up the MA based on the following broad terms –

(a) Eligibility of VC funds – an I&T VC fund with investment coverage including Hong Kong[4] and a minimum uncommitted capital balance of $120 million[5]. Eligible VC funds may apply to join the scheme within two years;

(b) Eligibility of investee companies – Hong Kong I&T start-ups with adequate presence in Hong Kong. The detailed criteria will be determined in due course and set out in the MA;

(c) Active investment period and maximum aggregate amount of matching investments – VC funds shall invite the Government to make co-investments in eligible deals within five years after being selected. For each VC fund, the maximum aggregate amount of matching investments from the Government shall be capped at $400 million to avoid over-concentration of risks;

(d) Maximum investment quantum by the Government in each investment deal – not more than 40% of the total amount of investment sought by the investee company in such deal or $30 million, whichever is lower. To limit the maximum loss from investment in one single start-up company, the Government's aggregate amount of investment in each start-up would be capped at $50 million;

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4 For example, a Greater China Fund or Asian Fund.

5 Both new and existing venture capital (VC) funds can apply for the scheme.

(e) The Government would decline a proposed investment from a VC fund under certain conditions which include but are not limited to the following –

(i) the proposed investee company is unable to meet the criteria of a Hong Kong I&T start-up with adequate presence in Hong Kong;

(ii) the business of the proposed investee company is in conflict with existing or planned government policies or legislation;

(iii) there is cause to believe that the proposed investee company may be involved in activities that may bring the Government into disrepute; or

(iv) the proposed investment is in violation of other terms as agreed with the partner VC funds;

(f) Upside incentives[6] to VC partners – competitive carried interest[7] plus the option to purchase the Government's shares within five years at a cost of the principal amount plus a suitable premium. The detailed terms of these incentives would be determined in due course; and

(g) Terms of investment and exit – the Government will co-invest in individual start-up on the same investment and exit terms as the VC fund.

15. It should be noted that further fine-tuning would be required to accommodate operational needs and to cater for the evolving practices of the VC industry. It is difficult to assess the duration of the ITVF at this stage as the utilisation of the fund balance will depend on the number of investment deals proposed by selected VC funds, the quantum of each deal, etc. We will consult the relevant Legislative Council (LegCo) Panel should there be key changes to the arrangements and management framework regarding the ITVF (such as adjustment of investment ceiling per deal and/or per start-up).

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6 These are performance-based incentives contingent on successful and profitable exits. Such profit-sharing arrangement is common in the agreements for VC funds in other places.

7 Carried interest is a share of the profits of an investment or investment fund that is paid to the VC in excess of the amount that the VC contributes to the investee company. In practical terms, it is a form of performance fee for the VC.

CONTROL AND REVIEW MECHANISM

16. We will put in place a proper control and review mechanism to monitor the performance of the ITVF. As pointed out in paragraph 12, an Advisory Panel will be appointed to advise on the selection of partner VC funds and operations of the ITVF at the strategic and policy level. We will devise detailed procedures and criteria to select VC funds through an open and fair selection mechanism. The partner VC funds will be required to sign with the Government an MA which sets out the rights and obligations of each party (see paragraph 14 above). The MA will include appropriate terms and conditions to safeguard Government's interest. The partner VCs should provide timely updates on portfolio companies and submit annual financial statements to the Government. The Government will administer the ITVF in accordance with the MA and prepare annual consolidated financial statements. Regular management reports on the investment performance of the fund would be submitted to the Advisory Panel on ITVF. We will also appoint an external auditor to carry out the annual audits of the financial statements of the fund. We will review the operation of the ITVF and report to the relevant LegCo Panel as appropriate.

EXPECTED BENEFITS

17. The proposed ITVF would help fill the funding gap encountered by local I&T start-ups at the growth stage. We initially expect to partner with four to five VC funds and tentatively co-invest in around 40 to 50 technology start-ups during the active investment period with these partners. However, the actual number of partner VC funds and pace of investment would invariably be affected by market conditions and investment sentiments, which are volatile and unpredictable. In the long run, more technology companies would likely be set up in Hong Kong, thereby creating more high value-added jobs for our youngsters. More start-ups will also help attract VC funds from abroad and build a vibrant and self-sustaining VC market. From a broader perspective, the proposal could also help foster a business environment that encourages application of I&T, thereby benefiting the development of Hong Kong as a knowledge-based economy.

FINANCIAL IMPLICATIONS

18. We propose to inject $2 billion into the ITF for financing the ITVF. The ITVF is not a vehicle for generating financial returns but an integral part of the infrastructure for I&T development. Any returns, including dividends and realised profits from exits of the investments concerned, would be deposited into the dedicated bank account of the ITVFC for the purpose of further investments under

the scheme. The actual annual funding allocation and the operating tenure of the ITVF will depend on the actual number of co-investment offers, amounts of investments approved and investment returns, subject to periodic review by ITC taking into account prevailing market conditions and industry needs.

19. An additional recurrent expenditure of $9.1 million per year will be required to meet the staff cost of the Secretariat, as well as legal and other administrative and promotion expenses. We have included the relevant provision in the 2016-17 Estimates of the ITC for the purpose.

20. Subject to Members' approval, we will create a new and dedicated subhead under ITF Head 111 Innovation and Technology to finance the ITVF. Technically, this involves our seeking a supplementary provision of $2 billion for Head 184 Transfer to Funds of the General Revenue Account (GRA) for transfer to the ITF and an offsetting cut of the same amount from GRA Head 106 Miscellaneous Services Subhead 789 Additional Commitments.

IMPLEMENTATION PLAN

21. Subject to Members' approval of the proposal, we plan to launch the ITVF in the first half of 2017.

PUBLIC CONSULTATION

22. We briefed the LegCo Panel on Commerce and Industry (C&I Panel) on 21 June 2016. Members generally supported the proposal and their views will be taken into account in finalising the implementation details.

BACKGROUND

23. One of the Government's principal funding vehicles for promoting I&T is the ITF. It was established in 1999 with $5 billion as a statutory fund to finance projects that contribute to I&T upgrading and development in manufacturing and services industries in Hong Kong with a view to enhancing Hong Kong's economic development. The Finance Committee approved a further injection of $5 billion in 2015. It also approved another injection of $2 billion in June 2016 as endowment capital to generate investment income to finance

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mid-stream research projects by universities funded by the University Grants Committee. Apart from TSSSU, ESS and the University-Industry Collaboration Programme which provide funding to I&T enterprises directly, other schemes under the ITF mainly fund R&D projects by R&D Centres and/or universities. There is no existing government funding scheme[8] that provides Series A funding to I&T start-ups.

24. The Innovation and Technology Bureau announced on 20 November 2015 that one of its work priorities was to "encourage more private organisations, VC funds and angel investors to invest in innovation and technology". The Chief Executive subsequently announced in the 2016 Policy Address that the Government would set aside $2 billion to set up an ITVF to encourage investment from VC funds in local I&T start-ups.

Innovation and Technology Bureau
Innovation and Technology Commission
June 2016

[8] There is an ARF (a government venture capital fund set up in 1993) which provides funding support to technology ventures and research and development projects with commercial potential. The Government, after consulting the C&I Panel in January 2015, decided to wind down the operation of ARF. Accordingly, ARF is no longer making any new investment.

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Funding Schemes that Directly Benefit Innovation and Technology Enterprises

Provider	Scheme	Target beneficiaries	Funding Limits	Remarks
Innovation and Technology Fund* managed by the Innovation and Technology Commission	Technology Start-up Support Scheme for Universities	University staff/students	Up to HK$1.2 million per year for each start-up for at most three years	
	Enterprise Support Scheme	Innovation and technology enterprises undertaking in-house R&D project	Up to HK$10 million per project	Dollar-for-dollar matching fund for specific R&D project only (not for general business operations)
	University- Industry Collaboration Programme	I&T enterprises undertaking R&D project in collaboration with local universities	Up to HK$30 million per project	Dollar-for-dollar matching fund for specific collaborative R&D project with local universities (not for general business operations)
Cyberport	Cyberport Creative Micro Fund	Start-ups or business concept in information and communications technology-related areas	HK$100,000 for each company	
	Cyberport Macro Fund	ICT start-ups of Cyberport	To be determined	Expected to be rolled out in the second half of 2016

Provider	Scheme	Target beneficiaries	Funding Limits	Remarks
Hong Kong Science and Technology Parks Corporation	Corporate Venture Fund	Technology start-ups in the Science Park or incubatees/graduates of its incubation programmes	Up to HK$8 million for each company	Co-investment with private investors on a matching basis
Local Universities	Universities' own seed funding	University staff/students that intend to form start-ups to commercialise their research outcome	Generally less than HK$1 million	Maximum funding and scope of use subject to the requirements of individual schemes

* There are other Schemes under the ITF. However, the recipients are mostly universities, R&D Centres and industry support bodies.

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Proposed Institutional Arrangements