

Appendix 1: Fiscal Responsibility Legislations and debt limits

The status of FRLs of the Big-10 countries (except People's Republic of China) may be summarised as follows:

1. In the European Union countries namely, Germany, Italy and France, the fiscal deficit and debt targets are determined by the Maastricht criteria. The Maastricht criteria include a limit of 3 per cent of GDP for the general government fiscal deficit and 60 per cent of GDP for public debt. These criteria were supplemented by the Stability and Growth Pact (SGP) agreement in 2005. In the SGP, country-specific medium-term budgetary objectives (MTOs) were set for the individual EU members. The fiscal compact establishes a structural deficit floor for the MTO of 0.5 per cent of GDP for countries with debt above 60 per cent of GDP and of 1 per cent of GDP for countries with debt significantly below 60 per cent of GDP. The extent of annual adjustment for achieving the MTO depends on the economy's cyclical position, debt level and the risks to public finance sustainability. As per the 2011 governance reform (Six Pack), lack of action to correct a significant deviation from the MTO can lead to the imposition of financial penalties.
2. India's Fiscal Responsibility and Budget Management Act 2003⁸ underwent a third amendment in March 2018, since its inception. As per the 2018 amendment, the general government and Union Government debt-GDP ratios have been targeted at 60 per cent and 40 per cent of GDP respectively to be achieved by fiscal year ending March 2025-26. The former fiscal deficit target of 3 per cent of GDP for the union government has now become an operational target which is to be achieved by fiscal year ending March 2021. The Union Government has been mandated to prescribe the annual targets for reduction of fiscal deficit for the period beginning from the date of commencement of the act and ending on 31 March 2021. The revenue deficit target has been given up.
3. In the UK, the 'Charter of Budget Responsibility (CBR)'⁹ sets out the framework for managing the public finances, the policy and operation of debt management. The 'Charter' also sets out the government's targets and the related rules. As per autumn 2016 update of the CBR¹⁰, the UK Treasury's objective for fiscal policy was to '*return the public finances to balance at the earliest possible date in the next Parliament*'. In order to meet this objective, the treasury was mandated to target '*to reduce the cyclically-adjusted public sector net borrowing to below 2 per cent of GDP by 2020-21*'. Further, this mandate was supplemented by a debt target, that is, '*a target for public sector net debt as a percentage of GDP to be falling in 2020-21*' and a welfare spending cap. The 2020 budget¹¹ proposes to adhere to the fiscal rules:
 - i. The current budget is to be brought in balance by the third year of the rolling five-year forecast period
 - ii. The public sector net investment (PSNI) should not exceed 3 per cent of GDP on average over the rolling five-year forecast period
 - iii. If the debt interest to revenue ratio is forecast to remain over 6 per cent for a sustained period, the government would take action to ensure a decline in government debt-to-GDP ratio.

4. In the USA, there is no constitutional provision to guide fiscal decision-making. The US Constitution allows the Congress to make spending, taxing, and borrowing decisions. Further, the Congress sets spending and revenue targets in the annual budget resolution. Consequently, a debt ceiling has been set and changed extensively. Since 1960, Congress has modified the U.S. debt limit 78 times¹². The last debt ceiling was introduced on 2 March 2019 at US\$21.9 trillion, that is, 102.6 per cent of the 2019 US nominal GDP (IMF). Eventually, this public debt limit was suspended in August 2019 until 31 July 2021 (Bipartisan Budget Act of 2019)¹³.

5. In Japan, as per the Fiscal Management Strategy of 2010¹⁴, a stable reduction in the public debt to GDP ratio for both national and local governments shall be maintained from FY2021 onwards. The corresponding fiscal balance targets have been defined as follows:

- For the national and local governments, the primary deficit to GDP ratio shall be halved from its level in FY2010 by FY2015 at the latest, and a surplus shall be achieved by FY2020 at the latest.
- In and after FY2021, efforts for fiscal consolidation shall be continued taking into account, the progress in achieving the debt target.

Recently, the 2018 Basic Policy on Economic and Fiscal Management and Reform¹⁵ postponed the achievement of a primary surplus by general government (central and local), by five years, to FY2025 from FY2020. The reform however continues to target to steadily reduce the government debt-to-GDP ratio.

6. In Brazil, a Fiscal Responsibility Law was enacted for all tiers of the government in May 2000. This law mandates a number of fiscal targets:

- The Senate sets debt limits for all levels of government. However, there was never an agreement reached on the limit for the central government. Thus, the only limits currently in place are for States and Municipalities. There are also limits set by the Senate for annual borrowing for States and Municipalities. The government sets numerical multiyear targets for the budget balance (for the current year and indicative targets for the next two years), expenditure and debt. In case of non-compliance, corrective measures need to be taken and can result in sanctions. Escape clauses exist for exceptional economic conditions and natural disaster but can only be invoked with Congressional approval. There is also the "golden rule" principle set in the Constitution (new borrowing should be at most equal to public investment).
- Personnel expenditure is limited to 50 per cent of net current revenue for the federal government, and 60 per cent for states and municipalities. Within each level of government, the law further specifies limits for the executive, legislative, judiciary and other offices, where applicable,
- permanent spending mandates cannot be created without permanent revenue increases or spending cuts

7. In Canada, in 1998, the debt repayment plan set out a “balanced budget or better” policy which, however, was not legislated at the federal level. A Contingency Reserve and an economic prudence factor were built into the federal budget and could be devoted to debt reduction. In 2006, the government abandoned the “balanced budget or better” rule with targets of C\$3 billion debt reduction, coupled with eliminating net general government debt by 2021 and federal debt by 2013-14 (later changed to 2011-12). Currently, at the federal level, Canada does not have explicit deficit and debt targets. However, a consistent decline in the debt-GDP ratio appears to be a soft anchor.

Appendix 2: Real GDP growth and deflator-based inflation rates

Table A1: Real GDP growth: 1997 to 2021

Year	BRA	CAN	PRC	DEU	FRA	IND	ITA	JPN	GBR	USA
1997	3.4	4.3	9.2	1.8	2.3	4	1.8	1.1	3.9	4.4
1998	0.3	3.9	7.8	2	3.6	6.2	1.8	-1.1	3.6	4.5
1999	0.5	5.2	7.7	1.9	3.4	8.5	1.6	-0.3	3.4	4.8
2000	4.4	5.2	8.5	2.9	3.9	4	3.8	2.8	3.4	4.1
2001	1.4	1.8	8.4	1.7	2	4.9	2	0.4	3	1
2002	3.1	3	9.1	-0.2	1.1	3.9	0.3	0.1	2.3	1.7
2003	1.1	1.8	10	-0.7	0.8	7.9	0.1	1.5	3.3	2.9
2004	5.8	3.1	10.2	1.2	2.8	7.8	1.4	2.2	2.4	3.8
2005	3.2	3.2	11.4	0.7	1.7	9.3	0.8	1.7	3.2	3.5
2006	4	2.6	12.7	3.8	2.4	9.3	1.8	1.4	2.8	2.9
2007	6.1	2.1	14.3	3	2.4	9.8	1.5	1.7	2.4	1.9
2008	5.1	1	9.7	1	0.3	3.9	-1	-1.1	-0.3	-0.1
2009	-0.1	-2.9	9.4	-5.7	-2.9	8.5	-5.3	-5.4	-4.2	-2.5
2010	7.5	3.1	10.6	4.2	1.9	10.3	1.7	4.2	1.9	2.6
2011	4	3.1	9.5	3.9	2.2	6.6	0.7	-0.1	1.5	1.6
2012	1.9	1.8	7.9	0.4	0.3	5.5	-3	1.5	1.5	2.2
2013	3	2.3	7.8	0.4	0.6	6.4	-1.8	2	2.1	1.8
2014	0.5	2.9	7.3	2.2	1	7.4	0	0.4	2.6	2.5
2015	-3.5	0.7	6.9	1.5	1.1	8	0.8	1.2	2.4	3.1
2016	-3.3	1	6.8	2.2	1.1	8.3	1.3	0.5	1.9	1.7
2017	1.3	3.2	6.9	2.6	2.3	7	1.7	2.2	1.9	2.3
2018	1.3	2	6.7	1.3	1.8	6.1	0.8	0.3	1.3	3
2019	1.1	1.7	6.1	0.6	1.5	4.2	0.3	0.7	1.5	2.2
Average (1997 to 2019)	2.3	2.4	8.9	1.4	1.6	6.9	0.6	0.8	2.1	2.4
2020	-5.8	-7.1	1.9	-6	-9.8	-10.3	-10.6	-5.3	-9.8	-4.3
2021	2.8	5.2	8.2	4.2	6	8.8	5.2	2.3	5.9	3.1

Source (basic data): IMF World Economic Outlook, October 2020

Table A2: GDP deflator-based inflation: 1997 to 2021

Year	BRA	CAN	PRC	DEU	FRA	IND	ITA	JPN	GBR	USA
1997	7.7	1.1	1.7	0.3	0.9	6.5	2.6	0.5	1.1	1.7
1998	4.9	-0.2	-1	0.7	1	8	2.4	0	1	1.1
1999	8	1.9	-1.3	0.3	0.2	3.4	1.5	-1.3	0.9	1.4
2000	5.6	4.3	2.1	-0.5	1.6	3.5	1.8	-1.4	1.9	2.2
2001	8.2	1.7	2.1	1.3	2	3.1	3	-1.1	1	2.2
2002	9.8	1.2	0.7	1.4	2.1	3.6	3.3	-1.5	2.1	1.6
2003	14.1	3.3	2.7	1.3	1.9	3.8	3.1	-1.6	2.3	1.9
2004	7.8	3.3	6.8	1.1	1.6	5.8	2.7	-1.1	2.5	2.7
2005	7.4	3.1	4.4	0.4	1.9	4.2	2	-1	2.5	3.1
2006	6.8	2.6	3.8	0.4	2.2	6.4	2.1	-0.9	2.8	3
2007	6.4	3.3	7.8	1.8	2.6	5.8	2.5	-0.7	2.6	2.7
2008	8.8	4	7.2	0.9	2.4	8.7	2.4	-1	2.9	1.9
2009	7.3	-2.3	-0.1	1.8	0.1	6.1	1.7	-0.6	1.7	0.8
2010	8.4	2.8	6.3	0.6	1.1	9	0.4	-1.9	1.5	1.2
2011	8.3	3.2	8.2	1.1	0.9	5.2	1.6	-1.7	2	2.1
2012	7.9	1.2	3.2	1.5	1.2	7.9	1.5	-0.8	1.7	1.9
2013	7.5	1.7	2.6	2	0.8	6.2	1.1	-0.3	1.9	1.8
2014	7.8	1.9	1	1.9	0.6	3.3	0.9	1.7	1.8	1.9
2015	7.6	-0.9	0.1	1.9	1.1	2.3	0.9	2.1	0.6	1
2016	8.1	0.8	0.9	1.3	0.5	3.2	1.1	0.3	2.1	1
2017	3.6	2.5	3.9	1.4	0.5	3.8	0.7	-0.2	1.9	1.9
2018	3.3	1.8	3.5	1.7	1	4.6	0.9	-0.1	2.1	2.4
2019	4.2	1.9	2.4	2.2	1.2	2.9	0.9	0.6	1.9	1.8
Average (1997 to 2019)	7.4	1.9	3	1.2	1.3	5.1	1.8	-0.5	1.9	1.9
2020	3.4	0.8	1.1	2	2	4.4	1.2	0.3	2.9	1.4
2021	3.3	2.5	1.7	1.9	0.3	3	0.9	0.3	-0.1	2.2

Source (basic data): IMF World Economic Outlook, October 2020

Appendix 3: Simulation results

Table 1: Simulation 1

Selecte d years (T)	Initial debt level (T-1)	Fiscal deficit	Real growth	Deflator based inflation	Projected debt (end of year T)	Initial debt level (T-1)	Fiscal deficit	Real growth	Deflator based inflation	Projected debt (end of year T)
Brazil					India					
2020	89.5	9.5	-5.8	3.4	101.2	72.3	12.1	-10.3	4.4	88.9
2021	101.2	7.3	2.8	3.3	102.7	88.9	10.1	8.8	3	89.8
2022	102.7	7.7	0.3	6.3	104.1	89.8	7.3	6.6	4.3	88.5
2030	112	7.7	0.3	6.3	112.9	81.9	7.3	6.6	4.3	81.3
2040	118.6	7.7	0.3	6.3	119.1	78	7.3	6.6	4.3	77.7

2050	122.2	7.7	0.3	6.3	122.4	76.5	7.3	6.6	4.3	76.4
Canada					Italy					
2020	88.6	20	-7.1	0.8	114.6	134.8	12.8	-10.6	1.2	161.5
2021	114.6	8.7	5.2	2.5	115.1	161.5	5.9	5.2	0.9	158.1
2022	115.1	3.7	1.9	1.4	115.1	158.1	3.3	0	1	159.8
2030	115.1	3.7	1.9	1.4	115.1	170.9	3.3	0	1	172.4
2040	115.1	3.7	1.9	1.4	115.1	185.5	3.3	0	1	186.9
2050	115.1	3.7	1.9	1.4	115.1	198.7	3.3	0	1	199.9
People's Republic of China					Japan					
2020	52.6	10.6	1.9	1.1	61.7	238	15.8	-5.3	0.3	266.1
2021	61.7	10.5	8.2	1.7	66.7	266.1	4.6	2.3	0.3	263.9
2022	66.7	5.9	7.1	2.2	66.9	263.9	5.5	1.1	0.4	265.5
2030	68.1	5.9	7.1	2.2	68.2	275.6	5.5	1.1	0.4	277
2040	68.9	5.9	7.1	2.2	69	288.4	5.5	1.1	0.4	289.6
2050	69.3	5.9	7.1	2.2	69.3	299.4	5.5	1.1	0.4	300.4
Germany					UK					
2020	59.5	11.2	-6	2	73.2	85.4	16.1	-9.8	2.9	107.7
2021	73.2	3.2	4.2	1.9	72.2	107.7	9.5	5.9	-0.1	111.2
2022	72.2	-0.3	1.4	1.7	69.7	111.2	3.7	1.9	1.8	111
2030	54.2	-0.3	1.4	1.7	52.2	109.6	3.7	1.9	1.8	109.4
2040	37	-0.3	1.4	1.7	35.6	108.1	3.7	1.9	1.8	107.9
2050	24.4	-0.3	1.4	1.7	23.3	107	3.7	1.9	1.8	106.9
France					USA					
2020	98.1	12.1	-9.8	2	118.5	108.7	19.2	-4.3	1.4	131.1
2021	118.5	6.9	6	0.3	118.4	131.1	9.1	3.1	2.2	133.7
2022	118.4	3.2	1.2	0.9	119.2	133.7	5.2	2.4	1.7	133.7
2030	124.5	3.2	1.2	0.9	125.2	133.8	5.2	2.4	1.7	133.8
2040	131	3.2	1.2	0.9	131.5	133.9	5.2	2.4	1.7	133.9
2050	136.2	3.2	1.2	0.9	136.7	133.9	5.2	2.4	1.7	133.9

Source (basic data): IMF

Table 1: Simulation 2

Selected years (T)	Initial debt level (T-1)	Fiscal deficit	Real growth	Deflator based inflation	Projected debt (end of year T)	Initial debt level (T-1)	Fiscal deficit	Real growth	Deflator based inflation	Projected debt (end of year T)
Brazil					India					
2020	89.5	9.5	-5.8	3.4	101.2	72.3	12.1	-10.3	4.4	88.9
2021	101.2	7.3	2.8	3.3	102.7	88.9	10.1	8.8	3	89.8
2022	102.7	6	0.3	6.3	102.4	89.8	6	6.6	4.3	87.1
2030	100.8	6	0.3	6.3	100.6	74.2	6	6.6	4.3	73
2040	99.5	6	0.3	6.3	99.4	66.3	6	6.6	4.3	65.9
2050	98.8	6	0.3	6.3	98.7	63.5	6	6.6	4.3	63.3

	Canada					Italy				
2020	88.6	20	-7.1	0.8	114.6	134.8	12.8	-10.6	1.2	161.5
2021	114.6	8.7	5.2	2.5	115.1	161.5	5.9	5.2	0.9	158.1
2022	115.1	3	1.9	1.4	114.4	158.1	3	0	1	159.5
2030	110.2	3	1.9	1.4	109.7	168.8	3	0	1	170.1
2040	105.7	3	1.9	1.4	105.4	181.1	3	0	1	182.2
2050	102.5	3	1.9	1.4	102.2	192.1	3	0	1	193.2
	People's Republic of China					Japan				
2020	52.6	10.6	1.9	1.1	61.7	238	15.8	-5.3	0.3	266.1
2021	61.7	10.5	8.2	1.7	66.7	266.1	4.6	2.3	0.3	263.9
2022	66.7	6	7.1	2.2	67.1	263.9	3	1.1	0.4	263
2030	69	6	7.1	2.2	69.2	256.9	3	1.1	0.4	256.1
2040	70.3	6	7.1	2.2	70.4	249.3	3	1.1	0.4	248.6
2050	70.9	6	7.1	2.2	70.9	242.8	3	1.1	0.4	242.2
	Germany					UK				
2020	59.5	11.2	-6	2	73.2	85.4	16.1	-9.8	2.9	107.7
2021	73.2	3.2	4.2	1.9	72.2	107.7	9.5	5.9	-0.1	111.2
2022	72.2	3	1.4	1.7	73	111.2	3	1.9	1.8	110.3
2030	78.1	3	1.4	1.7	78.7	104.8	3	1.9	1.8	104.1
2040	83.7	3	1.4	1.7	84.2	98.9	3	1.9	1.8	98.4
2050	87.8	3	1.4	1.7	88.2	94.8	3	1.9	1.8	94.5
	France					USA				
2020	98.1	12.1	-9.8	2	118.5	108.7	19.2	-4.3	1.4	131.1
2021	118.5	6.9	6	0.3	118.4	131.1	9.1	3.1	2.2	133.7
2022	118.4	3	1.2	0.9	119	133.7	3	2.4	1.7	131.5
2030	122.9	3	1.2	0.9	123.4	118.2	3	2.4	1.7	116.6
2040	127.6	3	1.2	0.9	128	104.7	3	2.4	1.7	103.6
2050	131.4	3	1.2	0.9	131.7	95.6	3	2.4	1.7	94.9

Source (basic data): IMF