Singapore Watch

Uniquely Singapore fiscal framework

26 January 2024

GEM Economics
Asia | Singapore

Kai Wei Ang
Asia & ASEAN Economist
Merrill Lynch (Singapore)
+65 6678 5518
kaiwei.ang@bofa.com

Budget 2024 (16th Feb) Preview: Pre-Elections Budget?

For FY23, given, strong revenues to date, we think that the latest estimates may be revise up to reflect a fiscal *surplus* of S$2bn (0.3% of GDP), from the previous estimate for a *deficit* of S$0.4bn (0.1% of GDP) For FY24, we think that the government may announce an overall deficit of S$3bn (0.4% of GDP). Given the government's track record of fiscal prudence, we don't expect space from the fiscal surplus in FY21-23 (we estimate S$13.7bn after Draw on Past Reserves is excluded) to be fully utilized. This also provides the government with some headroom to spend in FY25, if elections are not called by March 2025 (see also theme #3 of Year Ahead).

Amongst the policy measures that will be unveiled, we keep an eye on the following: (1) Household-friendly measures (perhaps more so than past years) that are aimed at alleviating cost of living pressures for lower- & middle-income groups; (2) Interim financial support for involuntarily unemployed workers, (3) Schemes aimed at strengthening Singapore's appeal as an investment destination, ahead of the raising of effective tax rate for multinational firms to 15% to meet BEPS 2.0 requirement (possibly from 1st Jan 2025); and (4) Possible new revenue measures, including taxes aimed at wealthy group.

Uniquely Singapore fiscal framework

Singapore's fiscal framework is often a source of confusion for investors. We elaborate upon the following in this note:

#1: Constitution requirement is to maintain an overall fiscal balance of ≥S$0 over each parliamentary term, under the Balanced Budget Rule (BBR).

#2: Under exceptional circumstances, the government can seek the President's approval to tap on Past Reserves to supplement the Budget.

#3: Roles of GIC, MAS and Temasek as custodians of Past Reserves.

#4: Budget presentation includes Net Investment Returns Contribution (NRIC) and excludes proceeds from sale of land. Spending items include special transfers to households & businesses and top-ups of endowment & trust funds.

#5: While the gross debt levels appear large (>170% of GDP), the government has significant net assets and no net debt. Also, only a very small part of borrowing thus far (slightly above 1% of GDP) is for spending purpose (and specifically for longer-term infrastructure; see also our Strategists' note from 2021). The rest of the issuance is for (a) meeting investment needs of CPF, (b) market development purpose), and (c) providing long-term savings option for retail investors.

See pages 2 to 7 for more details

Glossary:

MAS: Monetary Authority of Singapore

CPF: Central Provident Fund

BEPS: Base Erosion and Profit Shifting

Preview: Pre-elections Budget?

We outline our expectations and areas of focus for Budget 2024 (16th Feb) below:

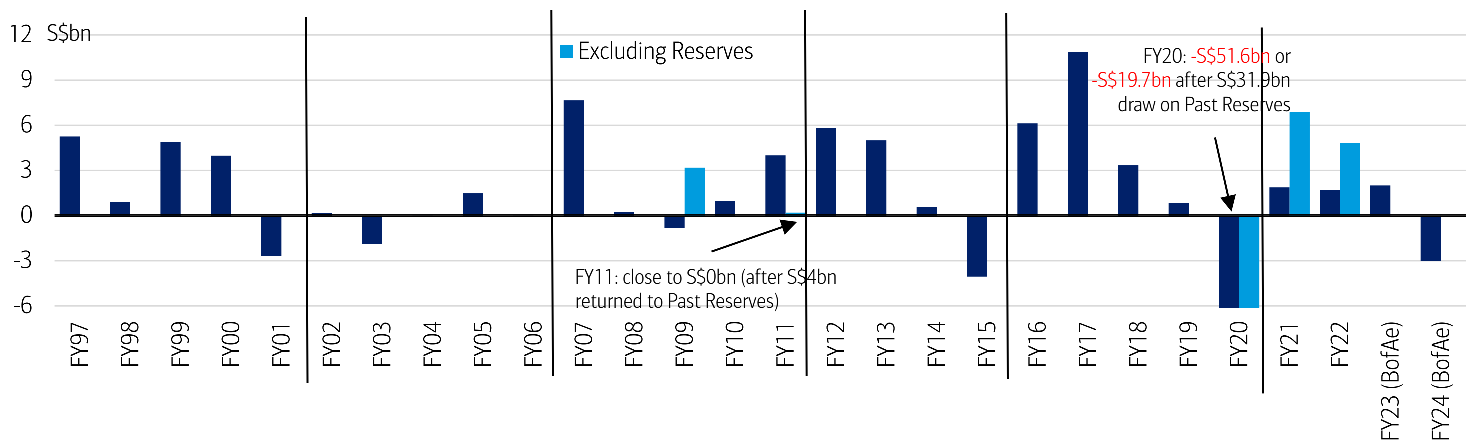
For **FY23 (Apr '23 to Mar '24)**, Budget 2023 (Feb '23) projected a small fiscal deficit of S$0.4bn (0.1% of GDP). Given strong revenues to date, we think that the **latest estimates may be revise up to reflect a fiscal *surplus* of S$2bn (0.3% of GDP).** This may imply a cumulative surplus of S$13.7bn under the current parliamentary term, after the S$8.1bn draw on Past Reserves in FY21 and FY22 is excluded.

For **FY24, we think that the government may announce an overall *deficit* of S$3bn (0.4% of GDP)**. This may reflect (a) higher special transfers to households & businesses amid sharpened focus on cost-of living pressure in the lead-up to leadership handover (see theme #3 of Year Ahead), and (b) lower corporate & personal income taxes, given weaker performance in year of assessment 2023 vs. 2022. These would more than offset higher revenue from the 2nd 1ppt GST increase, and other new taxes.

Given the government's track record of fiscal prudence, we don't expect space from the fiscal surplus in FY21-23 (we estimate S$13.7bn) to be fully utilized. This also provides the government with some headroom in FY25, if elections are not called by March 2025.

Exhibit 1: Overall fiscal position (S$bn, % of GDP)

Cumulative fiscal surplus in FY21-FY23 could amount to S$5.6bn (or S$13.7bn after draw on Past Reserves is excluded)



Source: BofA Global Research, MOF. Haver Note: Links refer to likely start/end of each fiscal year; Elections took place in Nov '01, May '06, May '11, Sep '15 and Jul '20

BofA GLOBAL RESEARCH

Exhibit 2: Fiscal position over FY19-FY24

We think that FY23 fiscal position could be revised up to +0.3% of GDP; For FY24, we think that a fiscal deficit of -0.4% of GDP could be announced

Components	FY19	FY20	FY21	FY22	FY23 (Budget Feb '23)	FY23 Revised (BofAe)	FY24 (BofAe)
(1) Operating Revenue	74.3	67.4	82.5	91.0	96.7		
(2) Total Expenditure	75.3	86.4	94.8	104.9	104.2		
(3) Primary Balance (1) - (2)	-1.1	-19.0	-12.3	-13.8	-7.5		
(4) Special transfers to households & businesses	1.6	33.5	6.8	2.7	2.8		
(5) Basic Balance (3) - (4)	-2.6	-52.5	-19.1	-16.5	-10.3		
(6) Top-ups to funds	13.6	17.3	0.0	6.3	16.8		
(7) Net investment returns contribution	17.0	18.2	20.4	22.4	23.5		
(8) Overall Balance (5) - (6) + (7)	0.8	-51.6	1.2	-0.4	-3.6		
(9) Capitalization of infra	0	0	0.7	2.2	3.5		
(10) Depreciation of infra + Interest costs & loan expenses	0	0	0	0.1	0.3		
Overall Fiscal position (8) + (9) - (10)	0.8	-51.6	1.9	1.7	-0.4	2.0	-3.0
% of GDP	0.2	-10.5	0.3	0.3	-0.1	0.3	-0.4
Note: Utilization of past reserves		31.9	5.0	3.1			

Source: BofA Global Research, MOF, Haver

BofA GLOBAL RESEARCH

Amongst the many policy measures that will be unveiled, we keep an eye on the following:

- **(1) Household-friendly measures** (perhaps more so than past years) that are aimed at alleviating cost of living pressures for lower- & middle-income groups.

- **(2) Interim financial support for involuntarily unemployed workers**. This will mark a policy shift, and was already flagged in the "Forward Singapore" blueprint[1] published last Oct.

- **(3) Schemes aimed at strengthening Singapore's appeal as an investment destination**, ahead of the raising of effective tax rate for multinational firms to 15% to meet BEPS 2.0 requirement (possibly from 1st Jan 2025); and

- **(4) Possible new revenue measures**, including taxes aimed at wealthy group.

On the macro front, the following will be of importance to track:

- **(1) MOF's projection of fiscal impulse**. MOF's measure factors in the current year's estimated spending of longer-term endowment & trust funds – which is not published (MOF only publishes actual/estimated spending of previous years). This would provide a more precise picture of the short-term macroeconomic impact vs. a simple comparison of basic balances between two periods.

- **(2) Output gap estimates**, which would serve as a precursor before it is next published in MAS semiannual Macroeconomic Review in late April; and

- **(3) Potential inflationary (or disinflationary) impact from Budget measures**.

Singapore's fiscal framework

Singapore's fiscal framework is often a source of confusion for investors. In this note, we explain the unique features.

Fiscal approach

(1) The government is constitutionally required to maintain an overall fiscal balance of ≥S$0 over each parliamentary terms, under the Balanced Budget Rule (BBR). Any surpluses at the end of each term will be transferred to Past Reserves (Exhibit 3).

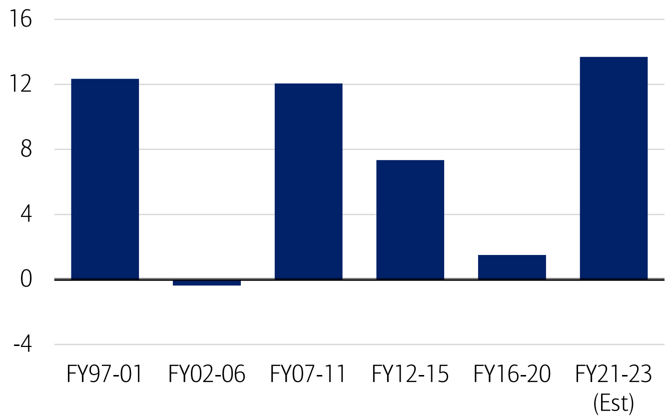
(2) Under exceptional circumstances, the government may request for a draw on "Past Reserves" if it's unable to meet the BBR. This is ultimately subject to the approval of the President. There is no constitutional obligation for the Government to return to Past Reserves for any amount drawn. **Since FY08, the government has drawn around S$44bn from Past Reserves, including S$4bn which was returned in FY11**. In the details:

- FY08 (GFC) – The government drew S$4bn in Jan-09 and returned the entire sum in Feb-11. The President also gave approval for a S$150bn guarantee on all bank deposits in Singapore to be backed by Past Reserves (this lapsed on 31st December 2010 without being triggered).

[1] The blueprint is a public engagement exercise initiated in June 2022 with the aim of refreshing Singapore's social compact.

- FY20-FY22 (COVID) – The expected draw is S$40bn over three fiscal years (FY20: S$31.9bn; FY21: S$5bn, FY22: S$3.1bn). Unlike FY08, the government is unlikely to return the sum in its entirety, as mentioned by the Finance Minister in Feb '23[2].

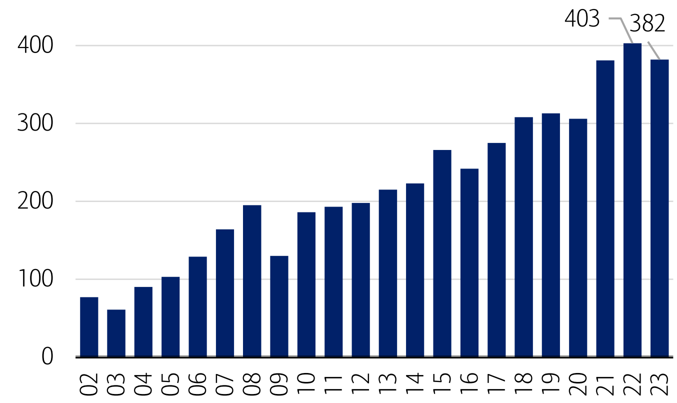
Exhibit 3: Fiscal position over parliamentary terms (S$bn)
Tendency to end each term with surplus (which then goes into Reserves)



Source: BofA Global Research, MOF, Haver Note: Measures funded by draw on Past Reserves do not count towards the Balanced Budget Rule

BofA GLOBAL RESEARCH

Exhibit 4: Temasek net portfolio value (S$bn)
Temasek's portfolio value has quadrupled over the past two decades



Source: BofA Global Research, Temasek Note: Figures refer to financial year ending March

BofA GLOBAL RESEARCH

(3) The overall size of Past Reserves is not publicly disclosed. The government views this as necessary to protect the S$ from any speculative action. Past Reserves comprise of assets managed by MAS, Temasek and GIC. We discuss each of these entities briefly below:

- **GIC:** The size of funds is not published but is well over S$100bn. GIC manages funds from the government and is not an owner of assets.

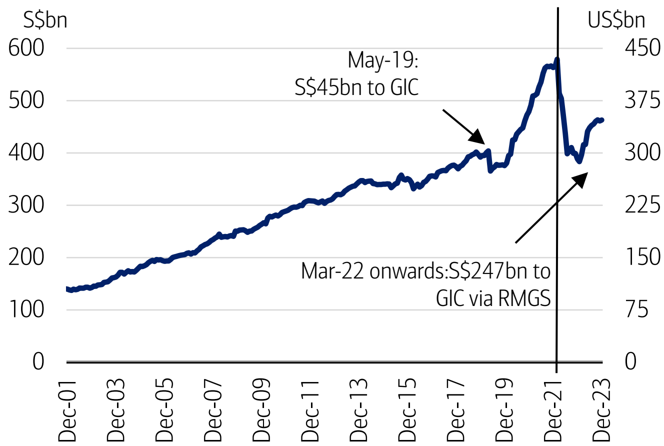
- **Temasek:** The global portfolio size of Temasek is S$382bn (as of Mar '23), from just under S$100bn in the early 2000s (Exhibit 4). This also includes S$70bn in capital injections by the government via investment in new Temasek shares (of which S$50bn was from Temasek's dividends to the shareholder[3]).

- **MAS:** The foreign reserves managed by MAS totaled S$463bn (or $351bn) in Dec '23, down from the peak of S$579bn after the transfer of "excess reserves" to GIC (Exhibit 5). Foreign reserves have grown steadily over the years, partly reflecting appreciation pressure on the S$NEER. Between 2H19 and 1H23, MAS has purchased US$240.3bn of FX from intervention operations (Exhibit 6).

  MAS deems the optimal foreign reserves to be 65-75% of GDP, and transfers of "excess" to GIC allows such assets to be invested for longer-term returns. In the past. transfers (often not publicly disclosed) were accompanied by a drawdown of Government deposits with MAS. With the decline in government surpluses and deposits with MAS (Exhibit 7), a new mechanism was introduced in early 2022, with the government issuing a non-marketable security (Reserves Management Government Securities, or RMGS) used to facilitate the transfer. Between Mar '22 and Dec '23, MAS transferred S$247bn to GIC via RMGS (Exhibit 8).

[2] The Finance Minister said during the Budget speech in Feb '23 that "we continue to be in a tight fiscal position…It is therefore highly unlikely that we will be able to put back what we have drawn from past reserves".
[3] MOF Parliamentary Reply: "Capital Injections to Temasek Holdings" (9 Jan 2023)

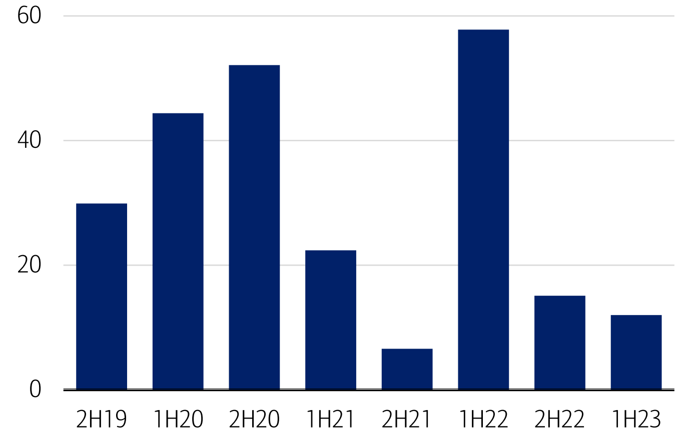
Exhibit 5: MAS official foreign reserves (S$bn & US$bn)
Reserves down from the peak after transfers of "excess" to GIC



Source: BofA Global Research, MAS, Haver

BofA GLOBAL RESEARCH

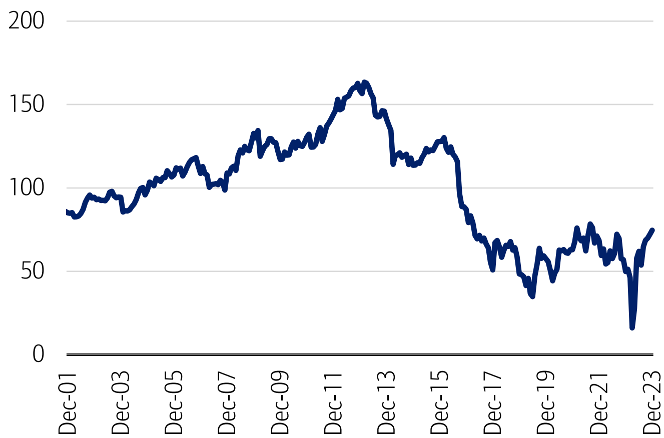
Exhibit 6: Net purchase of FX from intervention operations (US$bn)
MAS has made $240bn of net FX purchases since 2H19



Source: BofA Global Research, MAS, Haver Note: First disclosure was made for the period 2H19

BofA GLOBAL RESEARCH

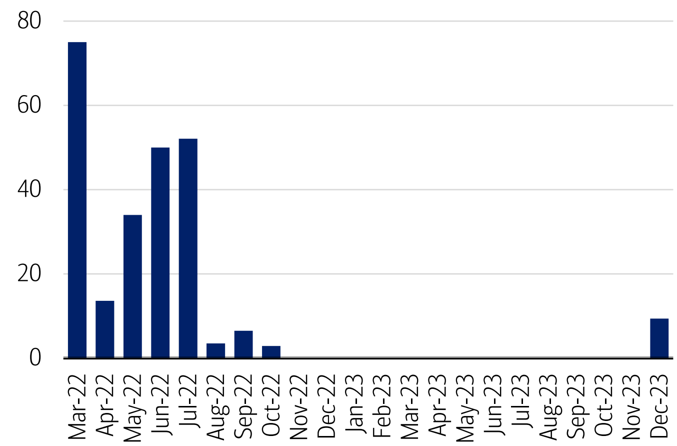
Exhibit 7: Government deposits with MAS (S$bn)
Government deposits lower compared to previous decades



Source: BofA Global Research, MAS, Haver

BofA GLOBAL RESEARCH

Exhibit 8: Monthly MAS-GIC transfers via. RMGS (S$bn)
MAS has transferred out S247bn of "excess" reserves since Mar '22



Source: BofA Global Research, MAS, Haver

BofA GLOBAL RESEARCH

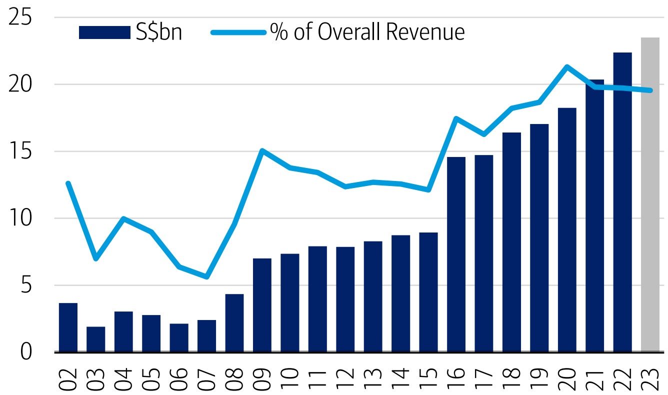
Budget presentation

(4) Singapore adopts a different Budget presentation from the one prescribed by IMF. We highlight a few key differences below:

- **(a) Operating revenue is complemented by investment returns from reserves via. the Net Investment Returns Contribution (NIRC) framework**. Since FY20, the NIRC accounted close to (or above) 20% of overall revenue, making it the largest source of income (Exhibit 9). The NIRC comprises of:
    - **Net Investment Returns (NIR)** – The government can spend up to 50% of the long-term expected real returns (including capital gains) on net assets invested by GIC, MAS and Temasek.
    - **(ii) Net Investment Income (NII) –** The government can spend up to 50% of NII (e.g. dividends and interest) derived from past reserves from the remaining assets.

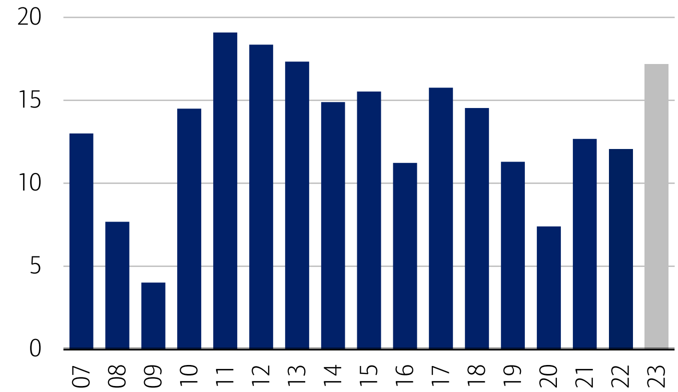
Before FY09, there was only the NII, and the government was only able to spend from actual investment income. In FY09, the NIR component was introduced with only GIC and MAS included and allowing a shift towards spending on expected long-term returns. In FY16, the NIR was expanded to include Temasek[4].

Exhibit 9: Net Investment Returns Contribution (NIRC)
NRIC accounted for almost 20% of overall revenue in recent years



Source: BofA Global Research, MOF, Haver Note: FY23 refers to estimates from Budget '23
BofA GLOBAL RESEARCH

Exhibit 10: Capital receipts – sales of land (S$bn)
Proceeds from land are not considered part of overall revenue



Source: BofA Global Research, MOF, Haver Note: FY23 refers to estimates from Budget '23
BofA GLOBAL RESEARCH

- **(b) Proceeds from sale of land (Exhibit 10) is <u>not</u> included in the Budget.** The government considers land as part of Past Reserves, and the Budget instead captures investment returns from land sales via the NIRC framework. As an example, when the government sells a parcel of State Land for S$1mn with a lease of 99 years, the cash proceeds are then invested (e.g. through GIC). After 99 years, the land automatically returns to the State and is protected as Past Reserves.
- **(c) Special transfers** are one-offs given to households and businesses.
- **(d) Endowment & trust funds** are set aside for funding specific multi-year programmes.

Government borrowing

Exhibit 11: Types and outstanding amount of Singapore Government Bond
Only a very small part of the government's borrowing is for spending purpose

Type of Debt	Marketable	Purpose	Limit (S$bn)	Outstanding Amount (S$bn)(3Q23)
(1) Issued for non-spending purposes				
(a) Singapore Government Securities (SGS) (Market Development)	Yes	Develop debt market		156.3
(b) T-Bills	Yes	Develop debt market		83.7
(c) Singapore Savings Bond (SSB)	No	Long-term savings option for retail investors		10.9
(d) Special SGS (SGSS)	No	Meet CPF investment needs	1065 (a) to (d)	622.7
Sub-total				873.6
Reserve Management Government Securities (RMGS)	No	Facilitate transfer of reserves from MAS	580	237.7
Sub total (include. RMGS)				1111.3
(2) Issued for long-term infrastructure spending purpose				
(e) SGS (infrastructure)	Yes			4.5
(f) Green SGS (infrastructure)	Yes		90 (e) to (f)	5.2
Sub total				9.7

Source: BofA Global Research, MOF, Haver
BofA GLOBAL RESEARCH

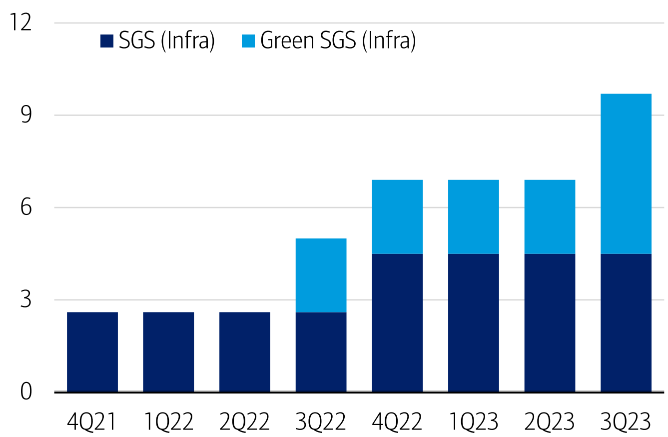
(5) The government only borrows for the purpose of funding long-term infrastructure projects (1.4% of GDP). As of 3Q23, the amount stands at S$9.7bn (or around 1.4% of GDP). In the past, such lumpy expenditures are funded out of the Budget.

[4] Temasek's earlier inclusion was delayed as there was no established methodology for projecting long-term returns.

The Significant Infrastructure Government Loan Act (SINGA) bill was passed in 2021, allowing the government to borrow for such purpose. **This adds greater flexibility to the Budget**, as such infrastructure spending are now capitalized over a much longer-term, rather than being pre-funded.

MAS serves as the fiscal agent of the government and undertakes issue & management on behalf of the government. MAS issues the **Singapore Government Securities (SGS) (Infrastructure)** and **Green SGS (Infrastructure)** for this purpose. Provisions under SINGA includes (a) capping gross borrowing at S$90bn (or 14% of GDP in 2022), (b) project cost should be ≥S$4bn, and the infrastructure should be available for use for at least 50 years, and (c) annual interest threshold of S$5bn. Our Strategist earlier discussed the market implications in this note: [Asia FI & FX Strategy Watch: Singapore Bonds – SINGA Debut 24 September 2021]

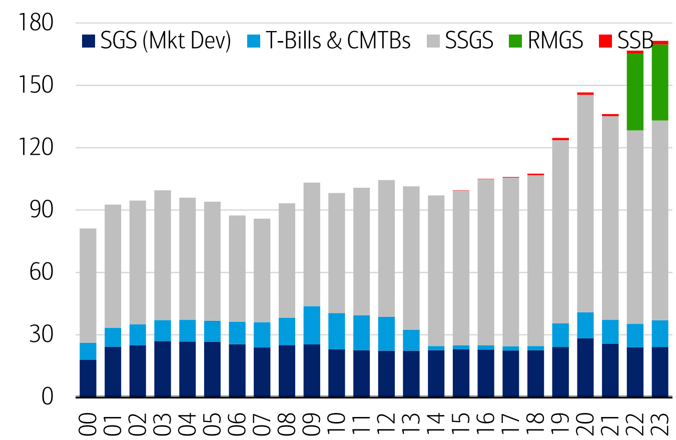
Exhibit 12: Domestic debt - SGS (Infra) & Green SGS (Infra (S$bn)
Outstanding balance of S$9.7bn (1.4% of GDP) as of 3Q23



Source: BofA Global Research, MOF, Haver

BofA GLOBAL RESEARCH

Exhibit 13: Domestic debt – non-spending purposes (% of GDP)
At face value, gross domestic debt appears large at >170% of GDP



Source: BofA Global Research, MOF, Haver

BofA GLOBAL RESEARCH

(6) The rest of government borrowing are for almost entirely for non-spending purposes (171% of GDP). This includes:

- **Special Singapore Government Securities (SSGS)** – Non-marketable bonds primarily issued to meet the investment needs of the Central Provident Fund (CPF), which is Singapore's mandatory pension fund scheme (amount due to members = S$568bn as of Nov '23). The proceeds from SSGS are pooled with the rest of the Government's funds and invested by GIC.
- **SGS (Market Development) and Treasury Bills (T-bills)** to develop the domestic debt market. This includes the **Cash Management Treasury Bills (CMTBs)**, which is issued on an ad-hoc basis to meet temporary cashflow mismatches.
- **Singapore Savings Bonds (SSBs)** – Non-marketable bonds issued monthly only to retail investors.

(7) While the gross debt levels appear large at first value, the government maintains that it **has significant net assets and no net debt**, with (a) net asset position reflected in net investment returns generated by reserves, which is made available to the government via NIRC, and (b) the strong balance sheet validated by the triple-A ratings from Fitch, Moody's and S&P.

Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations. Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.

Refer to BofA Global Research policies relating to conflicts of interest.

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives,