

# APPENDICES

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*Note:* Expenditure figures for 2020-21 and before have been adjusted to align with the definitions and policy area group classifications adopted in the 2021-22 estimate.



# **APPENDIX A**

## **MEDIUM RANGE FORECAST**



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## SECTION I FORECASTING ASSUMPTIONS AND BUDGETARY CRITERIA

**1** The Medium Range Forecast (MRF) is a fiscal planning tool. It sets out the high-level forecast of government expenditure and revenue as well as the financial position covering the five-year period including the budget year, i.e. from 2021-22 to 2025-26.

**2** A wide range of assumptions underlying the factors affecting Government's revenue and expenditure are used to derive the MRF. Some assumptions are economic in nature (the general economic assumptions) while others deal with specific areas of Government's activities (other assumptions).

### General Economic Assumptions

#### *Real Gross Domestic Product (real GDP)*

**3** GDP growth is forecast to range from 3.5% to 5.5% in real terms in 2021. We have used the mid-point of this range forecast in deriving the MRF. For planning purposes, in the four-year period 2022 to 2025, the trend growth rate of the economy in real terms is assumed to be 3.3% per annum.

#### *Price change*

**4** The GDP deflator, measuring overall price change in the economy, is forecast to increase by 1% in 2021. For the four-year period 2022 to 2025, the GDP deflator is assumed to increase at a trend rate of 2% per annum.

**5** The Composite Consumer Price Index (CCPI), measuring inflation in the consumer domain, is forecast to increase by 1.6% in 2021. Netting out the effects of various one-off relief measures, the underlying CCPI is forecast to increase by 1% in 2021. For the ensuing period 2022 to 2025, the trend rate of increase for the underlying CCPI is assumed to be 2% per annum.

#### *Nominal Gross Domestic Product (nominal GDP)*

**6** Given the assumptions on the rates of change in the real GDP and the GDP deflator, the GDP in nominal terms is forecast to increase by 4.5% to 6.5% in 2021, and the trend growth rate in nominal terms for the period 2022 to 2025 is assumed to be 5.3% per annum.

### Other Assumptions

**7** Other assumptions on expenditure and revenue patterns over the forecast period are as follows –

- The operating expenditure for 2022-23 and beyond represents the forecast expenditure requirements for Government.
- The capital expenditure for 2021-22 and beyond reflects the estimated cash flow requirements for capital projects including approved capital works projects and those at an advanced stage of planning.
- The revenue projections for 2022-23 and beyond basically reflect the relevant trend yields.

### Budgetary Criteria

**8** Article 107 of the Basic Law stipulates that “*The Hong Kong Special Administrative Region shall follow the principle of keeping expenditure within the limits of revenues in drawing up its budget, and strive to achieve a fiscal balance, avoid deficits and keep the budget commensurate with the growth rate of its gross domestic product.*”

**9** Article 108 of the Basic Law stipulates that “*... The Hong Kong Special Administrative Region shall, taking the low tax policy previously pursued in Hong Kong as reference, enact laws on its own concerning types of taxes, tax rates, tax reductions, allowances and exemptions, and other matters of taxation.*”

**10** For the purpose of preparing the MRF, the following criteria are also relevant –

#### *Budget surplus/deficit*

The Government aims to achieve, over time, a balance in the consolidated account.

#### *Expenditure policy*

The general principle is that, over time, the growth rate of expenditure should be commensurate with the growth rate of the economy.

#### *Revenue policy*

The Government aims to maintain, over time, the real yield from revenue.

#### *Fiscal reserves*

The Government aims to maintain adequate reserves in the long run.

**SECTION II MEDIUM RANGE FORECAST**

**11** The financial position of the Government for the current MRF period (*Note (a)*) is summarised below –

Table 1

(\$ million)	2020-21 Revised Estimate	2021-22 Estimate	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast
<b>Operating Account</b>						
Operating revenue ( <i>Note (b)</i> )	440,351	470,278	531,778	546,264	571,923	599,944
Less: Operating expenditure ( <i>Note (c)</i> )	721,192	611,900	572,000	586,900	603,300	622,300
<b>Operating deficit</b>	<b>(280,841)</b>	<b>(141,622)</b>	<b>(40,222)</b>	<b>(40,636)</b>	<b>(31,377)</b>	<b>(22,356)</b>
<b>Capital Account</b>						
Capital revenue ( <i>Note (d)</i> )	103,144	120,827	143,829	142,185	146,554	160,294
Less: Capital expenditure ( <i>Note (e)</i> )	99,193	115,927	150,573	154,736	157,363	145,654
<b>Capital surplus / (deficit)</b>	<b>3,951</b>	<b>4,900</b>	<b>(6,744)</b>	<b>(12,551)</b>	<b>(10,809)</b>	<b>14,640</b>
<b>Consolidated Account</b>						
Government revenue	543,495	591,105	675,607	688,449	718,477	760,238
Less: Government expenditure	820,385	727,827	722,573	741,636	760,663	767,954
<b>Consolidated deficit before issuance and repayment of bonds</b>	<b>(276,890)</b>	<b>(136,722)</b>	<b>(46,966)</b>	<b>(53,187)</b>	<b>(42,186)</b>	<b>(7,716)</b>
Add: Net proceeds from issuance of green bonds under the Government Green Bond Programme ( <i>Note (f)</i> )	19,303	35,100	35,100	35,100	35,100	35,100
Less: Repayment of green bonds ( <i>Note (f)</i> )	-	-	-	-	7,800	7,800
<b>Consolidated surplus / (deficit) after issuance and repayment of bonds</b>	<b>(257,587)</b>	<b>(101,622)</b>	<b>(11,866)</b>	<b>(18,087)</b>	<b>(14,886)</b>	<b>19,584</b>
<b>Fiscal reserves at 31 March</b>	<b>902,721</b>	<b>801,099</b>	<b>789,233</b>	<b>771,146</b>	<b>756,260</b>	<b>775,844</b>
In terms of number of months of government expenditure	13	13	13	12	12	12
In terms of percentage of GDP	33.3%	28.0%	26.2%	24.3%	22.6%	22.1%

**Fiscal Reserves**

**12** Part of the fiscal reserves has, since 1 January 2016, been held in a notional savings account called the Future Fund, which is placed with the Exchange Fund with a view to securing higher investment returns over a ten-year investment period. The initial endowment of the Future Fund was \$219,730 million, being the balance of the Land Fund on 1 January 2016. \$4.8 billion of the consolidated surplus from the Operating and Capital Reserves was transferred to the Future Fund as top-up in 2016-17. The arrangement thereafter is subject to an annual review by the Financial Secretary.

Table 2

<b>Distribution of fiscal reserves at 31 March</b>					
	2020-21 Revised Estimate	2021-22 Estimate			
(\$ million)			Future Fund	Operating and Capital Reserves	Total
General Revenue Account	443,588	<b>288,888</b>	4,800*	284,088	288,888
Funds with designated use	239,442	<b>254,843</b>		254,843	254,843
Capital Works Reserve Fund	128,202	<b>143,337</b>		143,337	143,337
Capital Investment Fund	21,702	<b>20,751</b>		20,751	20,751
Civil Service Pension Reserve Fund	42,770	<b>48,826</b>		48,826	48,826
Disaster Relief Fund	27	<b>100</b>		100	100
Innovation and Technology Fund	22,465	<b>18,430</b>		18,430	18,430
Loan Fund	3,174	<b>4,001</b>		4,001	4,001
Lotteries Fund	21,102	<b>19,398</b>		19,398	19,398
Land Fund	219,691	<b>257,368</b>	257,368	-	257,368
	<u>902,721</u>	<u><b>801,099</b></u>	<u>262,168</u>	<u>538,931</u>	<u>801,099</u>
In terms of number of months of government expenditure	13	13	4	9	13

\* Being one-third of 2015-16 consolidated surplus.

**13** The fiscal reserves would be drawn on to fund contingent and other liabilities. As detailed in Section IV, these include over \$489 billion for capital works projects underway and about \$508 billion as statutory pension obligations in the coming ten years.



Notes –

(a) *Accounting policies*

- (i) The MRF is prepared on a cash basis and reflects forecast receipts and payments, whether they relate to operating or capital transactions.
- (ii) The MRF includes the General Revenue Account and eight Funds (Capital Investment Fund, Capital Works Reserve Fund, Civil Service Pension Reserve Fund, Disaster Relief Fund, Innovation and Technology Fund, Land Fund, Loan Fund and Lotteries Fund). It does not include the Bond Fund which is managed separately and the balance of which does not form part of the fiscal reserves.

(b) *Operating revenue*

- (i) The operating revenue takes into account the revenue measures proposed in the 2021-22 Budget, and is made up of –

(\$ million)	2020-21 Revised Estimate	2021-22 Estimate	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast
Operating revenue before investment income	398,490	402,479	481,558	511,418	542,251	570,036
Investment income ( <i>Note (g)</i> )	41,861	67,799	50,220	34,846	29,672	29,908
Total	440,351	470,278	531,778	546,264	571,923	599,944

- (ii) Investment income under the Operating Account includes investment income of the General Revenue Account which is credited to revenue head Properties and Investments. The rate of investment return is 4.7% for 2021 (vs 3.7% for 2020) and is assumed to be in the range of 4.7% to 6.0% a year for 2022 to 2025.
- (iii) Investment income of the Future Fund includes investment income of the relevant portion of the General Revenue Account and investment income of the Land Fund, compounded on an annual basis. As directed by the Financial Secretary, the investment income will be brought back to the Government's accounts starting from 2021-22.

(c) *Operating expenditure*

This represents expenditure charged to the Operating Account of the General Revenue Account and Land Fund. The figures for 2022-23 and beyond set out the forecast operating expenditure requirements for Government.

*(d) Capital revenue*

(i) The breakdown of capital revenue is –

(\$ million)	2020-21 Revised Estimate	2021-22 Estimate	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast
General Revenue Account	3,750	3,081	2,145	2,139	2,885	2,884
Capital Investment Fund	699	708	834	991	1,208	1,643
Capital Works Reserve Fund	87,093	97,607	108,410	114,156	120,208	126,576
Disaster Relief Fund	2	-	-	-	-	-
Innovation and Technology Fund	42	-	-	-	-	-
Loan Fund	685	1,450	3,592	3,864	3,858	3,921
Lotteries Fund	295	1,202	1,412	1,415	1,418	1,421
Capital revenue before investment income	92,566	104,048	116,393	122,565	129,577	136,445
Investment income ( <i>Note (g)</i> )	10,578	16,779	27,436	19,620	16,977	23,849
Total	103,144	120,827	143,829	142,185	146,554	160,294

(ii) Land premium included under the Capital Works Reserve Fund for 2021-22 is estimated to be \$97.6 billion. For 2022-23 onwards, it is assumed to be 3.6% of GDP, being the 15-year historical average.

(iii) Investment income under the Capital Account includes investment income of the Capital Investment Fund, Capital Works Reserve Fund, Civil Service Pension Reserve Fund, Disaster Relief Fund, Innovation and Technology Fund, Loan Fund and Lotteries Fund. The rate of investment return is 4.7% for 2021 (vs 3.7% for 2020) and is assumed to be in the range of 4.7% to 6.0% a year for 2022 to 2025.

*(e) Capital expenditure*

The breakdown of capital expenditure is –

(\$ million)	2020-21 Revised Estimate	2021-22 Estimate	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast
General Revenue Account	5,987	8,393	9,622	9,213	10,661	8,888
Capital Investment Fund	2,684	2,654	8,133	5,480	8,335	6,846
Capital Works Reserve Fund	77,999	92,426	117,105	124,016	123,145	114,577
Disaster Relief Fund	72	-	-	-	-	-
Innovation and Technology Fund	5,331	5,062	6,267	7,338	6,638	5,340
Loan Fund	3,758	2,818	2,918	2,871	2,951	3,071
Lotteries Fund	3,362	4,574	6,528	5,818	5,633	6,932
Total	99,193	115,927	150,573	154,736	157,363	145,654

*(f) Government bonds*

The Government issued the inaugural and second green bonds under the Government Green Bond Programme in May 2019 and February 2021 respectively, and plans to issue more green bonds from 2021-22 to 2025-26. The actual size and timing of issuance will be determined having regard to market conditions. The net proceeds of the Programme are credited to the Capital Works Reserve Fund to finance projects of the Government with environmental benefits.

*(g) Housing Reserve*

The Housing Reserve was established in 2014 to support public housing development projects. As announced in the 2019-20 Budget Speech, the Housing Reserve would be brought back to the Government's accounts over four years from 2019-20 to 2022-23 as investment income, and would earn the same rate of investment return as stipulated in *Note (b)(ii)* above. At the same time, \$82.4 billion (the balance of the Housing Reserve at 31 December 2018) was earmarked for public housing development. \$21.2 billion and \$22.0 billion have been brought back from the Housing Reserve in 2019-20 and 2020-21 respectively.

### SECTION III RELATIONSHIP BETWEEN GOVERNMENT EXPENDITURE/PUBLIC EXPENDITURE AND GDP IN THE MEDIUM RANGE FORECAST

**14** For monitoring purposes, expenditure of the Trading Funds and the Housing Authority (collectively referred to as “other public bodies” in this Appendix) is added to government expenditure in order to compare public expenditure with GDP.

#### Government Expenditure and Public Expenditure in the Context of the Economy

Table 3

(\$ million)	2020-21 Revised Estimate	2021-22 Estimate	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast
Operating expenditure	721,192	611,900	572,000	586,900	603,300	622,300
Capital expenditure	99,193	115,927	150,573	154,736	157,363	145,654
<b>Government expenditure</b>	<b>820,385</b>	<b>727,827</b>	<b>722,573</b>	<b>741,636</b>	<b>760,663</b>	<b>767,954</b>
Expenditure by other public bodies	39,751	43,564	45,169	48,771	49,709	51,795
<b>Public expenditure (Note (a))</b>	<b>860,136</b>	<b>771,391</b>	<b>767,742</b>	<b>790,407</b>	<b>810,372</b>	<b>819,749</b>
<b>Gross Domestic Product (calendar year)</b>	<b>2,710,730</b>	<b>2,859,800</b>	<b>3,011,400</b>	<b>3,171,000</b>	<b>3,339,100</b>	<b>3,516,000</b>
Nominal growth in GDP (Note (b))	-5.4%	5.5%	5.3%	5.3%	5.3%	5.3%
Growth in recurrent government expenditure (Note (c))	7.6%	9.6%	3.5%	3.9%	4.7%	3.7%
Growth in government expenditure (Note (c))	35.0%	-11.3%	-0.7%	2.6%	2.6%	1.0%
Growth in public expenditure (Note (c))	33.8%	-10.3%	-0.5%	3.0%	2.5%	1.2%
<b>Public expenditure in terms of percentage of GDP</b>	<b>31.7%</b>	<b>27.0%</b>	<b>25.5%</b>	<b>24.9%</b>	<b>24.3%</b>	<b>23.3%</b>

Notes –

- (a) Public expenditure comprises government expenditure and expenditure by other public bodies. It does not include expenditure by those organisations, including statutory organisations in which the Government has only an equity position, such as the Airport Authority and the MTR Corporation Limited.
- (b) For 2021-22, the nominal GDP growth of 5.5% represents the mid-point of the range forecast of 4.5% to 6.5% for the calendar year 2021.
- (c) The growth rates for 2020-21 to 2025-26 refer to year-on-year change. For example, the rates for 2020-21 refer to the change between the revised estimate for 2020-21 and the actual expenditure in 2019-20. The rates for 2021-22 refer to the change between the 2021-22 estimate and the 2020-21 revised estimate, and so forth.

**15** Table 4 shows the relationship amongst the sum to be appropriated in the 2021-22 Budget, government expenditure and public expenditure.

**Relationship between Government Expenditure  
and Public Expenditure in 2021-22**

Table 4

(\$ million)	Appropriation	Government expenditure and revenue			Public expenditure
		Operating	Capital	Total	
<b>Expenditure</b>					
General Revenue Account					
Operating					
Recurrent	517,622	517,622	-	517,622	517,622
Non-recurrent	94,276	94,276	-	94,276	94,276
Capital					
Plant, equipment and works	5,113	-	5,113	5,113	5,113
Subventions	3,280	-	3,280	3,280	3,280
	620,291	611,898	8,393	620,291	620,291
Transfer to Funds	5,089	-	-	-	-
Capital Investment Fund	-	-	2,654	2,654	2,654
Capital Works Reserve Fund	-	-	92,426	92,426	92,426
Innovation and Technology Fund	-	-	5,062	5,062	5,062
Land Fund	-	2	-	2	2
Loan Fund	-	-	2,818	2,818	2,818
Lotteries Fund	-	-	4,574	4,574	4,574
Trading Funds	-	-	-	-	6,760
Housing Authority	-	-	-	-	36,804
	625,380	611,900	115,927	727,827	771,391
<b>Revenue</b>					
General Revenue Account					
Taxation		356,648	10	356,658	
Other revenue		75,951	3,071	79,022	
		432,599	3,081	435,680	
Capital Investment Fund		-	1,703	1,703	
Capital Works Reserve Fund		-	107,461	107,461	
Civil Service Pension Reserve Fund		-	3,035	3,035	
Disaster Relief Fund		-	5	5	
Innovation and Technology Fund		-	1,027	1,027	
Land Fund		37,679	-	37,679	
Loan Fund		-	1,645	1,645	
Lotteries Fund		-	2,870	2,870	
		470,278	120,827	591,105	
<b>Surplus / (Deficit)</b>		(141,622)	4,900	(136,722)	

**SECTION IV CONTINGENT AND MAJOR UNFUNDED LIABILITIES**

**16** The Government's contingent liabilities as at 31 March 2020, 31 March 2021 and 31 March 2022, are provided below as supplementary information to the MRF –

Table 5

(\$ million)	2020	At 31 March 2021	2022
Guarantee to the Hong Kong Export Credit Insurance Corporation for liabilities under contracts of insurance	36,726	38,872	40,300
Guarantees provided under the SME Financing Guarantee Scheme	24,835	74,906	92,909
Legal claims, disputes and proceedings	7,461	6,067	3,583
Subscription to callable shares in the Asian Development Bank	5,833	6,132	6,132
Subscription to callable shares in the Asian Infrastructure Investment Bank	4,800	4,745	4,745
Guarantees provided under the SME Loan Guarantee Scheme	3,877	3,260	2,576
Guarantees provided under a commercial loan of the Hong Kong Science and Technology Parks Corporation	975	947	920
Guarantees provided under the Special Loan Guarantee Scheme	329	112	102
Total	84,836	135,041	151,267

**17** The Government's major unfunded liabilities as at 31 March 2020 were as follows –

(\$ million)

Present value of statutory pension obligations ( <i>Note (a)</i> )	1,003,217
Untaken leave ( <i>Note (b)</i> )	28,169
Green bonds	7,754

*Notes –*

- (a) The statutory pension obligations for the coming ten years are estimated to be about \$508 billion in money of the day.
- (b) The estimate for “untaken leave” gives an indication of the overall value of leave earned but not yet taken by serving public officers.

**18** The estimated outstanding commitments of capital works projects as at 31 March 2020 and 31 March 2021 are \$390,573 million and \$489,020 million respectively. Some of these are contractual commitments.

