

ITEM FOR FINANCE COMMITTEE

HEAD 190 – UNIVERSITY GRANTS COMMITTEE

Subhead 700 General non-recurrent

New Item “Injection into the Research Endowment Fund”

New Item “Research Matching Grant Scheme”

Members are invited to approve –

- (a) a new commitment of \$20 billion for injection into the Research Endowment Fund to substantially increase and provide sustainable research funding to the higher education sector with a view to fostering the scientific research ecosystem in Hong Kong;
- (b) rationalising the use of investment income of different pots of endowment of the Research Endowment Fund for more effective deployment of funding; and
- (c) a new commitment of \$3 billion for launching the Research Matching Grant Scheme for three years, allowing local degree-awarding institutions (including self-financing institutions) to apply for matching grants from the Government for research-related purposes after securing research and development expenditure and donations from the private sector and philanthropists.

/PROBLEM

PROBLEM

We need to enhance the research capacity of the higher education sector and further the research excellence of Hong Kong with augmented and more effective financial support for the sector's research work.

PROPOSAL

2. The Secretary for Education proposes to –
 - (a) create a new commitment of \$20 billion for injection into the Research Endowment Fund (REF), which will be used to generate investment income for providing sustainable research funding to the higher education sector;
 - (b) rationalise the use of investment income from different pots of endowment of the REF for more effective deployment of funding;
 - (c) create a new commitment of \$3 billion for launching the Research Matching Grant Scheme (Research MGS) for three years, allowing local degree-awarding institutions (including self-financing institutions) to apply for matching grants from the Government for research-related purposes after securing research and development (R&D) expenditure and donations from the private sector and philanthropists.

JUSTIFICATION

Review on Research Policy and Funding

3. The Chief Executive announced in the Policy Address in October 2017 that the University Grants Committee (UGC) had been invited to set up a task force to conduct a holistic review of the research support strategy and the level and allocation mechanism of research funding for the higher education sector in Hong Kong. The Task Force on Review of Research Policy and Funding (Task Force), led by Professor Tsui Lap-chee, was soon set up under the aegis of UGC to take forward the review.

4. Having studied closely the existing research ecosystem in Hong Kong and drawing reference to the experience of other regions, the Task Force published its review findings and preliminary recommendations for consultation in June 2018. The recommendations received overwhelming support from the research community. The Task Force submitted the Review Report to the Government in September 2018.

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5. On promotion of research excellence, the Task Force recommended doubling the overall competitive research funding, including making substantial injection into the REF to sustain research funding, and rationalising the use of different pots of endowment of the REF for more effective deployment of funding. At the same time, the Task Force proposed incentivising cross-institutional/cross-disciplinary collaboration with sustainable support for research incentives of strategic priorities.

6. In promoting private sector support for research, the Task Force recommended setting up a Research MGS for local degree-awarding institutions (including self-financing institutions). Universities/institutions can apply for matching grants from the Government for research purpose after securing R&D expenditure and donations from the private sector and philanthropists. It allows institutions to tap more funding sources for large-scale research and helps promote a philanthropic culture in the community.

7. Considering that the recommendations put forward by the Task Force will help improve the research policy and further the research excellence of Hong Kong, the Government has accepted the recommendations in full. On research funding, the Government agrees that a substantial injection into the REF, as proposed by the Task Force, will help provide a more stable source of research funding, attract and retain talent as well as foster the scientific research ecosystem in Hong Kong. The Government also agrees to launch the Research MGS for local degree-awarding institutions to diversify the sources of research funding of universities/institutions.

Injection into the REF

8. The Chief Executive proposed in her 2018 Policy Address to inject \$20 billion into the REF. Investment income generated from the injection will serve the following purposes –

- (a) sustaining the level of research funding;
- (b) providing funding for the Research Impact Fund (RIF) launched by the Research Grants Council (RGC) to render continued funding support for impactful research; and
- (c) providing additional funding for RGC's collaborative research funding schemes to encourage cross-institutional/cross-disciplinary collaborations.

/Sustaining

Sustaining the level of funding for research

9. The REF is currently placed with the Exchange Fund administered by the Hong Kong Monetary Authority for investment. However, the annual investment return rate of the REF has declined from 6.8% in 2009 to 2.8% in 2017, which is lower than the level expected when the REF was established or when injections were made. The REF reported a deficit of \$336 million and \$79 million in 2016/17¹ and 2017/18 respectively. To provide adequate funding for schemes funded by the REF and meet the increasing demand for competitive research funding², the Government has accepted the Task Force's proposal to allocate new resources as a stable source of funding, which will also help sustain the level of research funding in the long run.

Rendering continued funding support for impactful research

10. To encourage local universities to conduct more impactful and translational research projects to meet Hong Kong's needs, and engage in more collaborative efforts with stakeholders outside academia, the RGC launched a competitive funding scheme called RIF on a pilot basis in 2018. Researchers are required to submit a "Pathways to Impact" statement to elaborate on the potential impact of the research project on society. The scheme was well received by the higher education sector. In 2018/19, a total of 164 applications were received with the funding request amounting to some \$1 billion in total. The UGC has hence increased the provision for RIF to \$200 million. After careful and thorough assessment, the RGC decided to fund 30 projects with \$193 million. The awarded projects covered a wide range of subject areas, such as R&D of drugs, innovative reclamation and building methods, as well as security and applications of the Internet of Things. In 2019/20, the number of applications received increased to 182, with the total funding request rising to about \$1.2 billion. Injection into the REF can regularise the funding for the RIF so as to promote more high-quality and impactful research.

Incentivising cross-institutional/cross-disciplinary collaboration

11. Cross-institutional/cross-disciplinary research plays an important role in the development of successful innovative projects. The RGC currently supports collaborative academic research through three collaborative research /schemes,

¹ Unless otherwise specified, the "year" in this paper refers to academic year, which runs from 1 July of a year to 30 June of the following year.

² Taking the General Research Fund as an example of competitive grants, the total amount of funding applied in each exercise has been on a rising trend in recent years. In 2015/16, the amount of total funding applied was \$2,820 million. It was increased by 4.7% to \$2,950 million in 2016/17, and was further increased by 3.1% to \$3,040 million in 2017/18.

schemes, namely the Area of Excellence Scheme, the Collaborative Research Fund Scheme (CRF) and the Theme-based Research Scheme (TRS). A total of approximately \$570 million funding is granted under these schemes per annum. The CRF has been well received by university researchers. Over the past five years, both the number of applications received under the scheme and the sum involved have continued to increase. In 2014/15, 155 applications were received involving a total sum of \$1.04 billion. In 2018/19, there were more than 220 applications and the sum involved has risen to over \$1.61 billion. The funding approved under the scheme is maintained at \$110 million in each of the past five years.

12. To encourage more joint collaborative research among institutions with a view to enhancing their respective research capacity and securing a critical research mass, the RGC will, in response to the recommendation of the Task Force, review these three existing funding schemes and consider combining them to form a new scheme to cater for existing research needs, and support proposals from research institutes set up by universities and incentivise universities to conduct more collaborative research. Injection into the REF will help substantially enhance the aggregate budget for cross-institutional/cross-disciplinary collaborative research and also the attractiveness of collaborative research.

Rationalisation of Use of Investment Income of Different Pots of Endowment of the REF

13. The endowment of the REF is currently divided into four pots of money, which are used to generate investment income to fund designated purposes as approved by the Finance Committee (FC). In addition to the proposed injection to the REF, the Task Force also proposed to rationalise the use of different pots of endowment of the REF. Currently, the utilisation of investment income generated from each pot of endowment of the REF varies. Details are set out at Enclosure 1. Taking 2017/18 as an example, while the pot for Earmarked Research Grants (ERG) had a deficit and the annual budget for TRS was also trimmed, the other pots were in surplus. At present, the investment income from different pots of endowment of the REF can only be used for purposes as previously approved by the FC. Redeploying a pot's investment income for other pots' designated purposes is not allowed, even when there is a surplus after its original designated purpose has been fully fulfilled. To make the best use of resources, it is proposed that the restriction be lifted so that the RGC may, after having fully fulfilled the original designated purposes of certain pots of endowment (including providing sufficient research funds for self-financing institutions, the TRS and fully covering the tuition fees of all local students of UGC-funded research postgraduate programmes), flexibly redeploy

Encl. 1

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any remaining investment incomes for other pots' designated purposes. The proposed free redeployment of investment income among the pots of endowment under the REF will facilitate the achievement of greater efficiency and enhanced effectiveness in channeling resources strategically to meet the higher education sector's research requirement.

Launching the Research MGS

14. The share of private sector only accounts for 45% of the total expenditure in local R&D over the years. To incentivise the private sector to strengthen financial support for R&D, and diversify the funding sources for research activities, the Chief Executive announced in the 2018 Policy Address that the Government has accepted the recommendation of the Task Force and proposed to launch a Research MGS. It is proposed that a total of \$3 billion will be provided in three years for application by local degree-awarding institutions (including self-financing institutions). R&D expenditure and donations from the private sector and philanthropists secured by individual institutions will be matched by the Government for research-related purposes and can be specifically allocated to any individual institution/project of any discipline. Subject to the funding approval from the Legislative Council (LegCo) in this legislative session, the RGC can launch the Research MGS in 2019/20 at the earliest. Details of the Research MGS and the matching mechanism are set out at Enclosure 2.

Encl. 2

15. This is the first government matching grant dedicated to research work in the higher education sector. The Research MGS not only allows the higher education sector to tap more sources of research funding, but also encourages collaboration between the industries and the higher education sector in R&D, thereby strengthening the social impact of the research conducted by the higher education sector. The introduction of the Research MGS will not only help local degree-awarding institutions (including self-financing institutions) diversify their funding sources, but also incentivise private sector to invest more in R&D.

16. As it takes time for the community to expand its overall research capacity and cultivate a research culture, the Government will make timely decision on the way forward of the Research MGS taking into account its effectiveness and the grants of other research funding schemes of the Government in the next few years.

CONTROL AND MONITORING MECHANISM

17. The existing time-tested REF control and monitoring mechanism will continue to apply. Specifically, the Permanent Secretary for Education Incorporated will act as the trustee of the REF; and the UGC will advise the

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trustee on the policies and procedures governing the operation and development of the REF, and be responsible for managing the investment and accounting matters of the REF. The Education Bureau will also continue to table the annual audited accounts of REF before the LegCo.

18. To ensure the accountability and transparency of the operation of the Research MGS, the use of government matching grants and the donations matched under the Research MGS will be subject to audit assurance. The UGC Secretariat will coordinate all participating institutions' disclosure of donations and the intended use of both the private donations and the government matching grants received. Institutions should also disclose publicly in their annual accounts the amount of donations and grants received, as well as the total amount of expenditure from the donations and grants.

FINANCIAL IMPLICATIONS

19. The Government has earmarked \$20 billion in the 2019-20 draft Estimates for the one-off injection into the REF. On the assumption that the rate of return is in the range from 2.8% to 4.6% per annum³, the annual investment income to be generated from the proposed injection will be around \$560 million to \$920 million. As the newly injected endowment will take at least one year to generate investment income, it is expected that the RGC funding will be substantially increased in 2021/22 the earliest if funding approval for injection is obtained from LegCo within this legislative session. Rationalising the use of investment income of different pots of endowment of the REF will not incur additional funding requirement.

20. The Government has included the necessary provision in the 2019-20 draft Estimates to meet the cash flow required for launching the proposed Research MGS in the current year and will earmark sufficient provision in the Estimates of subsequent years to meet the cash flow requirements of the scheme. The proposal has no recurrent financial implications for the Government. For indicative purpose, the estimated cash flow requirement of the scheme is as follows –

Government financial year	(\$ million)
2019-20	1,125
2020-21	975
2021-22	425
2022-23	475
Total	3,000

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³ According to the 2019-20 Budget, the Hong Kong Monetary Authority projected that the medium-term rate of investment return will range from 2.8% to 4.6% per annum from 2020 to 2023.

The actual cash flow requirement of each year will depend on the pace of securing private donations by participating institutions.

PUBLIC CONSULTATION

21. The Task Force consulted the stakeholders on the findings and preliminary recommendations in mid-2018, and incorporated as appropriate the comments received into the final review report submitted to the Government in September 2018. After careful consideration, the Government has accepted the recommendations of the Task Force in full. Regarding the proposals at paragraph 2 above, we briefed the LegCo Panel on Education (Education Panel) on 2 November 2018 in relation to the 2018 Policy Address and consulted the Education Panel again specifically on these proposals on 1 March 2019. At the meeting on 1 March 2019, whilst some members raised concerns about the research resources allocated to different disciplines and whether universities attach equal importance to teaching and research and the Panel passed three motions on allocation of research resources and institutions' staff appointment system, the Education Panel supported the proposals as set out in paragraph 2 above to be submitted to the FC for consideration. Education Bureau (EDB) explained at the meeting that the Government and the UGC have all along supported the universities in attaching equal importance to teaching and research and in making appropriate resource allocations while the RGC provides equal support for all types of academic research and that the recommendations at paragraph 2 above will also benefit research in the humanities and social sciences. On 4 April 2019, EDB submitted supplementary information on the funding policy of the RGC and detailed written response to the motions passed to the Education Panel (LegCo CB(4)731/18-19(01)).

BACKGROUND

REF

22. With the FC's approval vide FCR(2008-09)55, the REF was established in February 2009 with an endowment of \$18 billion. From 2010/11 onwards, the investment income from at least \$14 billion out of the total of \$18 billion is used to replace the bulk of the recurrent subvention from the Government allocated to the RGC for distribution as ERG to the UGC-funded institutions, thus providing greater funding stability and certainty of funding to support universities' research projects. The investment income from up to \$4 billion of the REF is used to support theme-based research, thus allowing universities to work on research proposals on themes of a more long-term nature and strategically beneficial to the development of Hong Kong.

23. In 2012, the Government secured the approval of LegCo (vide FCR(2011-12)67) to inject \$5 billion into the REF. The investment income from \$3 billion of that injection is for funding research projects of local self-financing degree-awarding institutions on a competitive basis to enhance academic and research development. The investment income from the remaining \$2 billion replaces the recurrent provision of \$100 million to the RGC to provide stable research funding for the UGC-funded universities. In 2017/18, the Government secured the approval of LegCo for a further injection of \$3 billion into the REF (vide FCR(2017-18)50), starting from 2018/19, to generate investment income for providing tuition waiver for local students admitted to UGC-funded research postgraduate programmes. Since February 2009, the Government has injected a total of \$26 billion into the REF. The REF balance was \$29.4 billion as at 28 February 2019.

Education Bureau
May 2019

The utilisation of investment income generated from different pots of endowment of the Research Endowment Fund

Earmarked Research Grants (ERG)

The investment income from \$16 billion of the endowment of the Research Endowment Fund (REF) provides the source of funding for the ERG to support research projects and activities. The ERG is the major source of funding for academic research in the eight University Grants Committee (UGC)-funded universities, and is allocated on a competitive basis. Currently, about 80% of the ERG is mainly utilised for the budget of General Research Fund and Early Career Scheme, providing funding support for projects carried out by individual Principal Investigators. The remaining 20% is allocated to eight other funding schemes¹.

2. In the 2017/18 academic year, the ERG pot registered a deficit of \$165 million. In the 2018/19 academic year, it will continue to operate on a deficit budget² with an estimated deficit of \$102 million.

Theme-based Research Scheme (TRS)

3. The funding for the TRS, supported by the investment income from \$4 billion of the endowment of the REF, is intended for funding longer-term research that is strategically beneficial to the development of Hong Kong. With an annual expenditure of around \$200 million, the first five rounds of TRS exercises (i.e. from the 2011/12 to 2015/16 academic year) covered three research themes³. Upon the introduction of the fourth research theme “Advancing Emerging Research and Innovations Important to Hong Kong”, the expenditure

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¹ Namely the Collaborative Research Fund, the Humanities and Social Sciences Prestigious Fellowship Scheme, the Fullbright-Research Grants Council (RGC) Hong Kong Senior Research Scholar/Research Scholar Award Programmes, the National Natural Science Foundation of China /RGC Joint Research Scheme, The French National Research Agency/RGC Joint Research Scheme, the European Union - Hong Kong Research and Innovation Cooperation Co-funding Mechanism by the RGC, the Germany/Hong Kong Joint Research Scheme, the PROCORE-France/Hong Kong Joint Research Scheme, and conference grants for research postgraduate students.

² The yearly deficit is met by the ERG’s surplus accumulated over the years.

³ The TRS was launched in 2010, with the following three themes selected: “Promoting good health”; “Developing a sustainable environment”; and “Enhancing Hong Kong’s strategic position as a regional and international business centre”. Starting from the 2016/17 exercise (the sixth round), a new theme “Advancing emerging research and innovations important to Hong Kong” was introduced in addition to the existing three.

for the sixth TRS exercise (the 2016/17 academic year) was increased to \$230 million. Owing to a significant decline in the investment return of the REF in the previous two years, the RGC has decided to reduce the annual budget for the seventh (the 2017/18 academic year) and the eighth (the 2018/19 academic year) TRS exercises to \$180 million.

Research Projects of Local Self-financing Degree-awarding Institutions

4. Regarding the funding for supporting the academic and research development of the local self-financing degree sector on a competitive basis, it has been operating on the investment income from \$3 billion of the endowment of the REF. There are three funding schemes for the local self-financing degree sector, namely the Faculty Development Scheme, the Inter-Institutional Development Scheme and the Institutional Development Scheme (IDS). Starting from 2019/20 academic year, the IDS will branch out into two grants, namely the Research Infrastructure Grant (RIG) and the new Collaborative Research Grant. The RIG will adopt the existing mode of operation of the IDS.

5. In the 2019/20 academic year, the projected investment income of the endowment for supporting various funding schemes for the local self-financing degree sector is estimated at about \$130 million. Based on the experience in the 2018/19 academic year, an overall budget of \$90 million earmarked for various funding schemes for the self-financing degree sector should be sufficient to meet the funding requirement in the 2019/20 academic year.

Tuition Waiver for Local Research Postgraduate Students at UGC-funded universities

6. The REF had a further injection of \$3 billion in 2018. The investment income generated from this pot of endowment is used to provide non-means-tested tuition waiver for local research postgraduate students, with a view to incentivising local students to engage in research work in the higher education sector. The Tuition Waiver Scheme was launched in July 2018, and the investment income from the \$3 billion injection is expected to be sufficient to cover the funding requirement in the 2019/20 academic year⁴.

⁴ As it takes time to generate investment income from the \$3 billion endowment to fund the studentships scheme, as a one-off measure, the Education Bureau has deployed existing resources for the UGC to provide tuition waiver for local students enrolled in UGC-funded research postgraduate programmes in the 2018/19 academic year.

**Details of the Research Matching Grant Scheme
and the Matching Mechanism**

The proposed Research Matching Grant Scheme (Research MGS) is devised by making reference to the mode of operation of the Matching Grant Scheme (MGS), which was first introduced in 2003. Details of the Research MGS are as follows –

Timeframe

2. The Research MGS will cover a period of three years from 1 July 2019 to 30 June 2022.

Coverage

3. The private donations and matching grants under the Research MGS should only be used for the purposes of funding research in universities/institutions and meeting research-related expenses (excluding capital works projects), regardless of disciplines. The Research MGS covers the following eight University Grants Committee (UGC)-funded universities (including their self-financing/subsidiary post-secondary education establishments) and 12 local self-financing degree-awarding institutions¹ –

The eight UGC-funded universities (including their self-financing institutions/arms)

- (i) The University of Hong Kong
- (ii) The Chinese University of Hong Kong
- (iii) The Hong Kong University of Science and Technology
- (iv) City University of Hong Kong
- (v) Hong Kong Baptist University
- (vi) The Education University of Hong Kong

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¹ The Research Grants Council (RGC) may revise the list of institutions as appropriate (e.g. to cover any newly established degree-awarding institutions).

- (vii) The Hong Kong Polytechnic University
- (viii) Lingnan University

The 12 local self-financing degree-awarding institutions

- (ix) Gratia Christian College
- (x) Tung Wah College
- (xi) Caritas Institute of Higher Education
- (xii) Centennial College
- (xiii) The Hang Seng University of Hong Kong
- (xiv) The Open University of Hong Kong
- (xv) Technological and Higher Education Institute of Hong Kong
- (xvi) Hong Kong Nang Yan College of Higher Education
- (xvii) Hong Kong Shue Yan University
- (xviii) HKCT Institute of Higher Education
- (xix) Chu Hai College of Higher Education
- (xx) Yew Chung College of Early Childhood Education

Principle of Application

4. All private donations received by universities/institutions and contract research projects commissioned/research and development expenditure met by the private sector during the period covered by the Research MGS are eligible for matching.

5. To ensure fairness in the provision of matching grant, “double matching” or “double subsidisation” is not allowed. In other words, projects which have already obtained publicly-funded financial assistance (such as the Innovation and Technology Fund, and the Research Endowment Fund and the Research Impact Fund under the RGC), other publicly-funded grants, and donations which have already received public fund matching pursuant to other matching grant schemes (such as the MGS) are not eligible for matching under this Scheme.

/Matching

Matching Formula

6. Based on the MGS, the matching mechanism for the Research MGS is as follows –

- (a) To encourage all universities/institutions to apply for matching, a matching grant at a “floor” level (\$50 million) will be set aside for each university/institution as a guaranteed minimum over the three-year period of the Research MGS. A university/institution which has successfully secured private donations within that guaranteed minimum amount will be provided with a matching grant up to the “floor” level;
- (b) By the end of the three-year period, funding under the guaranteed minimum which has yet to be matched by the universities/institutions concerned will be opened up for allocation to other universities/institutions with matching grants above the “floor” on a *first-come-first-served* basis;
- (c) To prevent a single university with strong fund-raising ability from capturing a dominating share of the matching grant, an upper limit or a “ceiling” (\$500 million) will be applicable to the aggregate amount of government matching grants received by each university/institution;
- (d) The matching should be \$1 for \$1 of grant received by a university/institution up to the “floor” level (i.e. \$1 government grant for every \$1 of private donations secured by the university/institution). For matching grants beyond the “floor” level but below the “ceiling”, a \$1 for \$2 matching ratio applies (i.e. \$1 government grant for every \$2 of private donations secured). The universities/institutions will not receive matching grants from the Government beyond the “ceiling” level; and
- (e) Requests for government matching grants for over and above the “floor” level by universities/institutions will be considered on a *first-come-first-served* basis.

Disclosure and Audit

7. To ensure the accountability and transparency of the operation of the Research MGS –

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- (a) the UGC Secretariat will co-ordinate all participating universities'/institutions' disclosure of donations and the intended use of both the private donations and the matching grants received. Universities/institutions are also required to disclose in their annual accounts the amount of donations/matching grants received and the income generated from donations/grants; and the total amount of expenditure using the donations/grants broken down into broad category of purposes;
- (b) the use of donations and government matching grants received shall be subject to audit. Auditors are required to confirm to the UGC Secretariat that the universities/institutions concerned have met the conditions of the grants, reported the actual uses of the donations/grants, and the intended use of the unspent donations/grants as well as the date of use; and
- (c) the universities/institutions are required to ensure that the matching grants received are only used to meet research-related expenses (excluding capital works projects) and that the money is spent in a cost-effective manner.
