

For discussion
on 5 February 2021

Legislative Council Panel on Education

The financial structure of the Hong Kong Examinations and Assessment Authority and initial thoughts on the long-term funding options

Purpose

This paper briefs Members on the current financial structure of the Hong Kong Examinations and Assessment Authority (HKEAA) and the initial thoughts on the long-term funding options.

HKEAA's operation and financial position

2. The HKEAA is a statutory body established in 1977 under the Hong Kong Examinations and Assessment Authority Ordinance (Cap. 261). Its main statutory responsibility is to conduct the “specified examinations”, which currently refers to the Hong Kong Diploma of Secondary Education (HKDSE) Examination. It is, therefore, the HKEAA's primary duty to professionally administer the HKDSE Examination and to provide fair and just assessment of all candidates. It also runs a number of fee-charging examination and assessment services, including those for the Territory-wide System Assessment (TSA), Language Proficiency Assessment for Teachers (LPAT), and a range of international and professional examinations (IPEs).

3. The HKEAA operates on a self-financing basis, though in the past the Government has provided the HKEAA with non-recurrent grants for specific initiatives/projects to assist towards the cost of conducting public examinations. The HKEAA's income is mainly derived from the HKDSE examination fees and service fees paid by organisations that engage its services, followed by the sale of publications and provision of assessment services for organisations and individuals. In 2019/20, the income related to the HKDSE Examination made up about 46.8% of HKEAA's income, while those related to IPEs (25.0%) and other local examinations (including TSA and LPAT) (15.3%), as well as government funding, interest from deposit and sundry took up the bulk of the remaining share of the income.

4. As the HKEAA recorded a continuing deficit since 2014/15, to allow time for the Government and the HKEAA to study in detail how to alleviate the serious deficit problem and to work out a long-term solution, the Government sought the approval of the Finance Committee (FC) of the Legislative Council (LegCo) vide FCR (2018-19)⁷⁴ for the provision of a non-recurrent funding of \$360.8 million to the HKEAA for four cohorts from 1 September 2018 to 31 August 2022¹ to support its effective operation during the period, based on the related major assumptions as set out in **Annex A**.

5. After the ending of the 4-year government non-recurring funding, it is anticipated that the HKEAA will again record **an overall deficit of some \$98 million in 2022/23**, which is mainly attributable to the \$128 million deficit arising from the HKDSE Examination. The actual / projected financial position of the HKEAA is shown in **Annex B**.

Factors accounting for HKEAA's deficit

Operating deficit incurred by administering the HKDSE Examination

6. The major cause of the HKEAA's deficit is the administration of the HKDSE Examination. Due to the declining candidature and increasing costs since 2014, the operation of the HKDSE Examination has been incurring a deficit. Planning and conducting the HKDSE Examination are very labour intensive. Every step from question setting, arrangement of examination logistics, liaison with schools, handling of registrations to on-site administration of the examinations involves substantial manpower. Taking the 2019 HKDSE Examination as an example, about 580 examination centres for written examinations and 113 speaking examination centres, involving 10 414 invigilator sessions and 913 oral examiners² were needed. At the same time, 750 000 scripts, 4 665 markers and marking assistants were involved. In 2019/20, about 62% of the expenditure of the HKDSE Examination was related to manpower, covering both regular staff³

¹ The financial year of the HKEAA runs from 1 September of a year to 31 August of the following year.

² Due to the implementation of precautionary measures in the 2020 HKDSE Examination under the COVID-19 epidemic, some 3 800 examination centres (including school halls and classrooms) for written examinations involving 21 313 invigilator sessions were needed. Speaking examinations were cancelled. 705 000 scripts, 4 740 markers and marking assistants were involved in the examination.

³ The staff concerned are responsible for various labour intensive tasks related to the HKDSE, including registration of candidates, arrangement of examination centres, appointment of subject committee members and examination personnel such as centre supervisors and invigilators, distribution of question papers and collection of scripts, release of examination results, processing of examination irregularities, appeals and certification of results. The administration of the HKDSE also involves various back-end

cost and the expenses for engaging examination personnel (e.g. setters, moderators and proof-readers of examination questions), as well as premises cost⁴, etc. Over the years, the number of regular staff has been maintained at a similar level. Unless there is a substantial change in the examination flow and format, such expenditure cannot be reduced proportionately with the decrease in the number of candidates.

Declining candidature for HKDSE Examination

7. Before 2012/13, when the number of HKDSE candidates was at a higher level (around 80 000), the HKEAA recorded surplus in administering the HKDSE Examination. From 2013/14 onwards, the candidature recorded a continuing decrease from around 80 000 to less than 50 000 in 2021/22, resulting in an increasing annual deficit of \$25.6 million in 2013/14 to estimated deficit of \$139 million in 2021/22, as shown in **Annex C**.

8. Based on the available information, the continuing decline in candidature is likely to end in the 2023 HKDSE Examination. The share of the HKDSE Examination income within the total income of the HKEAA will further drop vis-à-vis the share of the IPE and other incomes until that year. Given that the HKDSE Examination's operating cost is largely invariable cost, the decline in candidature would not proportionately reduce the operating cost.

Premises cost

9. Premises-related cost is a substantial expenditure item of the HKEAA. The HKEAA is leasing three commercial premises for office and storage purposes. The rental cost for these premises, including management fee and rates, was about \$9.56 million in 2020. It has also developed operations in government premises in San Po Kong, Lai King, Tsuen Wan and Tai Hing⁵. The premises cost also includes management fees and rates, building maintenance fees, air-conditioning fees. It also needs to incur expenditures for hiring school premises to serve as onscreen marking centres⁶ for the HKDSE Examination and premises for administering IPEs.

examination system operations, including examination script scanning services, processing of examination data, compilation of examination statistics and production of statistical reports.

⁴ Apart from the premises costs relating to assessment centres, the HKEAA needs to pay for incidental expenses for using school halls and classrooms for serving as examination venues such as air-conditioning, electricity, and cleansing expenses.

⁵ The HKEAA has on-screen marking workstations, storage, scanning and IT server facilities in various locations. It also provides some computer-based workstations for international and professional examination operations.

⁶ There are seven on-campus onscreen marking assessment centres. Total cost of hiring these centres was

Increasing number of candidates with Special Educational Needs (SEN)

10. Over the years, the HKEAA has been working closely with schools, teachers, the Education Bureau (EDB) and relevant experts to foster a more inclusive examination environment for SEN candidates, covering candidates with specific learning difficulties, physical, visual, aural, oral or other disabilities⁷. The special examination arrangements (SEAs) for SEN candidates require additional arrangements including special centres⁸, special question papers, special services, ancillary aids for candidates with visual and aural disabilities, special invigilation, etc. It is observed that the number of candidates with SEN has doubled from 2011/12 to 2019/20, resulting in a corresponding increase in expenses on SEAs. The cause for an increasing number of SEN candidates is likely the increasing awareness of the characteristics of those candidates and hence their early identification. Currently, the examination fee for candidates with SEN is set as the same level as other DSE candidates, and the cost arising from SEA is fully borne by the HKEAA without additional charge to SEN candidates. Neither is it fair for such specific SEA cost to be shared out by other candidates via increase in HKDSE examination fee. It is estimated that the SEA-related cost would further increase in the years to come, in tandem with an increasing number of SEN candidates. The actual / projected number of candidates with SEN and SEA-related cost is set out at **Annex D**.

Adjustment of HKDSE Examination fees

11. The operation of the HKDSE involves substantial operating cost. The examination is in general charged on a “user pays” principle. As at 2019/20, the HKDSE Examination fees covered about 53% of the operating cost. The per head cost of a candidate taking six subjects (four core subjects Chinese, English, Mathematics, Liberal Studies, and two electives) under the HKDSE is \$5,957, while the average examination fee paid by a candidate is \$3,132.

about \$3.26 million in 2019/20.

⁷ Applications for special examination arrangements (SEAs) are considered by the Committee on Special Needs Candidates and the Task Group on SEAs for Candidates with Specific Learning Disabilities (SLD) in accordance with the guidelines laid down by the Public Examinations Board. Apart from a valid diagnostic report, the candidates concerned should submit the rationale and recommendation for extra time allowance jointly made by the school and a relevant expert.

⁸ In the 2020 HKDSE, there were 147 home-centres for own school candidates with SEN, while 114 schools served as home cum district centres to accommodate their own and other candidates who required similar arrangements for written examinations in the same district. In addition, there were 14 special centres to serve other SEN candidates.

12. Over the years, the HKEAA has been mindful of the candidates' affordability of the examination fee. Every year, the HKEAA, when considering the need for fee adjustment, would take into account factors such as the HKEAA's overall financial position, costs and resources required, inflation rate, local economic situation and affordability of families in general. Since the launch of the HKDSE Examination, the HKEAA had imposed a freeze of the examination fees in the 2013/14, 2014/15 and 2020/21 for different reasons. The fee adjustment rates in previous years are set out at **Annex E**. While the freeze of the examination fees may help alleviate the financial burden of families, the HKEAA would have to absorb the increase in cost arising from inflation.

13. As shown in Annex E, the adjustment of HKDSE Examination fee in the period of 2012/13 to 2020/21 led to a cumulative increase of 24%, whereas the median household income of economically active domestic household (household size of three) for 2012 to 2019 had increased by 45.65% (from \$23,000 to \$33,500). The information reflects that the HKEAA has been very cautious and conservative in handling the adjustment of the examination fees and has absorbed substantial costs for the candidates.

Income contribution from IPEs

14. In the past five financial years, the HKEAA was able to generate income by undertaking entrusted IPEs in Hong Kong (such as the Associated Board of the Royal Schools of Music examinations (ABRSM), Scholastic Aptitude Test (SAT), General Certificate of Secondary Education examinations and Australian Teachers of Dancing Exams) and other assessment services, to support the operation of the HKEAA. From Annex B, surpluses from other examinations and assessment services in 2015/16 to 2019/20 range from \$37.3 to \$67.2 million, or around \$42.6 million on average, after setting aside funding for capacity building and development. The sustained growth in the IPE business and related income is important to help alleviate the overall deficit of the HKEAA. In recent years, there has been keen competition from other service providers of IPE services. In order to successfully bid for IPE contracts, the HKEAA needs to offer competitive service charges and upgrade its infrastructures and technologies. To cope with the challenges, the HKEAA would work harder to find new IPE opportunities to ensure that the income from IPEs could help offset the declining income from the HKDSE Examination, and to implement cost-saving measures to mitigate the deficit from the administration of the HKDSE Examination.

15. The COVID-19 epidemic has adversely affected the HKEAA's

income from IPEs. For example, since 2020, no ABRSM practical examinations were held due to the 14-day quarantine requirement and no examiners could come to Hong Kong for the practical examinations. The 14-day quarantine requirement is also limiting Mainlander students' entry to Hong Kong to take IPEs such as SAT. In addition, due to the relevant examination boards' social distancing requirements, more examination personnel will be needed to serve at additional test centres. The COVID-19 situation is fluid and its longer-term impact remains uncertain.

Initial thoughts on the long-term funding proposals

16. A Task Force comprising representatives from the EDB and the HKEAA was established in October 2019 to review in detail the HKEAA's operations, examine the necessary support from the Government and propose long-term sustainable funding proposals. During the course of the review, the Task Force had some initial thoughts that may minimise the deficit and help HKEAA become more financially sustainable in the long-term. Given the volatile worldwide economic situation brought about by the COVID-19, we recommend taking a cautious yet progressive approach in handling the long-term financial situation of the HKEAA. With different lead time, the proposals below could be implemented by stages and with different combinations. It is estimated that the financial impact of the proposals would only be visible beyond 2022/23.

A. HKEAA's cost containment and income generation proposals

(a) Cost-reduction pledge of the HKEAA

17. The HKEAA would adopt a cumulative savings target to achieve savings within a targeted period of time. This would motivate the HKEAA to adopt cost reduction measures to achieve specific targets of cumulative savings in operating / recurrent expenditure progressively over several financial years without affecting its services. By reviewing its manpower, workflow and resources in other areas and adopting a 0-1-1 scale from 2021/22 to 2023/24 for three consecutive financial years based on the spending of the year, the HKEAA is projected to be able to reduce eight to ten regular and project headcounts and the estimated saving will be around \$6 million for 2021/22 to 2022/23 and more than \$6 million annually from 2023/24 onwards.

(b) Savings and profits from use of technology

18. The HKEAA has started to review the administration of the labour-intensive HKDSE Examination to streamline the operational procedures and save manpower cost through the use of technology, including the use of computer-based testing (CBT) for certain HKDSE examinations and IPEs. It is anticipated that the use of technology such as online examination authoring in question design process, CBT for oral examinations, and artificial intelligence (AI) marking, in the implementation of HKDSE Examination and other examinations, if materialised, could bring about annual savings. The HKEAA will ensure that the adoption of technology would not compromise the fairness, validity and reliability of the HKDSE Examination, and will consult the education sector well in advance. The proposed upgrade in infrastructure would also equip the HKEAA with enhanced capacities to administer different types of IPEs, and thus generate new streams of income.

19. On the other hand, the HKEAA is developing an Integrated Corporate Services System (ICSS) on general office administration, covering budgeting, procurement, document management, project management, financial accounting and human resources management to replace the various existing segregated systems. With its full implementation in 2022, the ICSS can reduce redundant manual works and save cost. The HKEAA is also planning to enhance the infrastructures in its assessment centres with a view to providing venues suitable for both paper-based and CBT for IPEs.

B. Additional assistance by the Government

(a) Subsidising candidates with SEN

20. Despite the HKEAA's strenuous efforts in containing the cost of making SEAs for SEN candidates, the operating cost continues to increase with the increasing number of SEN candidates. As the HKEAA only charged the SEN candidates the same level of examination fees as other candidates, the operation of SEAs recorded a substantial deficit. To ensure that candidates with special needs could be equitably assessed under suitable conditions, the Government will consider subsidising SEN candidates attending the HKDSE Examination. As at 2021/22, the estimated subsidy is about \$23.6 million per year. We will discuss with the school sector the best and economical means to subsidise SEN students in taking the HKDSE Examination.

(b) Provision of vacant school premises to meet strategic development needs

21. The Government is working to identify suitable vacant school premises for the HKEAA to develop an examination and assessment centre to meet its strategic development needs. The utilisation rate of the assessment centres that are located in relatively more convenient locations is over 90%. From time to time, some teachers/markers suggest that the HKEAA should set up on-screen marking centres at more convenient locations. Under the preliminary plan, the HKEAA would make use of the vacant school premises to develop onscreen marking facilities and CBT facilities. Under the worldwide impact of COVID-19, e-assessment has become an irrevocable trend. The development of CBT facilities would be essential for the HKEAA to maintain its competitiveness as a service provider of IPE services in the Asia Pacific region. The HKEAA would also relocate its operations in premises under commercial leases in Wan Chai and San Po Kong to the vacant school premises. As at 2020, the estimated saving in annual rental cost and related fees would be about \$8.0 to \$10.0 million⁹. The HKEAA could also make use of the premises to conduct the IPEs, explore new business activities and allow educational bodies for conducting seminars and courses at the premises at reasonable fees. The estimated additional income is \$1 million a year. Depending on the availability and condition of the school premises, it may take around two years for the renovation and relocation.

C. Other key developments in coming years

(a) Streamlining of the HKDSE Examination

22. The EDB has accepted the review report of the Task Force on Review of School Curriculum (TF) in December 2020. Insofar as the four core subjects under the senior secondary curriculum are concerned, there will be changes in the curriculum and assessment to create space for students and teachers. For instance, Liberal Studies (LS) will be renamed, the contents will be trimmed to about half a subject and assessment simplified with only “attained” or “not attained”. The very labour intensive Independent Enquiry Study (IES) will be abolished and a much simpler Mainland study tour embedded with project learning elements will be put in place. Similarly, the TF recommended Chinese Language to review the modes of

⁹ The total rental cost for 2021 would be \$8.4 million. Management and air-conditioning fees are not included.

assessment. That said, streamlining of examination contents and format in LS and Chinese Language would surely have impact on the cost structure of the examinations of these two subjects. We will closely monitor the developments.

(b) Business development of the HKEAA

23. In the years to come, the HKEAA would need to strategically review its infrastructure and operational model, map out strategic development plans, upgrade its infrastructures to catch up with the international trends in conducting examinations and cope with the uncertainties on its operation brought about by the COVID-19. The use of novel technology in the administration of examinations would incur capital investment in upgrading the existing information management systems, examination platforms and e-security infrastructure. For instance, the HKEAA has identified the need for delivering examinations by computers, renovating the existing assessment centres to provide additional workstations for CBTs, and enhancing the administration of speaking assessment. These key developments could increase the competitiveness of IPEs and streamline the workflow in HKDSE Examination operations for higher efficiency and cost saving in a long run. The EDB would provide necessary support to meet its development needs (such as development or upgrading of information technology systems for administration of examination and for general organisational administration and maintenance of HKEAA premises, etc.) through the \$360.8 million funding approved by the LegCo FC in February 2019 or ad hoc grants where circumstances warrant.

Overall assessment

24. We expect the HKEAA to press ahead with its cost containment and income generation proposals. The HKEAA must also review its infrastructure and operational model, as well as map out strategic development plans in light of international good practices, latest technological advancement and the business potential locally, regionally and internationally. At the same time, the Government will consider giving assistance by providing subsidy for SEN candidates, identifying suitable vacant school premises for the HKEAA and providing necessary support for meeting its developmental needs. After all these measures are fully implemented, the structural deficit of the HKEAA could be largely addressed with a view to achieving long-term financial sustainability.

Advice Sought

25. Members are invited to note the development and advise on the initial thoughts on the long-term funding proposals.

**Education Bureau
January 2021**

**Major assumptions adopted in projecting
the financial requirements of HKEAA as set out in
LegCo paper no. FCR (2018-19)74 of January 2019**

1. A minimum amount of cash in hand equivalent to two months' expenses should be maintained to ensure liquidity and meet the day-to-day operational needs.
2. A financial commitment to roll over different financial years for capital projects carried out by the HKEAA, e.g. building repairs, information technology systems, etc., would be created.
3. At least \$10 million or one-third of the surplus from the international and professional examinations would be kept for capacity building / development of the HKEAA, such as conducting assessment research, implementing initiatives to promote "Assessment for Learning", etc.
4. The inflation rate was assumed to be 2.5%, which is in line with the Government's medium range forecast.
5. It was assumed that in the material time, the Hong Kong Diploma of Secondary Education (HKDSE) Examination fee will continue to be charged less than its full cost, taking into consideration relevant factors including the operating costs and resources required, prevailing inflation rate, local economic situation, and affordability of the candidates and parents. For this exercise, the HKDSE Examination fee increase was assumed to be 2.5%, but the actual proposed examination fee increase submitted by the HKEAA to the Government each year would be examined in the light of the prevailing situation every year.
6. Under the existing mechanism, the actual rate of salary increase would be determined by the HKEAA Council, taking into account a host of relevant factors, including the HKEAA's overall financial position, performance of the HKEAA and staff concerned, the market pay trend (general market and civil service), economic indicators, latest trends of unemployment rates and other relevant factors, such as market competitiveness of the remuneration package for retention of staff. The Government would also examine the HKEAA's annual estimates of income and expenditure before giving approval. For this exercise, it was assumed to be 5%.

Annex B

Financial position of the HKEAA since implementation of the HKDSE Examination in 2011/12

School Year/ HKEAA's Financial Year		Income (\$million)	Expenditure (\$million)	Surplus/ (Deficit) (\$million)	HKEAA's Overall Surplus/(Deficit) (\$million)
2011/12	#HKDSE	219.1	206.1	13.0	63.9
	*Others	381.5	330.6	50.9	
2012/13	#HKDSE	259.6	247.4	12.2	60.8
	*Others	284.1	235.5	48.6	
2013/14	#HKDSE	253.1	278.7	(25.6)	7.4
	*Others	215.7	182.7	33.0	
2014/15	#HKDSE	237.1	281.3	(44.2)	(6.1)
	*Others	210.4	172.3	38.1	
2015/16	#HKDSE	223.5	280.5	(57.0)	(19.7)
	*Others	185.2	147.9	37.3	
2016/17	#HKDSE	213.0	278.4	(65.4)	(16.5)
	*Others	197.4	148.5	48.9	
2017/18	#HKDSE	215.0	284.2	(69.2)	(10.1)
	*Others	199.7	140.6	59.1	
2018/19	#HKDSE	215.0	293.2	(78.2)	22.7
	Non-recurrent government funding	50.4	-	50.4	
	*Others	204.1	153.6	50.5	
2019/20	#HKDSE	210.6	312.2	(101.6)	17.4
	Non-recurrent government funding	51.8	-	51.8	
	*Others	188.0	120.8	67.2	
2020/21 (Projected)	#HKDSE	198.5	315.7	(117.2)	(13.0)
	Non-recurrent government funding	80.0	-	80.0	
	*Others	195.2	171.0	24.2	
2021/22 (Projected)	#HKDSE	200.1	339.1	(139.0)	4.9
	Non-recurrent government funding	114.4	-	114.4	
	*Others	201.2	171.7	29.5	
2022/23 (Projected)	#HKDSE	211.0	339.2	(128.2)	(97.6)
	*Others	221.2	190.6	30.6	

Notes

#HKDSE: This covers HKDSE Examination fees and services/activities related to the HKDSE Examination (such as publications).

*Others: Other examination services and other activities.

**Actual / Projected Number of HKDSE Examination Candidates and
Operating Surplus / deficit from HKDSE Examination**

School Year	Actual / Projected Number of HKDSE Examination Candidates	Actual / Projected Operating Surplus / (Deficit) from HKDSE Examination (\$million)
2011/12	73 074	13.0
2012/13	82 283	12.2
2013/14	79 572	(25.6)
2014/15	74 131	(44.2)
2015/16	68 128	(57.0)
2016/17	61 624	(65.4)
2017/18	59 000	(69.2)
2018/19	56 159	(78.2)
2019/20	52 416	(101.6)
2020/21	52 131	^(117.2)
2021/22	*49 700	^(139.0)
2022/23	*50 100	^(128.2)

*The figures are rounded to the nearest hundred.

^Projected figures

**Number of candidates with Special Education Needs (SEN) and
Special Examination Arrangements (SEA)-related costs**

School Year	Actual / Projected Number of Candidates with SEN	SEA-related Cost (\$million)
2011/12	1 056	3.1
2012/13	1 208	3.6
2013/14	1 595	7.2
2014/15	1 746	10.7
2015/16	2 047	12.1
2016/17	2 442	14.6
2017/18	2 666	14.7
2018/19	3 084	16.7
2019/20	3 156	16.9
2020/21	*3 400	*19.0
2021/22	*4 100	*23.6
2022/23	*5 000	*25.3

* These are projected figures. The number of applications from candidates with SEN is rounded to the nearest hundred.

**HKDSE Examination fee adjustment rates
from 2012/13 to 2020/21**

Year of HKDSE Examination	HKDSE Examination fee adjustment	Composite CPI¹⁰	Median monthly household income of economically active domestic households (household size of three)¹¹ (\$)	Change in median monthly household income
2012	Not applicable	4.1%	23,000	Not applicable
2013	5%	4.3%	24,900	8.3%
2014	0%	4.4%	26,000	4.4%
2015	0%	3.0%	27,500	5.8%
2016	2%	2.4%	29,500	7.3%
2017	3%	1.5%	30,000	1.7%
2018	4%	2.4%	32,700	9.0%
2019	4%	2.9%	33,500	2.4%
2020	4%	Not available	Not available	Not available
2021	0%	Not available	Not available	Not available

¹⁰ Source: Census and Statistics Department

¹¹ Source: Census and Statistics Department