APPENDICES

Note: Expenditure figures for 2016-17 and before have been adjusted to align with the definitions and policy area group classifications adopted in the 2017-18 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 covering the five-year period including the budget year, i.e. from 2017-18 to 2021-22.

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 is forecast to increase by 2% to 3% in real terms in 2017. We have used the mid-point of this range forecast in deriving the MRF. For planning purposes, in the four-year period 2018 to 2021, the trend growth rate of the economy in real terms is assumed to be 3% per annum.

Price change

4 The GDP deflator, measuring overall price change in the economy, is forecast to increase by 2% in 2017. For the four-year period 2018 to 2021, the GDP deflator is assumed to increase at a trend rate of 1.5% per annum.

5 The Composite Consumer Price Index (CCPI), measuring inflation in the consumer domain, is forecast to increase by 1.8% in 2017. Netting out the effects of various one-off relief measures, the underlying CCPI is forecast to increase by 2% in 2017. For the ensuing period 2018 to 2021, the trend rate of increase for the underlying CCPI is assumed to be 2.5% 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% to 5% in 2017, and the trend growth rate in nominal terms for the period 2018 to 2021 is assumed to be 4.5% per annum.

Other Assumptions

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

— The operating expenditure for 2018-19 and beyond represents the expenditure requirements for Government, forecast on a broad-brush basis.

— The capital expenditure for 2017-18 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 2018-19 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 a balance in the consolidated and operating accounts. The Government aims, over time, to achieve an operating surplus to partially finance capital expenditure.

— *Expenditure policy*

The general principle is that, over time, the growth rate of expenditure should not exceed the growth rate of the economy and that public expenditure should be kept at the order of 20% of GDP.

— *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)	2016-17 Revised Estimate	2017-18 Estimate	2018-19 Forecast	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast
Operating Account						
Operating revenue *(Note (b))*	408,243	395,256	438,952	455,339	476,812	500,871
Less: Operating expenditure *(Note (c))*	354,096	384,200	415,000	437,300	457,700	482,400
Operating surplus	**54,147**	**11,056**	**23,952**	**18,039**	**19,112**	**18,471**
Capital Account						
Capital revenue *(Note (d))*	151,278	112,443	104,039	108,044	110,746	116,308
Less: Capital expenditure *(Note (e))*	112,590	107,211	120,726	124,124	138,353	143,157
Capital surplus / (deficit)	**38,688**	**5,232**	**(16,687)**	**(16,080)**	**(27,607)**	**(26,849)**
Consolidated Account						
Government revenue	559,521	507,699	542,991	563,383	587,558	617,179
Less: Government expenditure	466,686	491,411	535,726	561,424	596,053	625,557
Consolidated surplus / (deficit) before repayment of bonds and notes	**92,835**	**16,288**	**7,265**	**1,959**	**(8,495)**	**(8,378)**
Less: Repayment of bonds and notes *(Note (f))*	-	-	-	1,500	-	-
Consolidated surplus / (deficit) after repayment of bonds and notes	**92,835**	**16,288**	**7,265**	**459**	**(8,495)**	**(8,378)**
Fiscal reserves at 31 March	**935,723**	**952,011**	**959,276**	**959,735**	**951,240**	**942,862**
In terms of number of months of government expenditure	24	23	21	21	19	18
In terms of percentage of GDP	37.6%	36.6%	35.3%	33.8%	32.0%	30.4%

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 top-up arrangement beyond 2016-17 would be subject to an annual review by the Financial Secretary.

Table 2

Distribution of fiscal reserves at 31 March

($ million)	2016-17 Revised Estimate	**2017-18 Estimate**	Future Fund	Operating and Capital Reserves	Total
General Revenue Account	559,009	**557,697**	4,800*	552,897	557,697
Funds with designated use	156,984	**174,584**		174,584	174,584
Capital Works Reserve Fund	87,180	**103,814**		103,814	103,814
Capital Investment Fund	3,078	**3,612**		3,612	3,612
Civil Service Pension Reserve Fund	31,899	**35,130**		35,130	35,130
Disaster Relief Fund	28	**80**		80	80
Innovation and Technology Fund	7,979	**6,413**		6,413	6,413
Loan Fund	3,938	**3,374**		3,374	3,374
Lotteries Fund	22,882	**22,161**		22,161	22,161
Land Fund	219,730	**219,730**	219,730	-	219,730
	935,723	**952,011**	224,530	727,481	952,011
In terms of number of months of government expenditure	24	23	5	18	23

* 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 $300 billion for capital works projects under way and about $450 billion as statutory pension obligations in the coming ten years.

14 Of the $200 billion needed for the Ten-year Hospital Development Plan, about $90 billion has been reflected as expenditure within the MRF period, leaving a balance of $110 billion to be charged against the fiscal reserves.

15 A total of $40.7 billion has been newly earmarked in the fiscal reserves for providing support to the elderly and the disadvantaged ($30 billion), promoting innovation and technology ($10 billion), and enhancing student and teacher development ($0.7 billion).

16 The Chief Executive has announced in the 2017 Policy Address that $20 billion would be set aside for a series of sports facilities. The provision would be charged against the fiscal reserves.

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 2017-18 Budget, and is made up of –

($ million)	2016-17 Revised Estimate	2017-18 Estimate	2018-19 Forecast	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast
Operating revenue before investment income	391,477	380,132	420,881	440,533	462,711	484,606
Investment income	16,766	15,124	18,071	14,806	14,101	16,265
Total	408,243	395,256	438,952	455,339	476,812	500,871

(ii) Investment income under the Operating Account includes investment income of the General Revenue Account (other than the portion notionally held for the Future Fund) which is credited to revenue head Properties and Investments. The rate of investment return is 2.8% for 2017 (vs 3.3% for 2016) and is assumed to be in the range of 2.4% to 3.3% a year for 2018 to 2021.

(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. It will be retained by the Exchange Fund for reinvestment and will not be paid to Government until the end of the ten-year placement (i.e. 31 December 2025) or a date as directed by the Financial Secretary.

(c) Operating expenditure

This represents expenditure charged to the Operating Account of the General Revenue Account. The figures for 2018-19 and beyond set out the expenditure requirements for Government, forecast on a broad-brush basis.

(d) Capital revenue

(i) The breakdown of capital revenue is –

($ million)	2016-17 Revised Estimate	2017-18 Estimate	2018-19 Forecast	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast
General Revenue Account	24,302	1,489	3,794	5,598	4,280	4,279
Capital Investment Fund	1,347	1,185	1,150	1,317	1,429	1,616
Capital Works Reserve Fund	117,900	101,038	89,270	92,841	97,483	102,357
Disaster Relief Fund	3	-	-	-	-	-
Innovation and Technology Fund	40	8	-	-	-	-
Loan Fund	2,142	2,285	2,419	2,449	2,474	3,200
Lotteries Fund	1,411	1,475	1,554	1,638	1,726	1,819
Capital revenue before asset sales and investment income	147,145	107,480	98,187	103,843	107,392	113,271
Asset sales	169	281	308	266	266	266
Investment income	3,964	4,682	5,544	3,935	3,088	2,771
Total	151,278	112,443	104,039	108,044	110,746	116,308

(ii) Land premium included under the Capital Works Reserve Fund for 2017-18 is estimated to be $101 billion. For 2018-19 onwards, it is assumed to be 3.3% of GDP, being the ten-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 2.8% for 2017 (vs 3.3% for 2016) and is assumed to be in the range of 2.4% to 3.3% a year for 2018 to 2021.

(e) Capital expenditure

The breakdown of capital expenditure is –

($ million)	2016-17 Revised Estimate	2017-18 Estimate	2018-19 Forecast	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast
General Revenue Account	4,062	5,007	5,074	5,233	5,391	5,550
Capital Investment Fund	10,194	726	18	1,668	-	-
Capital Works Reserve Fund	90,772	91,654	104,239	108,957	125,376	130,886
Disaster Relief Fund	54	-	-	-	-	-
Innovation and Technology Fund	1,258	1,783	2,411	2,451	2,310	2,380
Loan Fund	4,976	5,214	4,241	2,622	2,553	2,526
Lotteries Fund	1,274	2,827	4,743	3,193	2,723	1,815
Total	112,590	107,211	120,726	124,124	138,353	143,157

(f) Repayment of bonds and notes

Repayment of bonds and notes is only in respect of the global bond issue in 2004. The outstanding principal of $1,500 million would be fully repaid in 2019-20.

(g) Housing Reserve

The Housing Reserve, which was established in 2014 to support large-scale public housing development projects, now stands at $77 billion. The sum is retained within the Exchange Fund to earn the same rate of investment return as stipulated in *Note (b)(ii)*. The Housing Reserve is kept outside the Government's accounts and does not form part of the fiscal reserves. Government will seek the approval of the Finance Committee before offering to draw on the Housing Reserve for injections into the Housing Authority.

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

17 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)	2012-13 to 2017-18 Trend Growth *(Note (d))*	2016-17 Revised Estimate	2017-18 Estimate	2018-19 Forecast	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast
Operating expenditure		354,096	384,200	415,000	437,300	457,700	482,400
Capital expenditure		112,590	107,211	120,726	124,124	138,353	143,157
Government expenditure		466,686	491,411	535,726	561,424	596,053	625,557
Expenditure by other public bodies		34,104	40,406	40,716	41,063	46,064	48,437
Public expenditure *(Note (a))*		500,790	531,817	576,442	602,487	642,117	673,994
Gross Domestic Product (calendar year)		2,489,109	2,601,100	2,718,200	2,840,500	2,968,300	3,101,900
Nominal growth in GDP *(Note (b))*	5.0%	3.8%	4.5%	4.5%	4.5%	4.5%	4.5%
Growth in recurrent government expenditure *(Note (c))*	7.2%	6.4%	7.4%	9.8%	5.9%	5.3%	5.6%
Growth in government expenditure *(Note (c))*	5.4%	7.1%	5.3%	9.0%	4.8%	6.2%	4.9%
Growth in public expenditure *(Note (c))*	5.9%	7.0%	6.2%	8.4%	4.5%	6.6%	5.0%
Public expenditure in terms of percentage of GDP		20.1%	20.4%	21.2%	21.2%	21.6%	21.7%

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 2017-18, the nominal GDP growth of 4.5% represents the mid-point of the range forecast of 4% to 5% for the calendar year 2017.

(c) The growth rates for 2016-17 to 2021-22 refer to year-on-year change. For example, the rates for 2016-17 refer to the change between revised estimate for 2016-17 and actual expenditure in 2015-16. The rates for 2017-18 refer to the change between the 2017-18 estimate and the 2016-17 revised estimate, and so forth.

(d) The trend growth rates refer to the average annual growths between 2012-13 and 2017-18 irrespective of fluctuations.

18 Table 4 shows the relationship amongst the sum to be appropriated in the 2017-18 Budget, government expenditure and public expenditure.

Relationship between Government Expenditure and Public Expenditure in 2017-18

Table 4

($ million)	Appropriation	Government expenditure and revenue			Public expenditure
		Operating	Capital	Total	
Expenditure					
General Revenue Account					
Operating					
Recurrent	370,965	370,965	-	370,965	370,965
Non-recurrent	13,235	13,235	-	13,235	13,235
Capital					
Plant, equipment and works	3,102	-	3,102	3,102	3,102
Subventions	1,905	-	1,905	1,905	1,905
	389,207	384,200	5,007	389,207	389,207
Transfer to Funds	8,850	-	-	-	-
Capital Investment Fund	-	-	726	726	726
Capital Works Reserve Fund	-	-	91,654	91,654	91,654
Innovation and Technology Fund	-	-	1,783	1,783	1,783
Loan Fund	-	-	5,214	5,214	5,214
Lotteries Fund	-	-	2,827	2,827	2,827
Trading Funds	-	-	-	-	4,843
Housing Authority	-	-	-	-	35,563
	398,057	384,200	107,211	491,411	531,817
Revenue					
General Revenue Account					
Taxation		337,231	15	337,246	
Other revenue		58,025	1,474	59,499	
		395,256	1,489	396,745	
Capital Investment Fund		-	1,260	1,260	
Capital Works Reserve Fund		-	103,788	103,788	
Civil Service Pension Reserve Fund		-	931	931	
Disaster Relief Fund		-	2	2	
Innovation and Technology Fund		-	217	217	
Loan Fund		-	2,650	2,650	
Lotteries Fund		-	2,106	2,106	
		395,256	112,443	507,699	
Surplus		11,056	5,232	16,288	

SECTION IV CONTINGENT AND MAJOR UNFUNDED LIABILITIES

19 The Government's contingent liabilities as at 31 March 2016, 31 March 2017 and 31 March 2018, are provided below as supplementary information to the MRF –

Table 5

($ million)	At 31 March 2016	2017	2018
Guarantee to the Hong Kong Export Credit Insurance Corporation for liabilities under contracts of insurance	33,453	36,729	39,041
Legal claims, disputes and proceedings	12,053	29,789	28,446
Guarantees provided under the SME Financing Guarantee Scheme – Special Concessionary Measures	24,079	19,382	13,905
Possible capital subscriptions to the Asian Development Bank	5,990	5,725	5,725
Guarantees provided under the SME Loan Guarantee Scheme	5,253	4,793	4,704
Guarantees provided under a commercial loan of the Hong Kong Science and Technology Parks Corporation	2,002	1,957	1,911
Guarantees provided under the Special Loan Guarantee Scheme	3,504	938	756
Total	86,334	99,313	94,488

20 The Government's major unfunded liabilities as at 31 March 2016 were as follows –

($ million)	
Present value of statutory pension obligations *(Note (a))*	874,746
Untaken leave *(Note (b))*	26,883
Government bonds and notes issued in 2004	1,500

Notes –

(a) The statutory pension obligations for the coming ten years are estimated to be about $450 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.

21 The estimated outstanding commitments of capital works projects as at 31 March 2016 and 31 March 2017 are $296,697 million and $310,334 million respectively. Some of these are contractual commitments.