

## Chapter 3 – Expenditure Projections

### Overview

3.1 On the basis of the macroeconomic assumptions set out in Chapter 2, the Working Group has examined the expenditure requirements for the three policy area groups which are particularly sensitive to demographic changes - namely, **education, social welfare and health**. They account for the lion's share (about 60%) of the Government's recurrent expenditure in 2014-15. Four projection scenarios have been developed for each –

- (a) Under the **No Service Enhancement Scenario**, it is assumed that there would be **no** policy changes and **no** service improvements in these three areas from now to 2041-42. The two key variables determining their recurrent expenditure requirements under this scenario are **demographic changes** and **price changes** (based on the relevant price assumptions as set out in Chapter 2). By way of illustration, this scenario assumes that –
  - (i) in the field of education, the number of publicly-funded first-year first-degree (FYFD) places in full-time-equivalent term in the University Grants Committee (UGC)-funded sector would remain at 15 000 per cohort as approved by the Executive Council for the 2012/13 – 2014/15 triennium, and that we continue to maintain the 12-year free education policy;
  - (ii) in the field of social welfare, this scenario assumes that the number of elderly taking up the Old Age Allowance (OAA), Old Age Living Allowance (OALA), etc. as a percentage of the elderly population for the relevant age cohort would remain the same; thus, as the total elderly population grows, expenditure on the elderly-related funding schemes would grow correspondingly without any increase in payment rates. Based on past trends, the number of old-age cases for Comprehensive Social

Security Assistance (CSSA) is assumed to grow in line with overall population growth rather than growth in elderly population; and

- (iii) in the field of health, the scenario assumes that the number of bed days and the average length of hospital stay for the different age groups would remain as is; demographic changes would merely lead to proportionate changes in the expenditure on these age groups. No medical advancement (i.e. no adoption of new medical technology, no new drugs and no new medical devices) is assumed.

The projections are based on the current policies and service levels, including the new policies and initiatives announced in the 2014 Policy Address or reflected in the 2014-15 Budget. The projections further assume that resources and delivery capacity are not constraints. This scenario serves as the basic building block for assessing the impact of demographic changes on age-related expenses.

- (b) With the scenario at (a) above as the building block, three Service Enhancement Scenarios have been developed –
  - (i) **Service Enhancement at 1% per annum** assumes that recurrent expenditure on education, social welfare and health would grow at 1% per annum on top of demographic changes and price changes;
  - (ii) **Service Enhancement at 2% per annum** is the same as (i) except that recurrent expenditure on the three areas is assumed to grow at 2% per annum on top of demographic changes and price changes; and

- (iii) **Service Enhancement at Historical Trend** assumes that services for education, social welfare and health would be enhanced, at 3.86%, 2.8% and 2.63% per annum respectively (or on average, 3% per annum collectively for the three sectors) trailing historical trends. In the fields of education and social welfare, the trends since 1997-98 have been used. In the field of health, the Working Group adopted the trend rate since 2007-08 to take away the distortions caused by the outbreak of SARS in 2003-04.

The Working Group adopted a broad brush approach to deduce the historical service enhancement rates for the three policy area groups, by attributing past expenditure changes to three factors – namely, demographic changes, price changes and the balance, “service enhancements”. The historical service enhancement rates deduced were 3.86% per annum for education, 2.8% per annum for social welfare and 2.63% per annum for health (on average, 3% per annum collectively for the three sectors).

The analysis and expenditure projections on education, social welfare and health services are detailed in **sections (A) to (C)** below.

- 3.2 The Working Group then examined the expenditure projections for **capital works and civil service pensions and Civil Service Provident Fund/ Mandatory Provident Fund contributions, being known financial pressure points and other recurrent, non-recurrent and other capital expenditure.** Save for statutory commitments, it is assumed that capital works and other expenditure items would remain a constant share of GDP<sup>1</sup> during the projection period. The analysis and projections for these are set out in **sections (D) to (F)** respectively.

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<sup>1</sup> Capital works expenditure is assumed to remain a constant share of real GDP while other expenditure items are assumed to remain a constant share of nominal GDP.

- 3.3 Within the projection period to 2041-42, there would be occasions under a number of scenarios when the fiscal reserves would be depleted and the Government would need to borrow to make ends meet. **Section (G)** sets out the assumptions on interest expenses.

### Base Case

- 3.4 Under the **No Service Enhancement Scenario** for education, social welfare and health services, **total government expenditure** as a percentage of nominal GDP is projected to increase from 19% of nominal GDP or \$421.0 billion in 2014-15 (including repayment of \$9.8 billion in bonds and notes) as follows –

	% of GDP	\$ Billion	Overall growth per annum
	by 2041-42		
<b>No Service Enhancement</b>	23.9%	1,700	5.3%

The projected trend growth in government expenditure of **5.3% per annum** is higher than the projected trend growth in nominal GDP of 4.4% per annum.

- 3.5 This means that with demographic and price changes alone, even assuming no further enhancements to education, social welfare and health services to 2041-42, total government expenditure would increase by 4.9 percentage points of nominal GDP within three decades.
- 3.6 Under the three **Service Enhancement Scenarios**, **total government expenditure** would grow as follows –

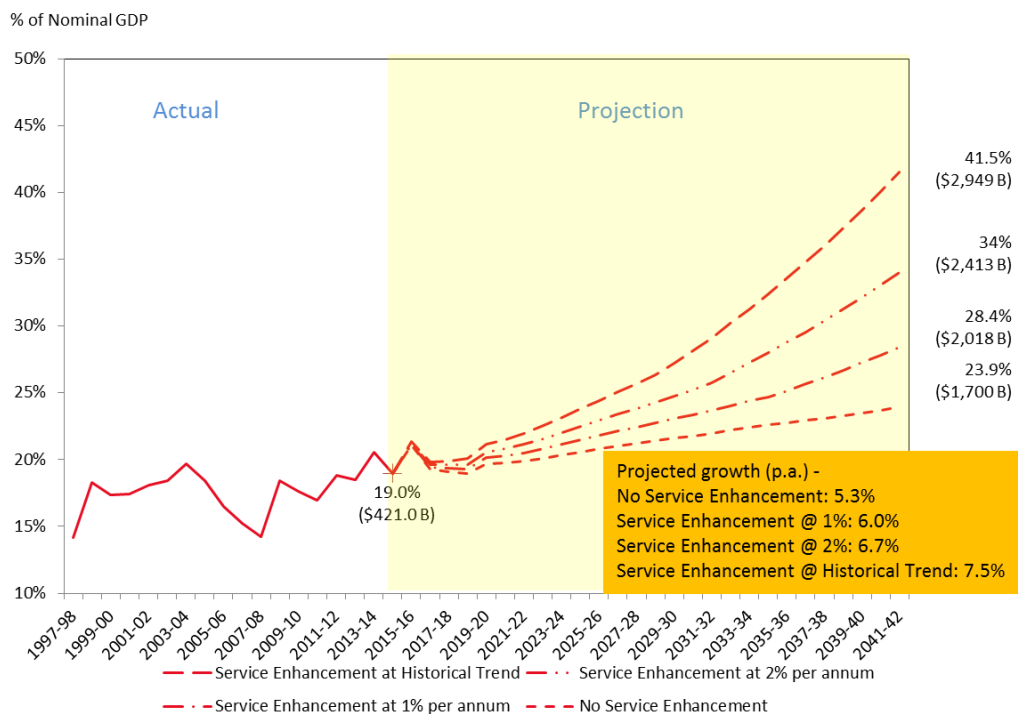
Service Enhancement	% of GDP	\$ Billion	Overall growth* per annum
	by 2041-42		
@ 1% per annum	28.4%	2,018	6.0%
@ 2% per annum	34.0%	2,413	6.7%
@ Historical Trend	41.5%	2,949	7.5%

\* Covering demographic and price changes and service enhancement.

The projected trend growth in government expenditure of **6.0% to 7.5% per annum exceeds** the post-handover average annual growth of 4.7% in government expenditure. It also **exceeds** the projected nominal GDP growth of 4.4% per annum.

3.7 This means that on top of the demographic and price changes already reflected in the No Service Enhancement Scenario, if services in education, social welfare and health would be enhanced between 1% and the historical trends at roughly 3% per annum, total government expenditure would increase by 9.4 to 22.5 percentage points (vs 4.9 percentage points under the No Service Enhancement Scenario), reaching 28.4% to 41.5% of nominal GDP within three decades. This would far exceed the current public expenditure guideline of 20% of nominal GDP.

*Chart 3.1 – Total government expenditure from 1997-98 to 2041-42 under the Base Case*



## Sensitivity analysis

3.8 In addition to the above projections under the Base Case macroeconomic assumptions, the Working Group has also reviewed how the projections would vary under the High Case, Low Case and Shock Case with different underlying macroeconomic assumptions as defined in Chapter 2. The results are summarised below –

(a) For the **No Service Enhancement Scenario**, the projected total government expenditure in 2041-42 is as follows –

<b>Total government expenditure by 2041-42 (% of GDP)</b>	<b>Base Case</b>	<b>High Case</b>	<b>Low Case</b>	<b>Shock Case<sup>2</sup></b>
No Service Enhancement	23.9%	22.7%	27.1%	29.3%

(b) For the **Service Enhancement Scenarios**, the projected total government expenditure in 2041-42 would be as follows –

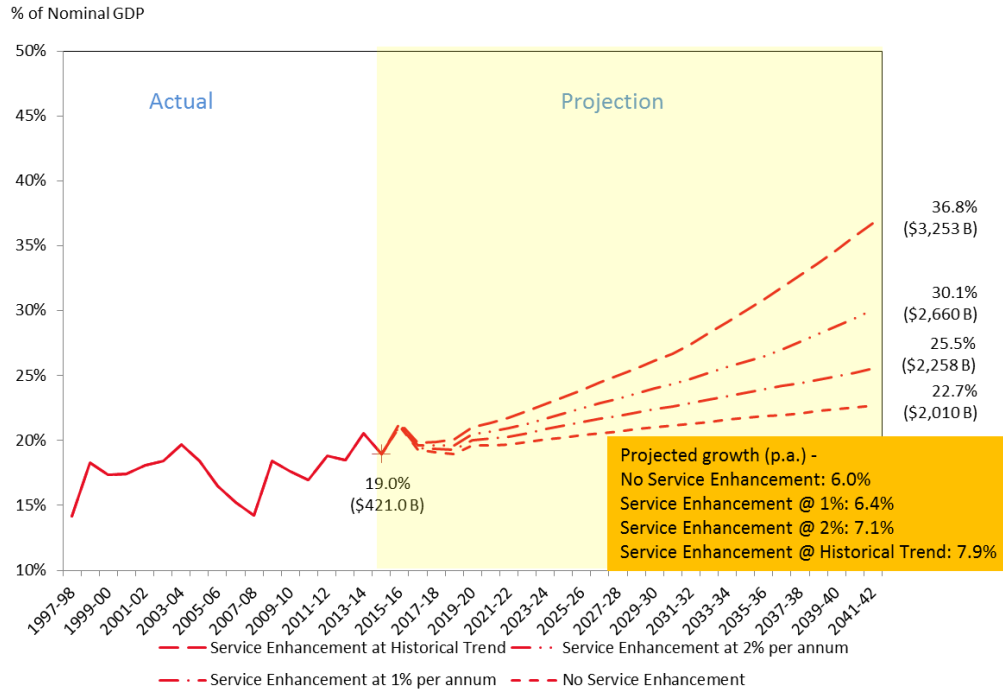
<b>Total government expenditure by 2041-42 (% of GDP)</b>	<b>Base Case</b>	<b>High Case</b>	<b>Low Case</b>	<b>Shock Case<sup>2</sup></b>
Service Enhancement @ 1% per annum	28.4%	25.5%	32.1%	34.6%
@ 2% per annum	34.0%	30.1%	38.4%	41.3%
@ Historical Trend	41.5%	36.8%	46.9%	50.4%

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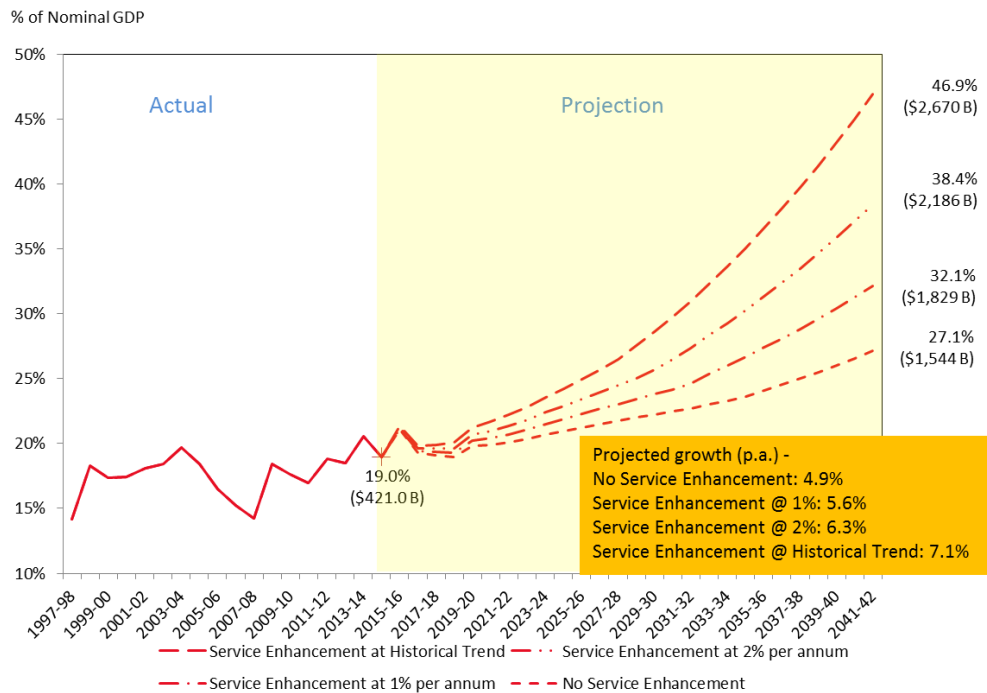
<sup>2</sup> In projecting expenditure under the Shock Case, the Working Group has made reference to the austerity / expenditure control measures adopted in past to cope with fiscal difficulties. Such measures include civil service pay freeze and reduction, freezing social security payments and controlling expenditure growth.

Charts 3.2 to 3.4 – Total government expenditure from 1997-98 to 2041-42 under the High, Low and Shock Cases

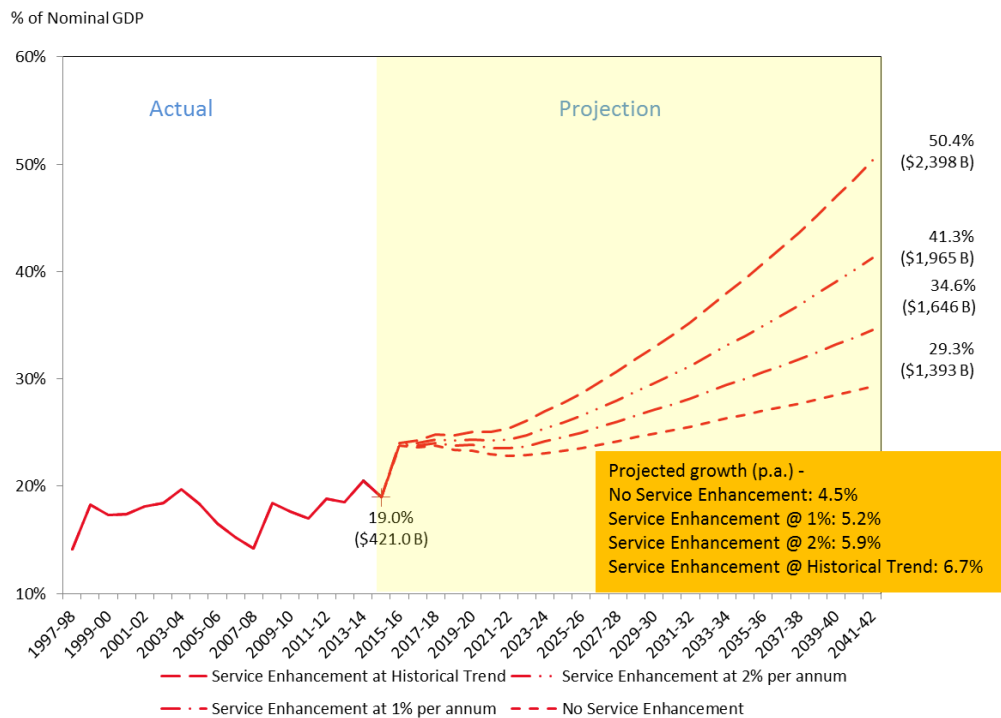
### High Case



### Low Case



## Shock Case



3.9 The above scenarios have not taken into account the funding pressures which the **Housing Authority** would face under the 2014 Policy Address commitment to increase the supply of subsidized public housing (about 20 000 Public Rental Housing (PRH) units and 8 000 Home Ownership Scheme (HOS) units per annum). On the basis of the 2013 Policy Address commitment (involving a target supply of 20 000 PRH and 5 000 HOS units per annum) and assuming that the Government would shoulder the Housing Authority’s funding shortfall in entirety as projected to arise as from 2019-20, the cumulative **potential liabilities** for the Government could be a further **\$130 billion to some \$490 billion by 2041-42.**

3.10 Unless otherwise indicated, the projections in this Chapter relate to the Base Case. More details on the assumptions, limitations and considerations in relation to the expenditure projections are described at **Annex D.**

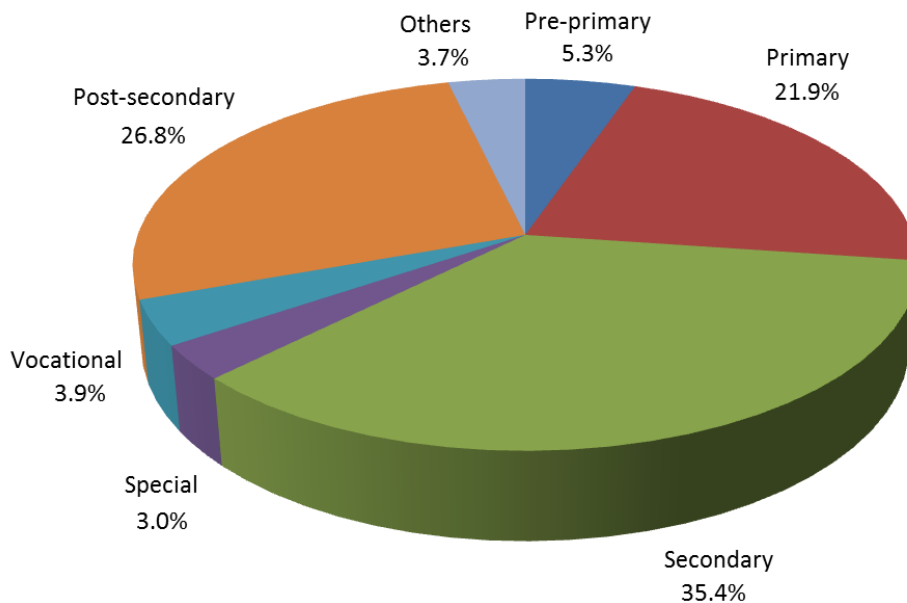


## (A) Education

3.11 Education is the policy area group with the largest share of recurrent government expenditure. In 2014-15, recurrent government expenditure on education is estimated to be \$67.1 billion, representing around 21.8% of the total recurrent government expenditure or 3% of nominal GDP.

3.12 A breakdown of the recurrent expenditure on education by education level in 2014-15 is shown below –

*Chart 3.5 – Recurrent education expenditure by education level in 2014-15 (\$67.1 billion)*



3.13 Around 96% of the recurrent expenditure on education is for the operation of public sector and subsidized primary and secondary schools (including salary grants for teachers and other subsidy grants), and providing subventions to education institutions and subsidies to students from pre-primary to post-secondary levels. Disbursement of expenditure, subventions or subsidies for the pre-primary, primary and secondary education sectors is primarily based on the number of schools, classes, teachers or students. Expenditure on vocational and post-secondary education which accounts for 30.7% of total recurrent education expenditure is supply-driven, depending on the Government's policy as to how

many student places would be provided in these sectors.

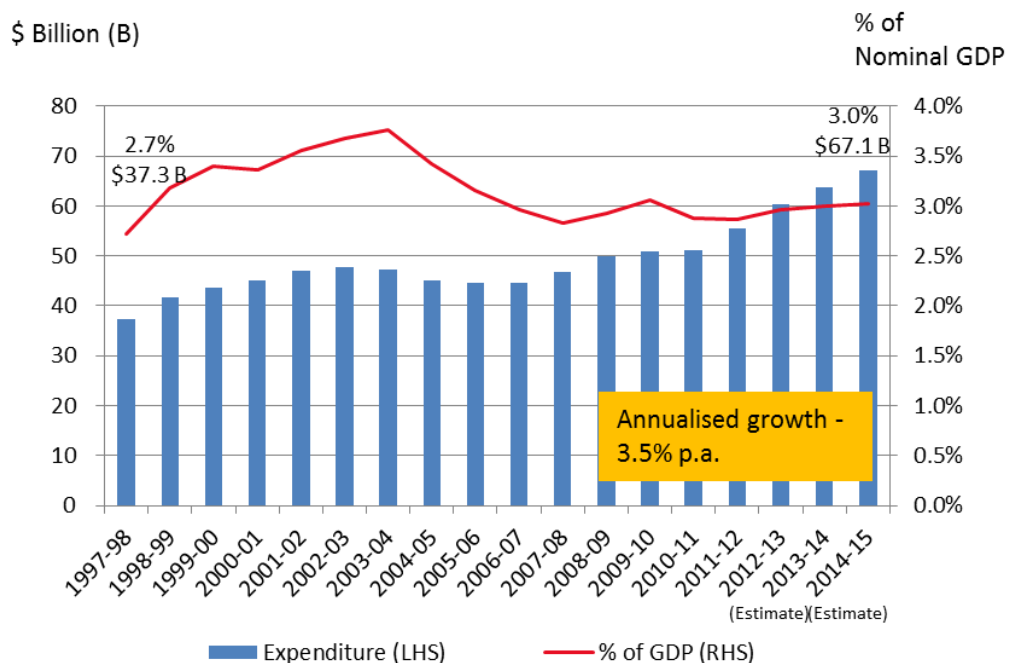
- 3.14 In the 2013/14 school year, there were about 133 000 pre-primary students in 724 kindergartens covered by the pre-primary education vouchers, 280 500 primary students, 379 600 secondary students, 7 850 special school students studying in around 1 000 public sector and subsidized schools. There were 45 800 full-time and 26 300 part-time vocational education student places provided by the Vocational Training Council and 91 600 full-time equivalent student places in the eight UGC-funded institutions. There were some 337 300 students in receipt of some form of financial assistance.
- 3.15 The Government has invested heavily in education for the purpose of nurturing human capital, facilitating social mobility and sustaining the development of Hong Kong. A number of major education policy initiatives have been introduced since 1997-98 at all levels of education, leading to a marked increase in recurrent expenditure. Some notable examples are –
- (a) launch of the Pre-primary Education Voucher Scheme in the 2007/08 school year. Taking into account the plan to increase the voucher value by \$2,500 per year in the 2014/15 and 2015/16 school years, it is estimated that about 139 000 kindergarten students will receive the voucher at \$20,010 in the 2014/15 school year and the estimated total cost is about \$2.6 billion;
  - (b) launch of free senior secondary education as from the 2008/09 school year, implementation of the new senior secondary curriculum from the 2009/10 school year and various measures from the 2009/10 school year to stabilise the secondary school sector in the light of the temporary decline in Secondary 1 student population decline (including reduction of allocation class size, Voluntary Optimisation of Class Structure Scheme). From 2007-08 to 2014-15, government expenditure on secondary education has increased by around \$6.7 billion;

(c) launch of small class teaching in public sector primary schools as from the 2009/10 school year. From 2008-09 to 2014-15, government expenditure on primary education has increased by around \$3.8 billion; and

(d) launch of the 334 new academic structure in the tertiary sector from the 2012/13 school year, and increasing publicly-funded FYFD places for the 2012/13 - 2014/15 triennium to 15 000 places a year and senior year undergraduate places to 8 000 a year. From 2011-12 to 2014-15, government expenditure on post-secondary education has increased by around \$4.5 billion.

3.16 As compared with the 1997-98 recurrent expenditure of \$37.3 billion on education, the 2014-15 provision of \$67.1 billion has increased by about 80% over the 17 years from 1997-98 to 2014-15 (*Chart 3.6*). This is higher than the 61.5% cumulative growth of the nominal GDP.

*Chart 3.6 – Recurrent education expenditure from 1997-98 to 2014-15*



## Projection

3.17 The total population for the age group of 3 to 21 is projected to drop by 8.1% from 1.166 million in 2014 to 1.072 million in 2041. Specifically, the group is forecast to –

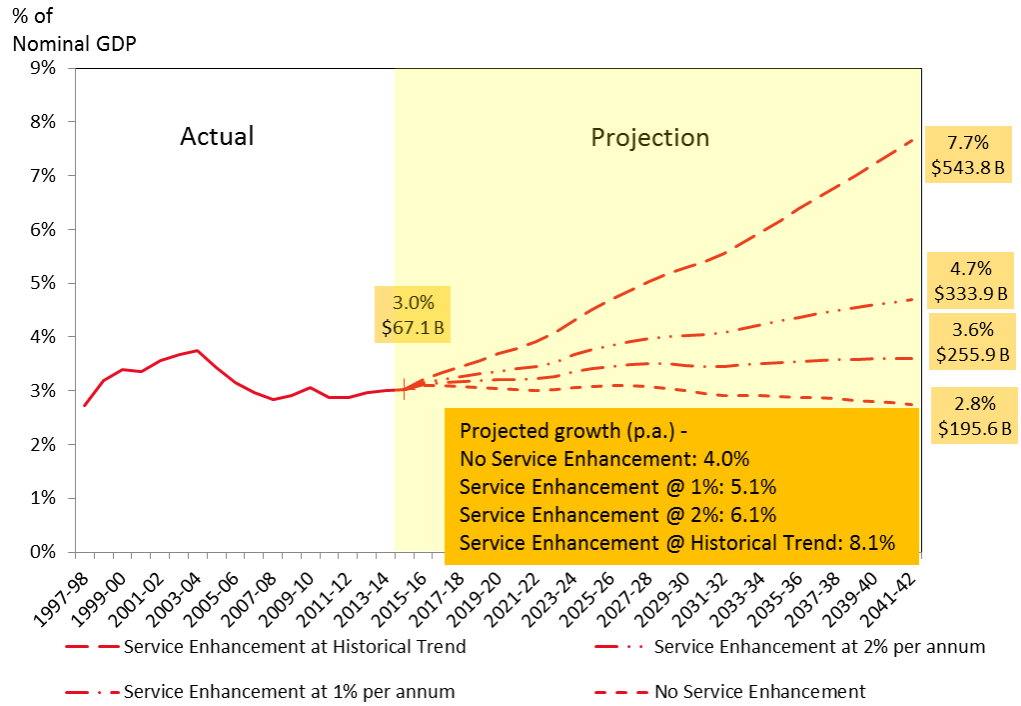
- (a) drop by 5.7% from 1.166 million in 2014 to 1.099 million in 2020, then
- (b) rise by 8.2% to the peak of 1.189 million in 2029, then
- (c) drop by 9.8% to 1.072 million in 2041.

3.18 Based on the assumptions detailed in **Annex D**, recurrent expenditure on education is projected as follows –

- (a) Under the **No Service Enhancement Scenario**, recurrent education expenditure as a percentage of nominal GDP would drop from 3% in 2014-15 to 2.8% in 2041-42, mainly owing to the expected decline in total population for the age group of 3 to 21. In dollar terms, there would still be an increase from \$67.1 billion to \$195.6 billion. It reflects a growth rate of **4.0% per annum**.
- (b) Under the three **Service Enhancement Scenarios**, recurrent education expenditure as a percentage of nominal GDP would increase from 3% in 2014-15 to between 3.6% and 7.7% in 2041-42; or in dollar terms, from \$67.1 billion to between \$255.9 billion and \$543.8 billion. This reflects a projected trend growth rate of **5.1% to 8.1% per annum**, exceeding the post-handover average annual growth of 3.5% in recurrent education expenditure.

The projections are illustrated in *Chart 3.7* below.

Chart 3.7 – Recurrent education expenditure from 1997-98 to 2041-42

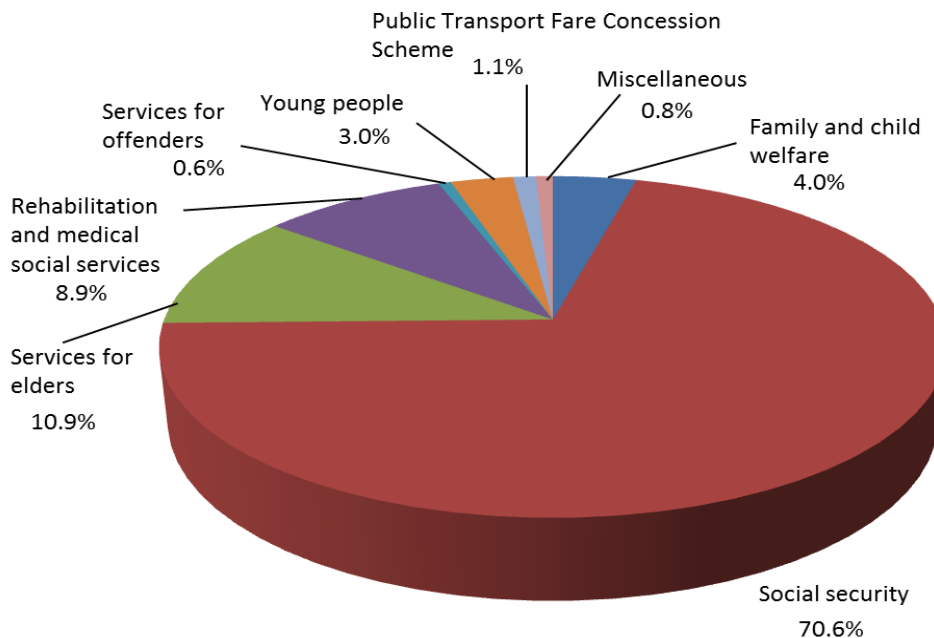


## (B) Social welfare

3.19 Social welfare is the policy area group with the second largest share of recurrent government expenditure. In 2014-15, recurrent expenditure on social welfare is estimated to be \$56.9 billion, representing around 18.5% of the total recurrent government expenditure or 2.6% of nominal GDP.

3.20 A breakdown of the 2014-15 recurrent expenditure on social welfare by major expenditure categories is shown below –

*Chart 3.8 – Recurrent expenditure on social welfare by major expenditure categories in 2014-15 (\$56.9 billion)*



3.21 Around 70% of the recurrent welfare expenditure for 2014-15 (or about \$39.1 billion) relate to **social security payments**, broken down as follows –

- (a) Comprehensive Social Security Assistance (CSSA): Based on an average of 255 000 CSSA cases with some 432 000 recipients, the 2014-15 provision for CSSA is about \$21.6 billion. At February 2014, the average CSSA payment for a four-member household is \$12,438 per month.

- (b) Social Security Allowance (about \$17.4 billion in 2014-15):
- (i) OALA – Based on an estimated caseload of 415 000 and \$2,285 each case per month, the annual provision for OALA is about \$11.4 billion.
  - (ii) OAA/Guangdong Scheme – The estimated caseload for OAA and the Guangdong Scheme is 195 000 and 31 000 respectively and the estimated annual provision is about \$3.2 billion.
  - (iii) Disability Allowance (DA) – Based on an estimated caseload of 125 000, the annual provision is about \$2.9 billion.

3.22 Around 11% of the recurrent expenditure on social welfare for 2014-15 (or some \$6.2 billion) relate to **services for the elderly**. These include –

- (a) over 27 000 residential places in care and attention homes and nursing homes, estimated to cost some \$4 billion in 2014-15; and
- (b) services for over 2 900 day care places, some 24 000 home care cases or places and 211 community elderly centres, estimated to cost some \$1.8 billion in 2014-15.

3.23 The Government has introduced major policy initiatives since 1997-98 with a view to improving the scale and depth of services offered to the needy. These include –

- (a) launching OALA in 2013 to supplement the living expenses of elderly persons aged 65 or above who are in need of financial support. The annual provision for OALA is about \$11.4 billion in 2014-15;

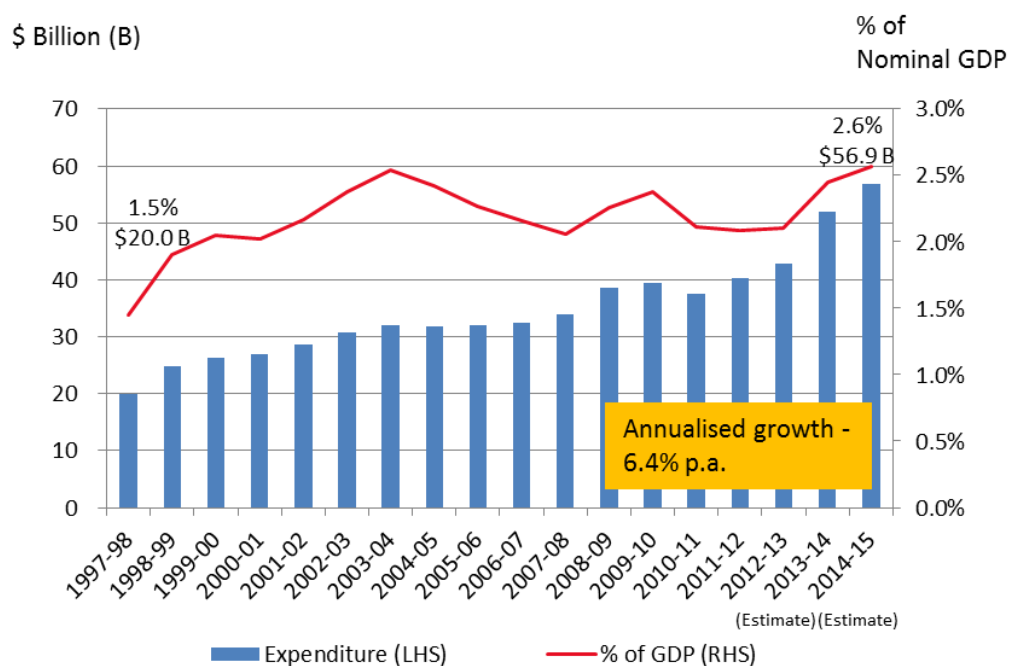
- (b) launching the Public Transport Fare Concession Scheme for the Elderly and Eligible Persons with Disabilities (\$2 Scheme) in 2012. The average number of passenger trips involving the elderly as of end-September 2013 was around 595 200 a day, and involving persons with disabilities about 80 800 a day. The estimated government subsidy involved is around \$600 million for 2014-15;
- (c) increasing the support level of Dementia Supplement from 40% to 100% for the elderly in residential care homes and day care centres/units for elderly in 2012-13 with an estimated additional expenditure of \$125 million each year;
- (d) implementing the Integrated Discharge Support Programme for Elderly Patients on a territory-wide basis to provide integrated support services to elderly hospital discharges who have difficulties taking care of themselves and also to their carers. The estimated expenditure is about \$171 million each year; and
- (e) providing Community Living Supplement to recipients with disabilities at non-severe level, recipients in ill-health and elders in 2011-12 to better support their stay in the community (\$590 million) and Residential Care Supplement to all CSSA recipients aged 60 or above who occupy non-subsidised residential care places for the elderly in 2012-13. The estimated expenditure is about \$102 million each year.

3.24 As announced in the 2014 Policy Address, a Low-income Working Family Allowance (LIFA) scheme will be introduced. While details on the scheme are yet to be finalised, the planned provision for the scheme is about \$3 billion in a full year, covering more than 200 000 households. Rather than excluding this major initiative from the analysis, the Working Group has assumed that the scheme would be implemented in 2015-16 and the basic parameters would not change within the forecast period and the annual provision would be adjusted in line with the CCPI.



3.25 As compared with the 1997-98 recurrent expenditure of \$20 billion on social welfare, the 2014-15 provision at \$56.9 billion represents a 185% quantum leap. This is much higher than the 61.5% cumulative growth of nominal GDP over the 17 years from 1997-98 to 2014-15 (*Chart 3.9*).

*Chart 3.9 – Recurrent social welfare expenditure from 1997-98 to 2014-15*



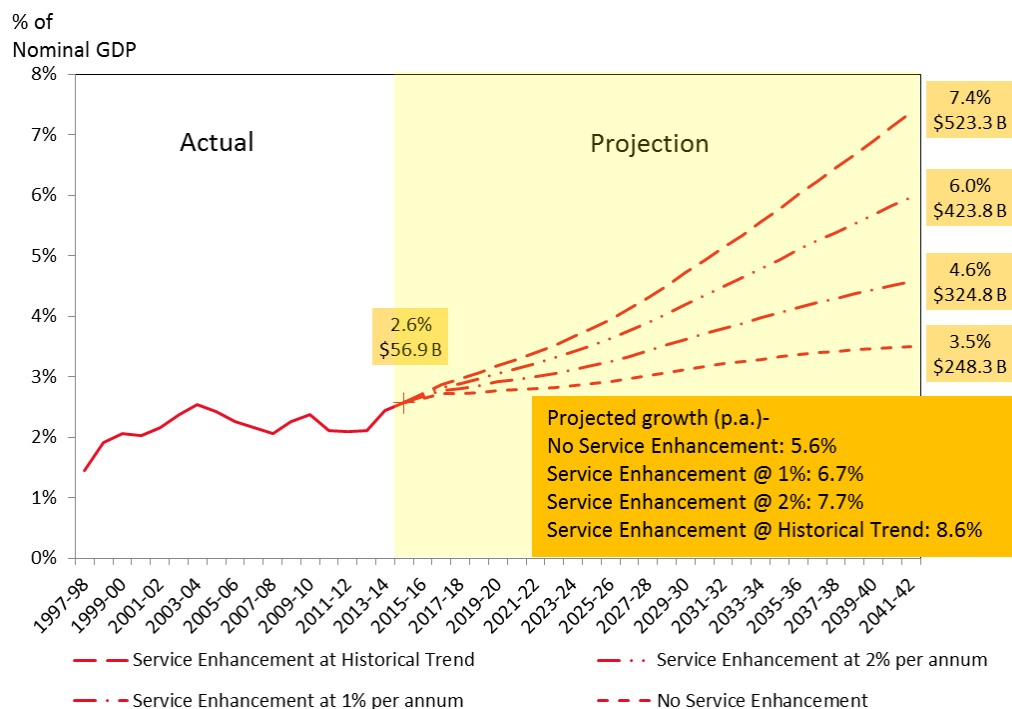
### Projection

3.26 The elderly population aged 65 and above is projected to rise from 1 018 000 in 2013 to 2 560 000 in 2042. This would obviously have a major impact on the scale and cost of welfare services, many types of which are targeted at the elderly.

3.27 Taking into account the projected change in total and elderly population, recurrent expenditure on social welfare is projected to grow as follows –

- (a) Under the **No Service Enhancement Scenario**, recurrent social welfare expenditure as a percentage of nominal GDP would increase from 2.6% in 2014-15 to 3.5% in 2041-42; or in dollar terms, from \$56.9 billion to \$248.3 billion. It reflects a growth rate of **5.6% per annum**.
- (b) Under the three **Service Enhancement Scenarios**, recurrent social welfare expenditure as a percentage of nominal GDP would increase from 2.6% in 2014-15 to between 4.6% and 7.4% in 2041-42; or in dollar terms, from \$56.9 billion to between \$324.8 billion and \$523.3 billion. This implies a projected trend growth rate of **6.7% to 8.6% per annum**, higher than the post-handover average annual growth of 6.4% in recurrent social welfare expenditure.

*Chart 3.10 – Recurrent social welfare expenditure from 1997-98 to 2041-42*



## **(C) Health**

3.28 Health is the policy area group with the third largest share of recurrent government expenditure. In 2014-15, recurrent government expenditure on health is estimated to be \$52.4 billion, representing around 17% of the total recurrent government expenditure or 2.4% of nominal GDP.

3.29 Around 90% of the recurrent expenditure on health is for providing recurrent subvention to the Hospital Authority for its public health services while the remaining 10% is mainly on primary healthcare carried out by the Department of Health.

3.30 The Hospital Authority is a statutory body established on 1 December 1990 under the Hospital Authority Ordinance (Cap. 113) to manage all public hospitals in Hong Kong. Being the principal provider of public healthcare service in Hong Kong, the Hospital Authority assumes the important role of the safety net in the public healthcare system and looks after nearly 90% of inpatient services and 30% of outpatient services in Hong Kong. It manages 42 public hospitals and institutions, 48 specialist outpatient clinics (SOPC) and 73 general outpatient clinics (GOPC). The recurrent subvention to the Hospital Authority supports the delivery of public medical services, including –

### **(a) In-patient services**

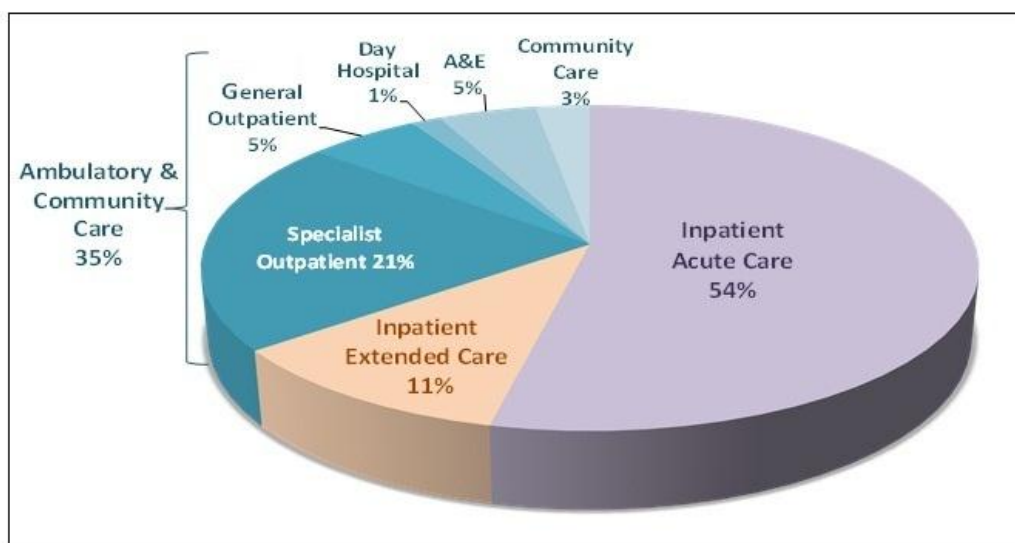
The Hospital Authority plans to provide around 27 645 hospital beds as at 31 March 2015 for in-patient services. Based on the Hospital Authority's utilisation profile in 2012-13, it utilised 65% of its recurrent resources for provision of in-patient services which comprises 54% for acute care (for general and mentally ill patients) and 11% for extended care (for convalescence, infirmary, mentally handicapped and mentally ill patients).

(b) Ambulatory and community care

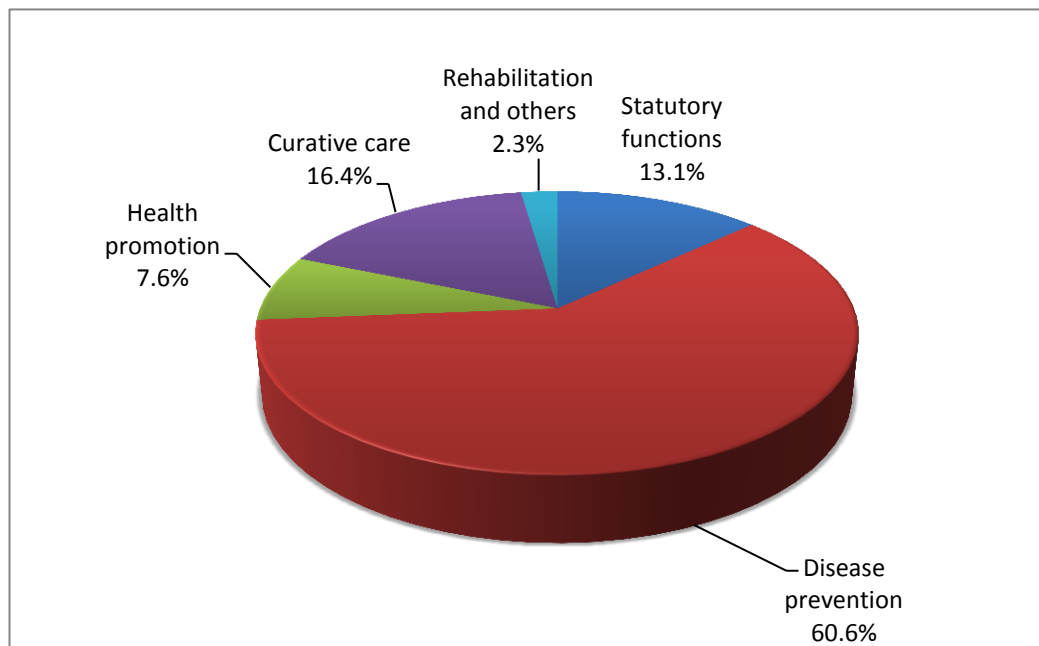
The Hospital Authority utilised about 35% of its recurrent resources for provision of ambulatory and community care services which include accident & emergency (A&E) services, SOPC, GOPC, day hospital as well as community services such as outreach visit by community nurse and psychiatric outreach services in 2012-13. Of this 35%, 31% was taken up by SOPC (21%), GOPC (5%) and A&E (5%). In 2014-15, the Hospital Authority will provide services for around 6 867 000 SOPC, 5 709 000 GOPC and 2 237 000 A&E attendances.

3.31 The resources utilization profiles of the Hospital Authority and the Department of Health are illustrated in *Charts 3.11 and 3.12*.

*Chart 3.11 – Hospital Authority’s Resource Utilisation Profile in 2012-13*



*Chart 3.12 – Department of Health’s Planned Resource Utilisation Profile in 2014-15*



3.32 Since 1997-98, a number of major health policy initiatives have been or are planned to be introduced. These include –

*For Hospital Authority*

- (a) opening 980 additional general (acute and convalescent) hospital beds between 2009-10 and 2014-15, with annual provision of \$1.3 billion in 2014-15;
- (b) introducing community-based recovery support programme for discharged mentally ill patients using case management approach since 2009-10 and implementing the district-based Community Case Management Programme for persons with severe mental illness since 2010-11 with annual provision of about \$0.2 billion in 2014-15;
- (c) enhancing primary care services through the development of community health centres/networks and strengthening chronic disease management for diabetic and hypertensive patients since 2009-10 with annual provision of \$0.6 billion in 2014-15;
- (d) improving the quality of drugs provided to Hospital Authority

patients by widening the scope of Hospital Authority Drug Formulary for more new drugs since 2009-10 with annual provision of \$0.7 billion in 2014-15;

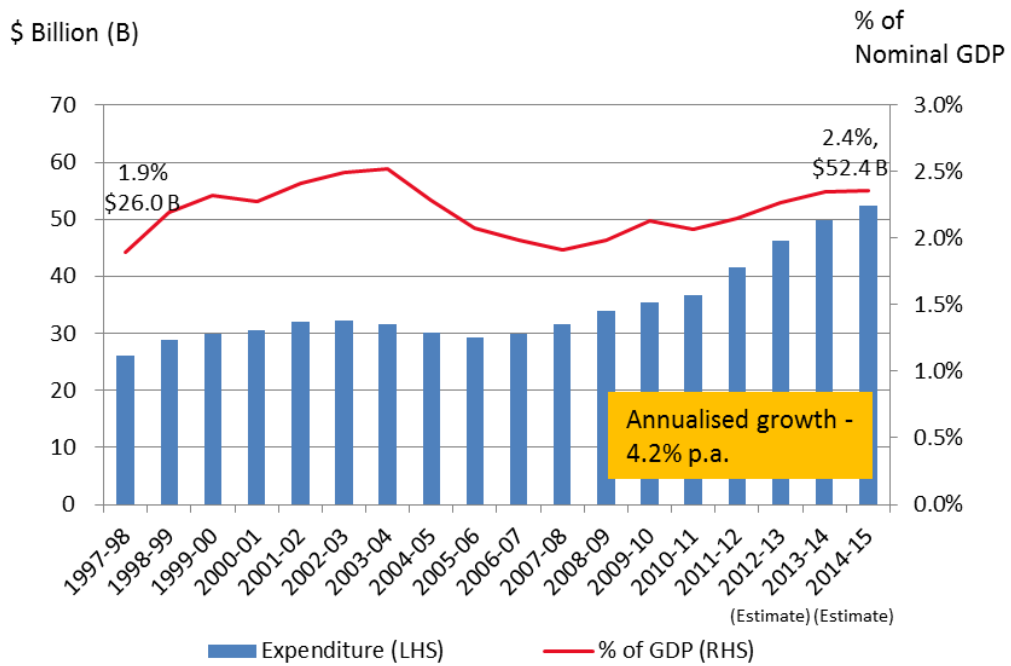
- (e) enhancing the pharmaceutical product procurement system, supply chain management and drug quality assurance since 2009-10 with annual provision of around \$0.2 billion in 2014-15;

*For Department of Health*

- (f) introducing the Elderly Health Care Voucher Pilot Scheme on 1 January 2009 for enhancing the provision of primary care services to the elderly. The Scheme has been regularized since January 2013. The voucher value per annum was doubled from \$500 to \$1,000 in 2013 and is further doubled to \$2,000 pursuant to the 2014 Policy Address. The provision for 2014-15 is \$0.8 billion; and
- (g) operation of the Vaccination Office (\$0.12 billion in 2014-15), which oversees, inter alia, the operation of two vaccination subsidy schemes, i.e. subsidising children aged six months to less than six years to receive seasonal influenza vaccination at private practitioners' clinics since 2008-09 and subsidising elders aged 65 or above to receive seasonal influenza and pneumococcal vaccinations at private practitioners' clinics since 2009-10.

3.33 As compared with the 1997-98 recurrent expenditure on health of \$26 billion, the 2014-15 expenditure at \$52.4 billion represents an increase of about 101%. This is higher than the 61.5% cumulative growth of nominal GDP over the 17 years from 1997-98 to 2014-15 (*Chart 3.13*). The annual subvention for the Hospital Authority has increased from \$23.8 billion in 1997-98 to \$47.2 billion in 2014-15.

Chart 3.13 – Recurrent health expenditure from 1997-98 to 2014-15



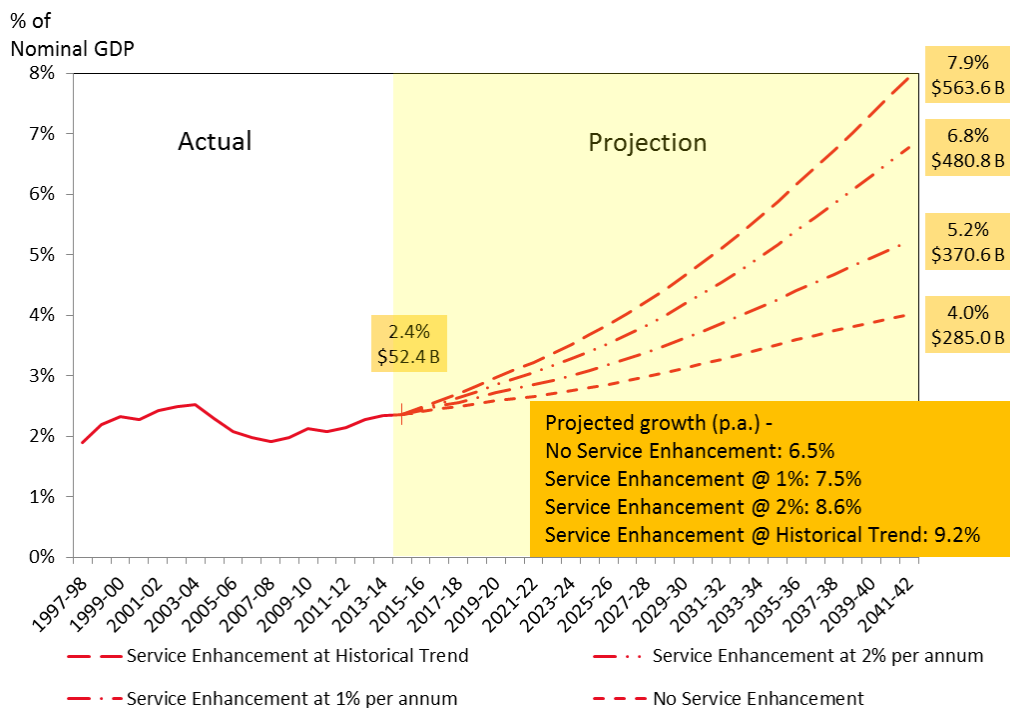
### Projection

3.34 Taking into account the projected change in total and elderly population, recurrent expenditure on health is projected to grow as follows –

- (a) Under the **No Service Enhancement Scenario**, recurrent health expenditure as a percentage of nominal GDP would increase from 2.4% in 2014-15 to 4.0% in 2041-42; or in dollar terms, from \$52.4 billion to \$285.0 billion. It reflects a growth rate of **6.5% per annum**.

(b) Under the three **Service Enhancement Scenarios**, recurrent health expenditure as a percentage of nominal GDP would increase from 2.4% in 2014-15 to between 5.2% and 7.9% in 2041-42; or in dollar terms, from \$52.4 billion to between \$370.6 billion and \$563.6 billion. This implies a projected trend growth rate of **7.5% to 9.2% per annum**, higher than the post-handover average annual growth of 4.2% in recurrent expenditure on health services.

Chart 3.14 – Recurrent health expenditure from 1997-98 to 2041-42



3.35 The projected increase in recurrent health expenditure is due to the increase in total and elderly population, the assumed service enhancement and price increase. Amid the accelerating advancement of medical knowledge and technology in the global healthcare industry, the Hospital Authority would need to continue to upkeep its safety and quality of care to a level highly comparable to the international standard. Additional resources are required to adopt new technology (e.g. introduction of new drugs, medical devices and staff training for new technology) as well as for modernization (e.g. facility modernization and implementation of new safety control process). These initiatives are generally termed as “medical advancement” which has been factored in the

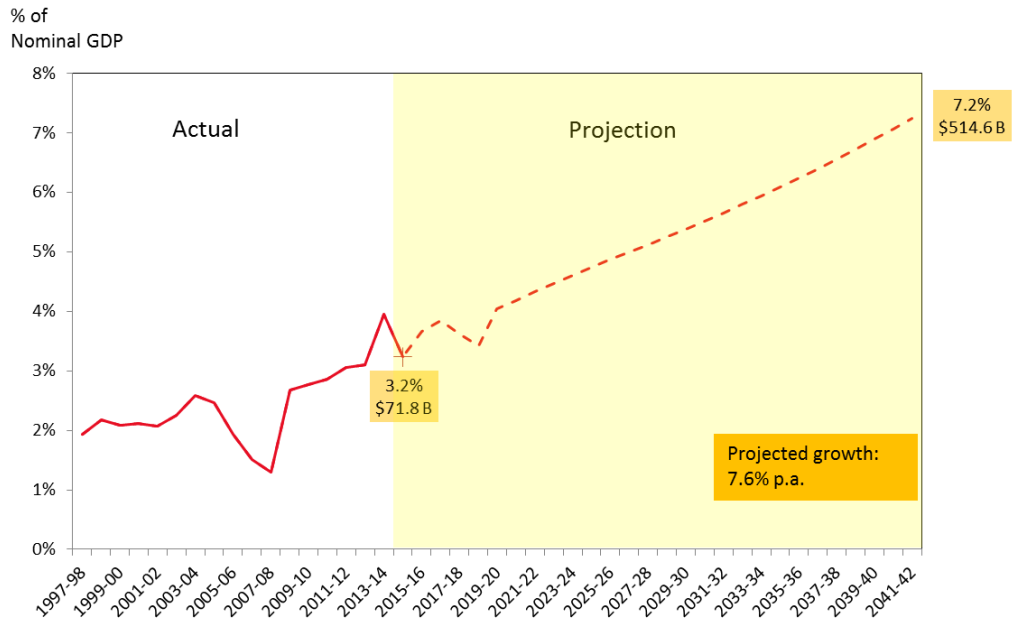


assumed service enhancement in the projections. The historical service enhancement factor since 1997-98 was 1.06% per annum, and that since 2007-08 was 2.63% per annum. After much deliberations, the Working Group agreed to adopt the factor of 2.63% for the Service Enhancement at Historical Trend Scenario in order to avoid the distortions caused by SARS.

## **(D) Capital works**

- 3.36 The Government is committed to taking forward infrastructure projects to foster economic development and enhance the quality of life of Hong Kong's citizens. These include highway and transport infrastructure, environmental protection projects, schools, elderly facilities as well as hospital beds which are indirectly age-related. The estimated capital works expenditure to be incurred under the Capital Works Reserve Fund (CWRF) and the Lotteries Fund in 2014-15 is \$71.8 billion.
- 3.37 As compared with the spending of \$26.5 billion in 1997-98, the annual cash flow on capital works has increased by a total of about 171% over 17 years.
- 3.38 Whilst the cash flow requirements on capital works tends to be volatile, the Working Group noted that over a period of some 30 years (from 1982-83 upon the establishment of the Capital Works Reserve Fund to 2014-15), capital works expenditure was on average 3.4% of real GDP. The Working Group assumes that capital works expenditure would be maintained at 3.4% of real GDP over the forecast period. Despite this, construction prices tended to and are assumed to rise faster than general inflation as measured by the GDP deflator. In terms of nominal GDP, capital works expenditure is projected to increase from 3.2% in 2014-15 to 7.2% in 2041-42. In dollar terms, capital works expenditure is projected to increase from \$71.8 billion to \$514.6 billion, at a growth rate of **7.6% per annum**, higher than the post-handover average annual growth of 6.0% (*Chart 3.15*).

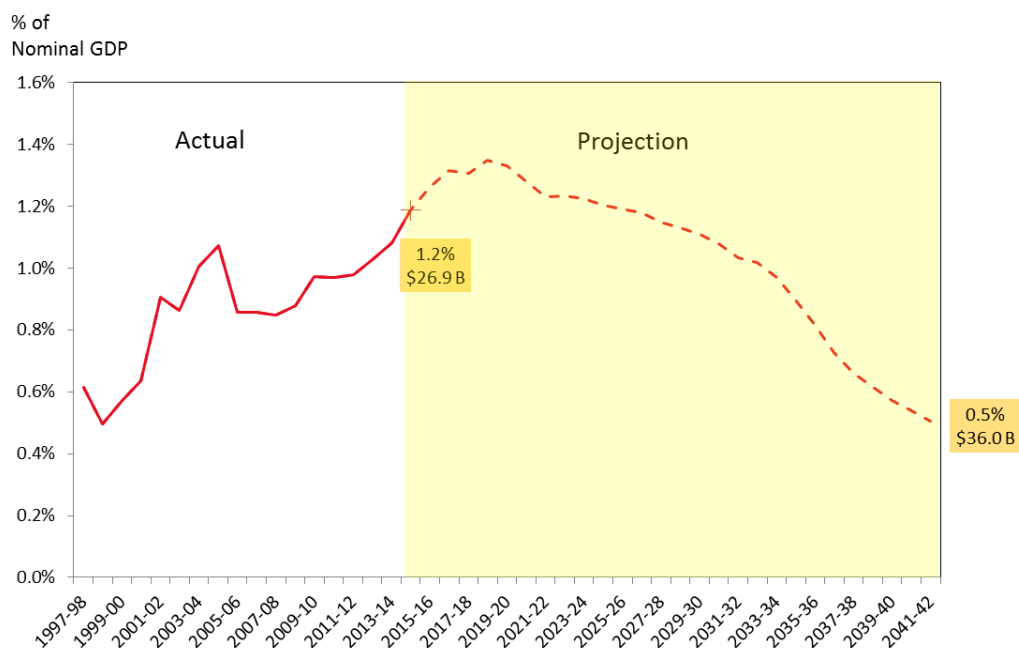
Chart 3.15 – Capital works expenditure from 1997-98 to 2041-42



**(E) Civil service pensions and Civil Service Provident Fund/ Mandatory Provident Fund contributions**

- 3.39 Pension benefits are payable mainly to the retired civil servants and judicial officers who joined the services before 1 June 2000. The expenditure comprises mainly two elements, namely (a) lump sum pensions gratuity payable at the time of the officer's retirement (commuted pension) and (b) a monthly pension till the pensioner is not eligible for payment. Pension payments are statutory liabilities. As at end-March 2013, there are about 116 000 serving pensionable officers and some 117 000 pensioners.
- 3.40 On the basis of an actuarial assessment on pension liability updated in October 2013, it is projected that the Government's expenditure on public and judicial service pension benefits would increase gradually from \$26.9 billion in 2014-15 to the **peak at \$50.9 billion in 2032-33**, when most of the pensionable officers would be retiring and receiving their lump sum pension gratuities over the period. The expenditure is projected to decrease henceforth to \$36 billion by 2041-42. In terms of percentage of nominal GDP, pension expenditure would be 1.2% in 2014-15 and 0.5% in 2041-42 (*Chart 3.16*).

Chart 3.16 – Pension expenditure from 1997-98 to 2041-42



3.41 Civil servants joining the service on or after 1 June 2000 are no longer eligible for pension upon their retirement. They are eligible for employer’s contribution to Mandatory Provident Fund (MPF) and then Civil Service Provident Fund (CSPF) upon progressing onto permanent terms of appointment in three years’ time.

3.42 Expenditure on MPF/CSPF contributions for the existing level of staff is projected to increase from \$2.1 billion in 2014-15 to \$32.3 billion by 2041-42. This factor has been taken into consideration in the projection of Government’s total expenditure.

## (F) Other Expenditure

3.43 The projections in sections (A) – (E) above have yet to cover –

- (a) recurrent government expenditure on security, infrastructure, economic, housing<sup>3</sup>, environment and food, community and external affairs, and support (other than pension benefits) (termed as “**other recurrent expenditure**” in this report), which are less affected by age-related changes in population structure;
- (b) **non-recurrent expenditure**, which is expenditure on items of a one-off nature but not involving the acquisition or construction of physical assets; and
- (c) **other capital expenditure**, which includes purchases of equipment and payment from the Capital Investment Fund, Disaster Relief Fund, Innovation and Technology Fund, etc.

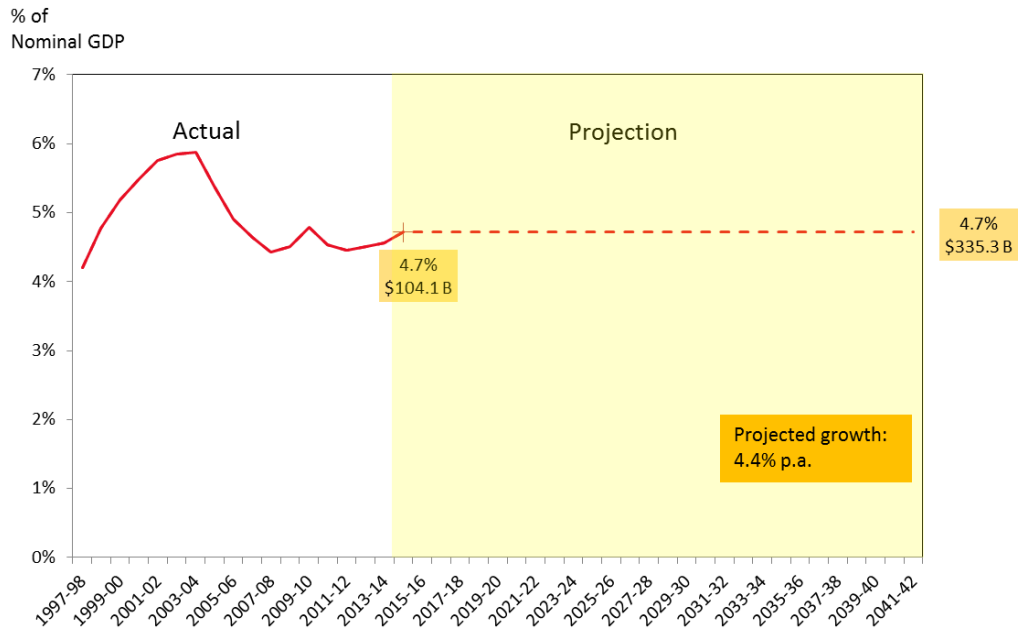
3.44 Based on the actual expenditure trends in these portfolios in recent years, the Working Group has assumed that these expenditures would grow as a constant share of nominal GDP from 2014-15 to 2041-42. The expenditure projections for these are as follows –

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<sup>3</sup> This expenditure is for exercising building control of former Housing Authority buildings and facilitate the development of private residential property market. It should be distinguished from the funding support for Housing Authority for the construction of public housing.

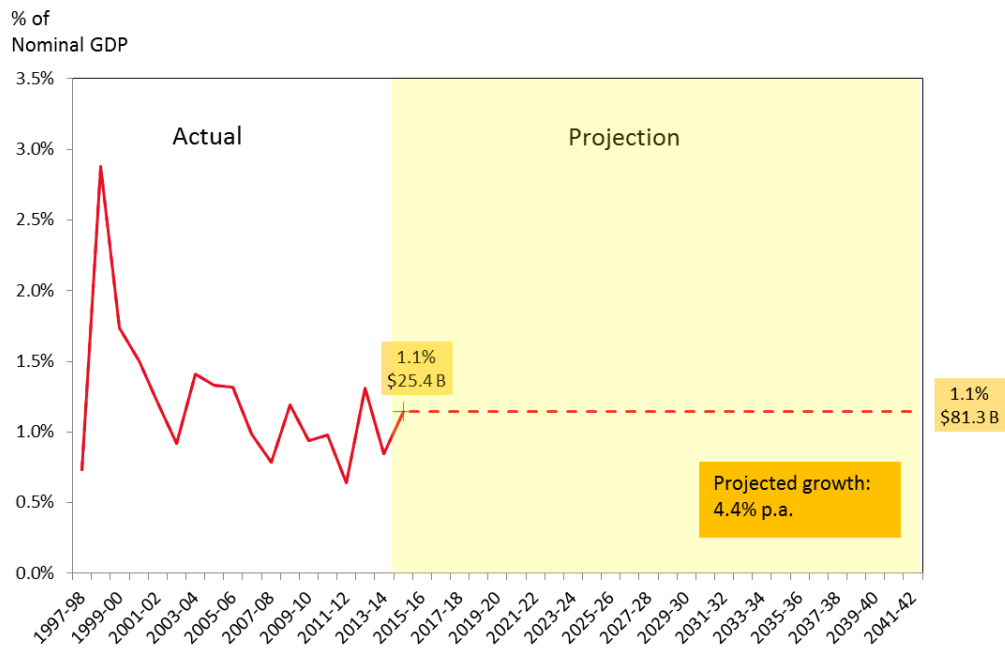
- (a) **Other recurrent expenditure** is projected to stay at 4.7% of nominal GDP from 2014-15 to 2041-42; or in dollar terms, from \$104.1 billion to \$335.3 billion, reflecting a growth rate of 4.4% per annum (*Chart 3.17*).

*Chart 3.17 – Other Recurrent Expenditure from 1997-98 to 2041-42*



(b) **Non-recurrent and other capital expenditure** (after adjustments to exclude one-off fund injections and relief measures) is projected to stay at 1.1% of nominal GDP from 2014-15 to 2041-42; or in dollar terms, increase from \$25.4 billion to \$81.3 billion, reflecting a growth rate of 4.4% per annum (*Chart 3.18*).

*Chart 3.18 – Non-recurrent and other capital expenditure from 1997-98 to 2041-42*





## **(G) Interest Expenses**

3.45 Taking into account the revenue projections in Chapter 4, there would be projection scenarios/cases where the fiscal reserves balance would not be sufficient to finance the funding shortfall up to 2041-42. Under these situations, loan financing would be assumed in the projection. Interest cost for such borrowing is assumed at 3.5% per annum, taking into account the prevailing 10-year bond yields and the possible upward trend in the coming years. In the worst scenario, i.e. the Service Enhancement at Historical Trend Scenario under the Shock Case, interest expenses for 2041-42 would reach 8.6% of the nominal GDP, or \$409.2 billion. The projected interest expenses have been included in the projection on total government expenditure as appropriate.

## **Housing Authority**

- 3.46 The expenditure of the Housing Authority does not form part of the government expenditure and is therefore not covered in the projections discussed in the previous sections. However, the Working Group reckons that housing is a top priority of the Government and commitments on the housing programme would have substantive financial implications on the public sector.
- 3.47 The Housing Authority is a statutory body established in April 1973 under the Housing Ordinance (Cap. 283). It develops and implements a public housing programme which seeks to achieve the Government's policy objective to meet the housing needs of low-income families which cannot afford private accommodation.
- 3.48 For the purpose of assessing the fiscal pressure which the housing construction programme may have on the Government, the Working Group has examined the preliminary longer term projections of the Housing Authority and has assumed that the funding shortfall of the Housing Authority would be met by government injection in entirety. The Working Group has examined two scenarios –
- (a) Scenario 1 – this scenario assumes that the Public Rental Housing (PRH) rent increase is at 5% biennially.

Under this scenario, the projected funding shortfall for the Housing Authority could be \$31 billion at the beginning of 2019-20. The amount of funding source required every three years thereafter could be in the range of \$29 billion to \$82 billion. The total funding shortfall could reach about \$490 billion by 2041-42.

- (b) Scenario 2 – this scenario assumes that PRH rent increase is at 10% biennially.

Under this scenario, the projected funding shortfall for the Housing Authority could be \$27 billion at the beginning of 2020-21. The amount of funding source required every three years thereafter could vary from \$15 billion to \$33 billion. The total funding shortfall could reach about \$130 billion by 2041-42.

- 3.49 The above analysis assumes that the Housing Authority would be able to comply with the commitment in the 2013 Policy Address, to provide 20 000 PRH units and 5 000 Home Ownership Scheme (HOS) units every year. It does not reflect the commitment in the 2014 Policy Address to provide 8 000 instead of 5 000 HOS units every year. The analysis is without prejudice to the future negotiation between the Government and the Housing Authority.

## Conclusion

3.50 Assuming that the economy would grow along the lines set out in the Base Case, the Government's total expenditure is projected to increase from 19% of the nominal GDP or \$421.0 billion in 2014-15 to the following levels under the various scenarios –

	Total government expenditure by 2041-42	
	% of GDP	\$ Billion
No Service Enhancement	23.9%	1,700
Service Enhancement @ 1% per annum	28.4%	2,018
Service Enhancement @ 2% per annum	34.0%	2,413
Service Enhancement @ Historical Trend	41.5%	2,949

3.51 If the funding shortfalls for the Housing Authority were to be absorbed as Government's ultimate liability, the projected total expenditure for the Government could increase by another \$130 billion to \$490 billion by 2041-42 (before the commitment announced in the 2014 Policy Address). The projection could involve an extra 0.3 to 1.5 percentage points of the nominal GDP in the years requiring Government's funding support.

3.52 Article 107 of the Basic Law requires the Government to keep the budget commensurate with the growth rate of GDP. The Working Group notes with concern that the projected expenditure growth would outpace the growth of the economy. Proposed measures to contain the expenditure growth are discussed in Chapter 7.