

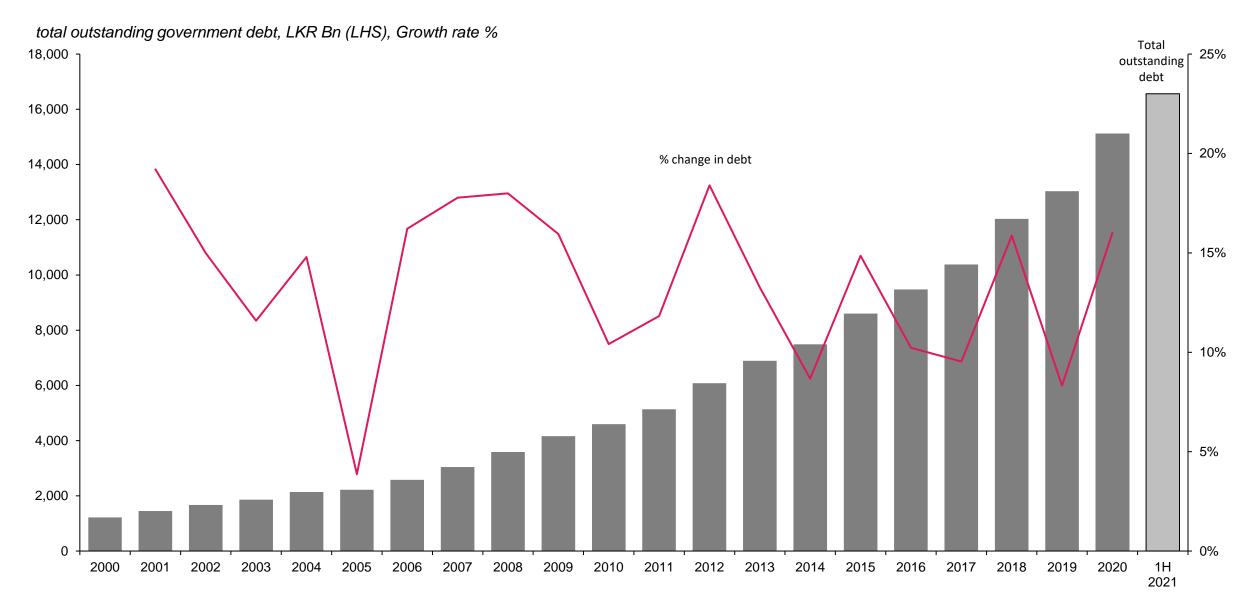
Primer On Debt Sustainability

07 Oct 2021

What is the problem?



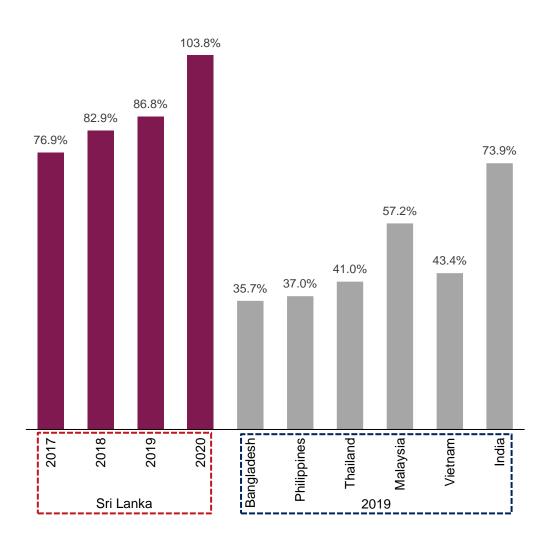
Sri Lanka's debt has exploded



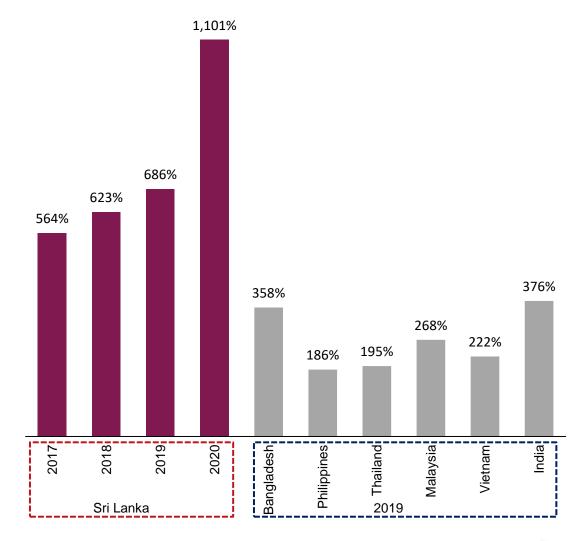


Govt debt-to-GDP is at elevated levels

Government debt remains significantly higher than peers % of GDP



Government debt relative to revenue has gone up % of government revenue



Why do governments borrow?

Borrowing can help governments

- Deal with negative shocks
- Undertake countercyclical fiscal policy
- Finance exceptionally large expenditures such as public infrastructure investments

There are good and bad motives to borrow

Good Motives

- Tax smoothing (higher taxes are more distortionary convex)
- Counter cyclical policy (to stabilize the business cycle)
- Long term investment
- Asset management and government debt as a safe asset
- Dynamic inefficiency

Bad Motives

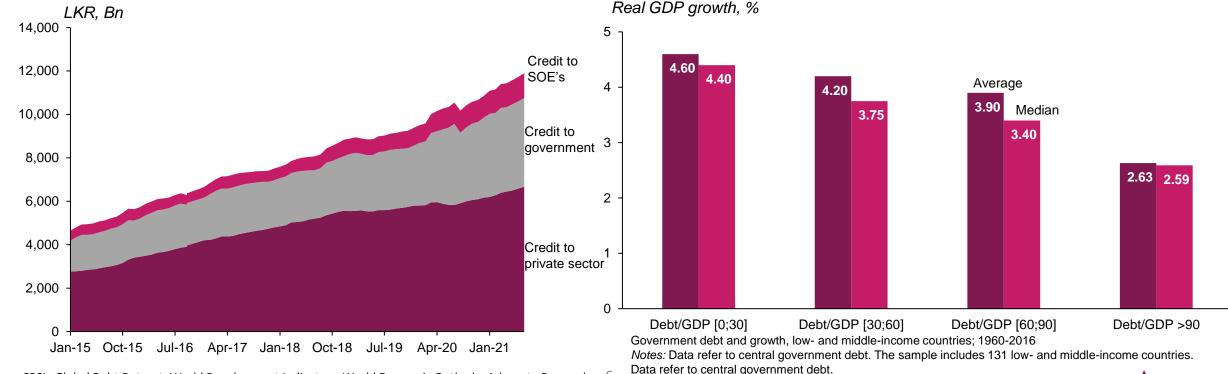
- Political budget cycles and rent seeking
- Intergenerational transfers
- Strategic manipulation
- Common pool



Debt overhang problem

- A debt burden so large that entities cannot take on any additional debt to finance future projects
- As debt increases growth slows as resources are absorbed by the state tightening credit conditions
- Investors perceive lower real returns due to expectation of higher inflation and taxation holding back on investments.

 Large inherited debt leads to lower future deficits or surpluses lowering growth and reducing room for counter cyclical measures



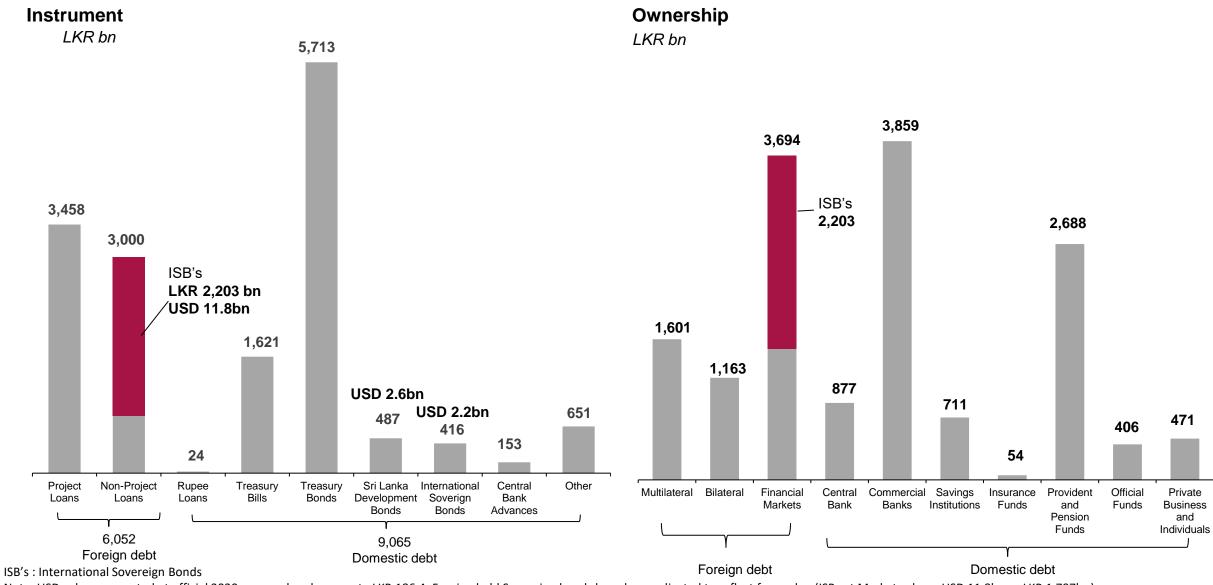
Source: CBSL, Global Debt Dataset, World Development Indicators, World Economic Outlook, Advocata Research www.advocata.org

Taxonomy of Debt

- Central Government Debt debt the government has built up over the years when expenditure has been greater than revenue
- Subnational Government Debt debt of subnational governments. Sri Lanka does not have any subnational debt
- Subnational governments consists of state governments and local/regional governments
- Public Debt the amount of money that the government owes to outside creditors, includes central
 government debt, foreign project loans received by SOBE's and publicly guaranteed debt
- Government Guaranteed Loan requires the government to repay any amount of outstanding loan in the event of default
- Contingent Liabilities obligations that arise from a particular discrete event(s) that may or may not
 occur
 - Explicit liabilities Specific government obligations defined by law or contract. The government is legally mandated to settle such an obligation when it becomes due
 - Implicit liabilities represent a moral obligation or expected burden for the government not in the legal sense but based on public expectations and political pressures



What is outstanding, and to who?



Note: USD values converted at official 2020 year-end exchange rate LKR 186.4, Foreign held Sovereign bonds have been adjusted to reflect face value (ISBs at Market value = USD 11,8bn or LKR 1,797bn)

Source: Central Bank of Sri Lanka, Advocata Research

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Foreign debt

Foreign debt						
	LKR bn	USD bn	% of foreign debt			
Multilateral	1,601.4	8.59	24.8%			
ADB	865.5	4.64	13.4%			
IDA	593.2	3.18	9.2%			
Other	142.8	0.77	2.2%			
Bilateral	1,163.0	6.24	18.0%			
Japan	659.3	3.54	10.2%			
India	146.5	0.79	2.3%			
China	124.7	0.67	1.9%			
Other	232.5	1.25	3.6%			
Financial Markets	3,696.4	19.83	57.2%			
Export-Import Bank of China	528.4	2.83	8.2%			
International Sovereign Bonds	2,203.3	11.82	34.1%			
Foreign currency term financing facilities	279.6	1.50	4.3%			
Other	683.1	3.67	10.6%			
Total	6,460.8	34.66	100.0%			

Multilateral Creditors

- From foreign international financial institutions such as EIB or WB
- Concessional with longer repayment periods
- Non tradeable
- Senior creditors

Bilateral Creditors

- From foreign governments and their lending arms
- Can be concessional
- Often project based
- Non tradeable, and often used by low-income countries, especially those with poorly developed on illiquid financial market

Debt Securities

- Issued by public auction, it is a promise to repay an amount at maturity with fixed or flexible interest rate.
- Can be short, medium or long term.
- Issued in foreign debt markets (e.g. Eurobond market) and governed under foreign law



Domestic debt

Treasury bills

- Highly liquid instruments with a maturity of less than a year, issued locally
- · Used to meet short-term mismatches in receipts and expenditure
- Used as collateral by the central bank in its open market operations

Treasury bonds

- Highly liquid instruments with a maturity of more than a year (2-20), issued locally
- Issued under the Registered Stock and Securities Ordinance No. 7 of 1937, to raise public debt for budgetary purposes
- Terms of annual borrowing targets are specified in the appropriation act
- Risk free with a half yearly coupon and principal paid at maturity
- Yields are determined by the market

SLDB's

- USD denominated securities issued in the local market and governed by local law
- Highly illiquid as they aren't issued on an exchange, with yields based on a bidding system

Loans

Loans between government and local banks

Domestic debt						
	LKR bn	USD bn	% of domestic debt			
Treasury bills	1,620.7		17.9%			
Central bank	654.6		7.2%			
Commercial bank	813.0		9.0%			
Insurance and finance co.'s	61.3		0.7%			
Savings institutions	55.7		0.4%			
Other	20.9		0.6%			
Treasury bonds	5,713.3		63.0%			
Commercial banks	1,513.3		16.7%			
EPF	2,609.1		28.8%			
Savings institutions	672.9		7.4%			
Departmental and official funds	393.1		4.3%			
Other	492.9		5.8%			
Other	1,731.1		19.1%			
Sri Lanka Development Bonds	486.9	2.61	5.4%			
International Sovereign Bonds	415.8	2.23	4.6%			
Balance	828.4		9.1%			
Total	9,065.1		100.0%			



What is debt sustainability

Debt is sustainable if the country (or its government) does <u>NOT</u>, in the future, need to **default** or **renegotiate** or **restructure** its debt or **make implausibly large policy adjustments**.

The IMF's Debt Sustainability Analysis considers the following KPI's

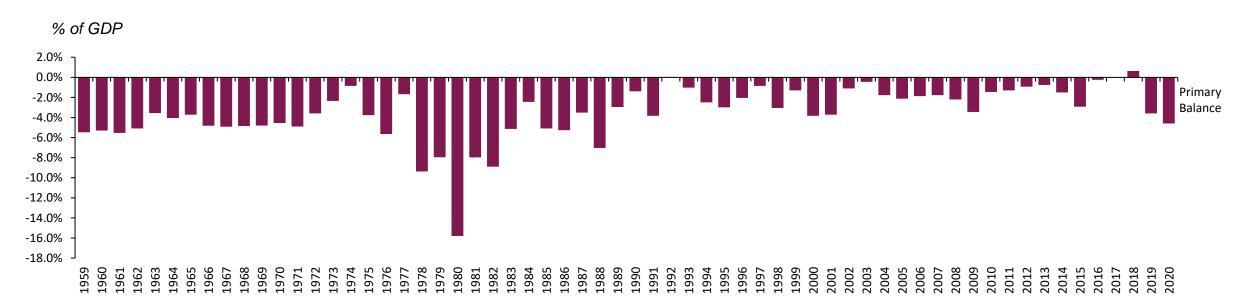
Market Perception	External Financing Requirements	Change in Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt
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Primary Balance

Primary Balance (PB) is the difference between Government Revenue(R) and non-interest Government expenditure(G)

$$PB = R - G$$





How to Assess solvency

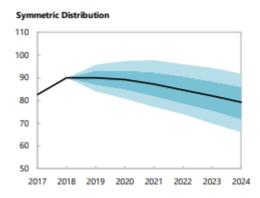
For the government to be solvent its debt cannot exceed the present value of all future primary balances

Transversality Condition

$$d_{t} \leq \frac{pb_{t+1}}{\frac{(1+r_{t+1})}{(1+g_{t+1})}} + \frac{pb_{t+2}}{\frac{(1+r_{t+1})(1+r_{t+2})}{(1+g_{t+1})(1+g_{t+2})}} + \frac{pb_{t+3}}{\frac{(1+r_{t+1})(1+r_{t+2})(1+r_{t+3})}{(1+g_{t+1})(1+g_{t+2})(1+g_{t+3})}} + \dots$$

Since it is not possible to forecast primary balances into the future, the IMF and World Bank use a more probabilistic model called Debt Sustainability Analysis

There is no threshold, but it is considered at 70% debt/GDP for middle income market access countries

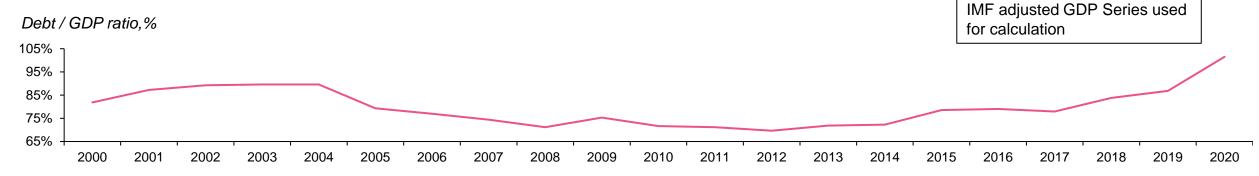


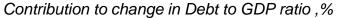
Breakdown of change in debt

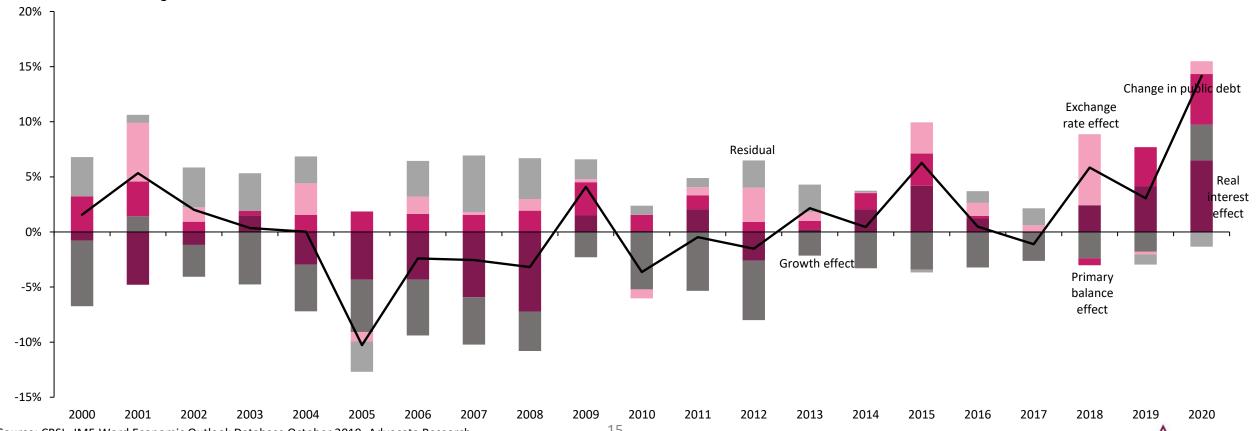
$$d_t - d_{t-1} = \frac{i_t^w - \pi(1 + g_t)}{(1 + g_t)(1 + \pi_t)} - \frac{g_t}{(1 + g_t)(1 + \pi_t)} + \frac{\alpha \varepsilon (1 + i_t^f)}{(1 + g_t)(1 + \pi_t)} - pb + residual$$



Debt Attribution Analysis for Sri Lanka

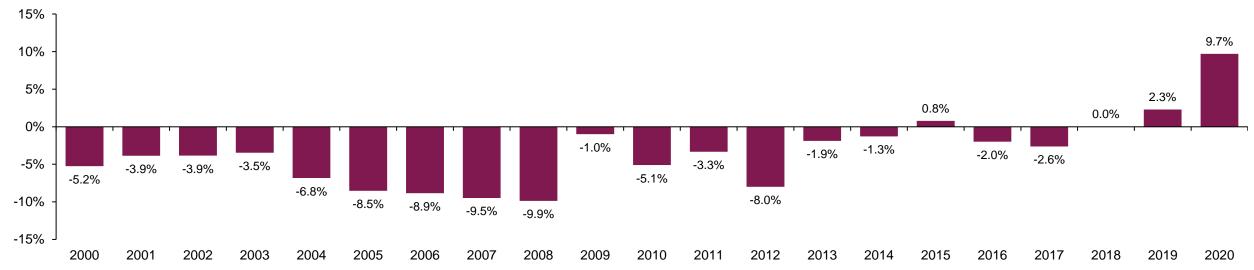




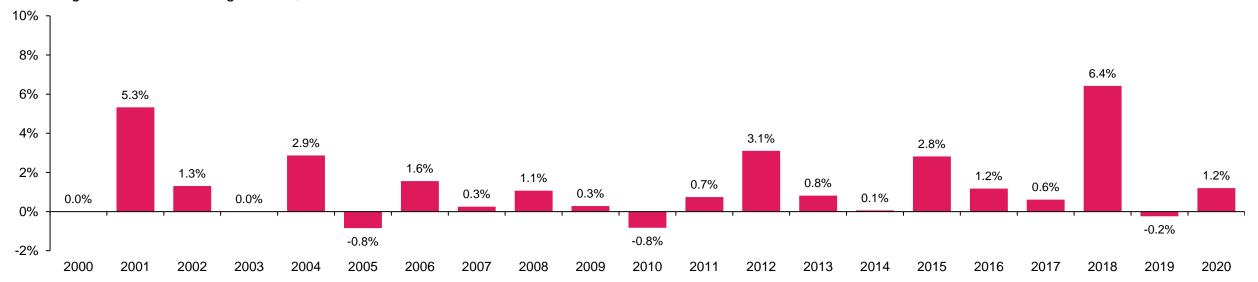


Snowball Effect (R-G) and Exchange Rate Effect

Automatic Debt Stabilizers - Snowball effect (r-g),%



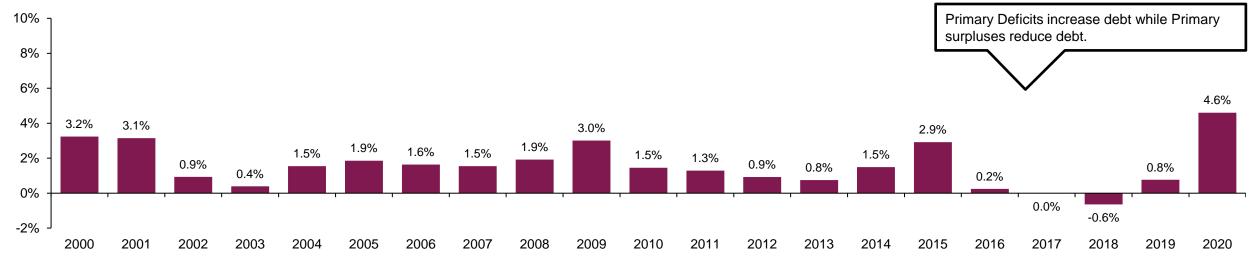
Exchange rate effect on change in debt,%



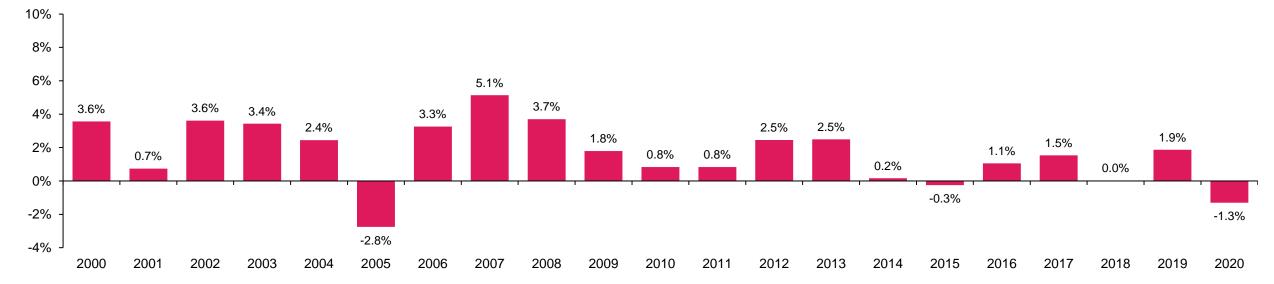


Primary Balance and Residual Effect

Primary Balance effect on change in debt, %



Residual effect on change in debt, % (combine effect and non flow stock increases)

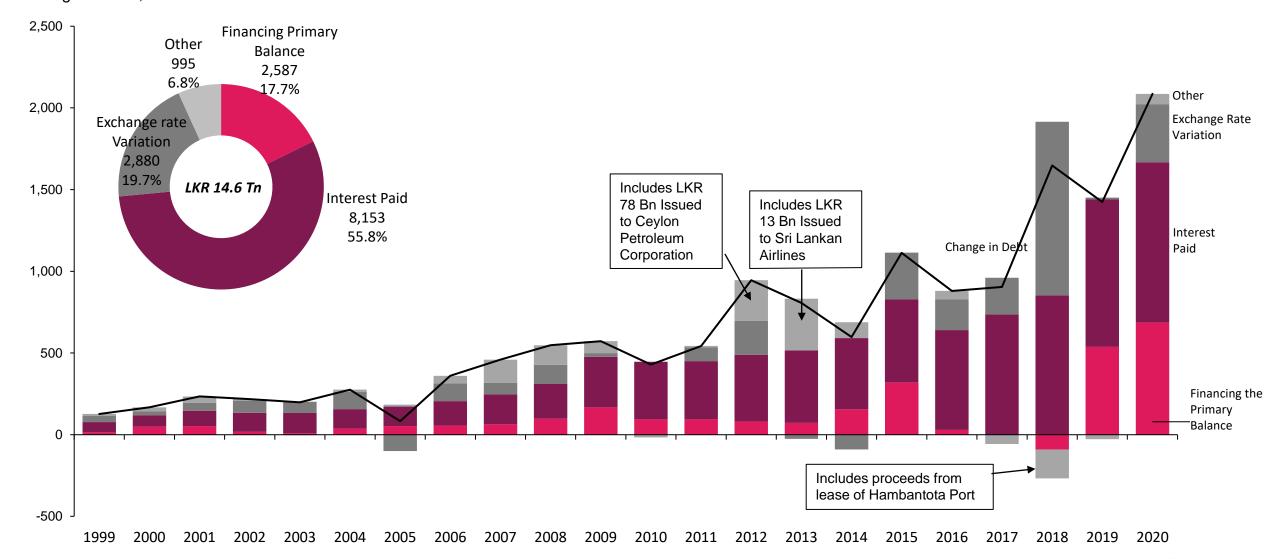


Source: CBSL, IMF-Word Economic Outlook Database October 2019, Advocata Research



Debt Attribution Analysis - Absolute

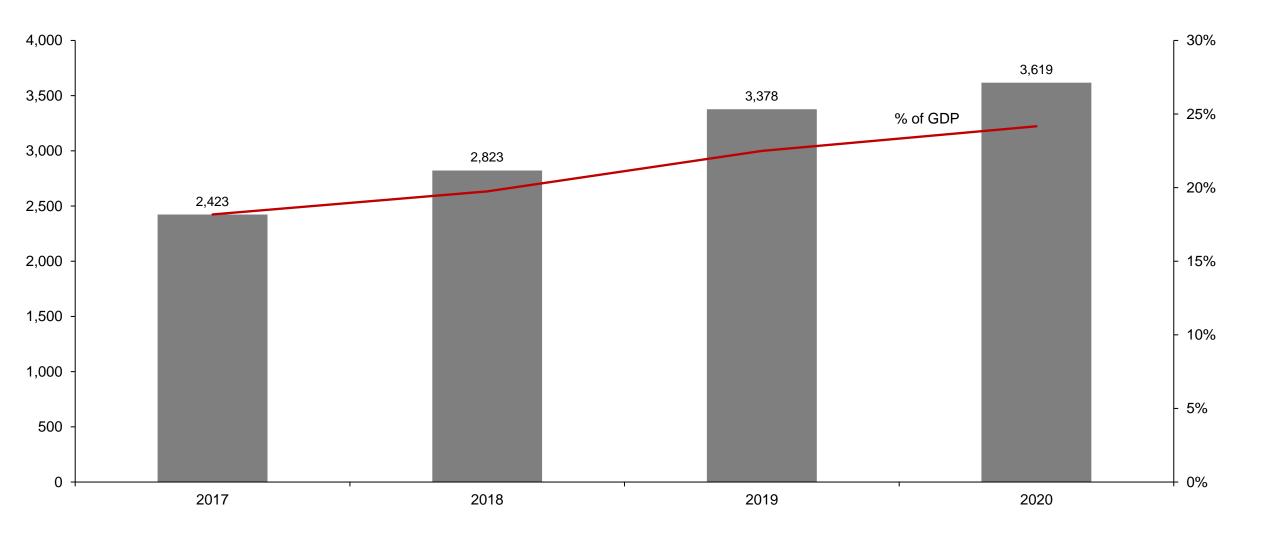
Interest expense and Exchange rate variation account for 75% of the Debt increase since 1999 Change in Debt, LKR Bn





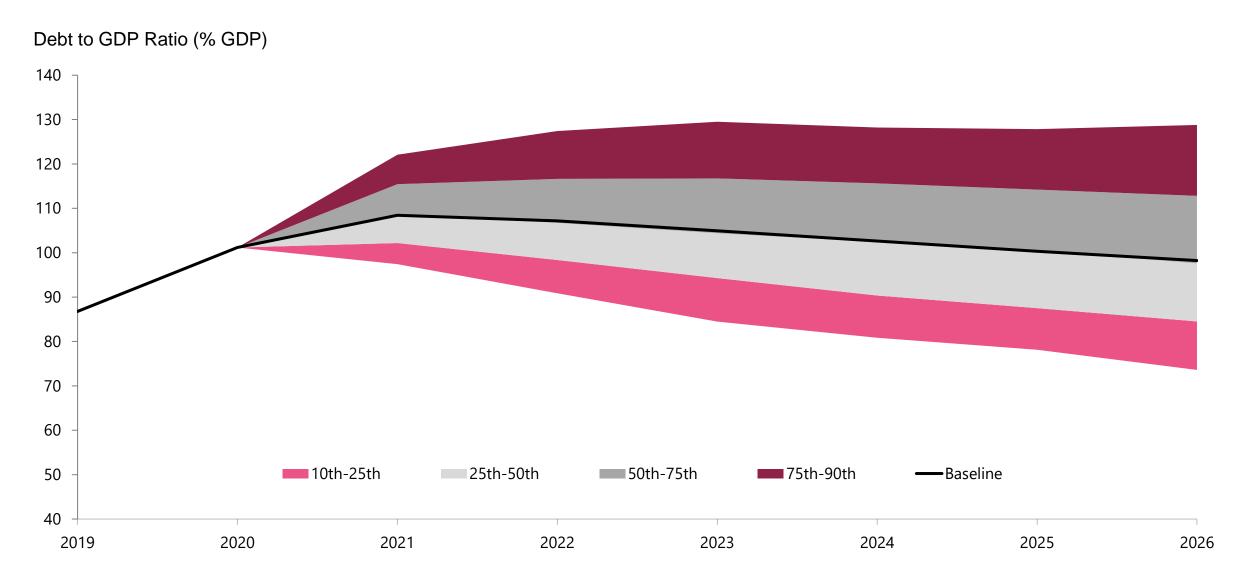
Trends in Gross Financing Needs

LKR, Bn(LHS); % GDP(RHS)





Debt to GPD Ratio trajectory





Note- Data from 2021 onwards are in house estimates. Source: CBSL, Advocata Research www.advocata.org

Structure of the debt



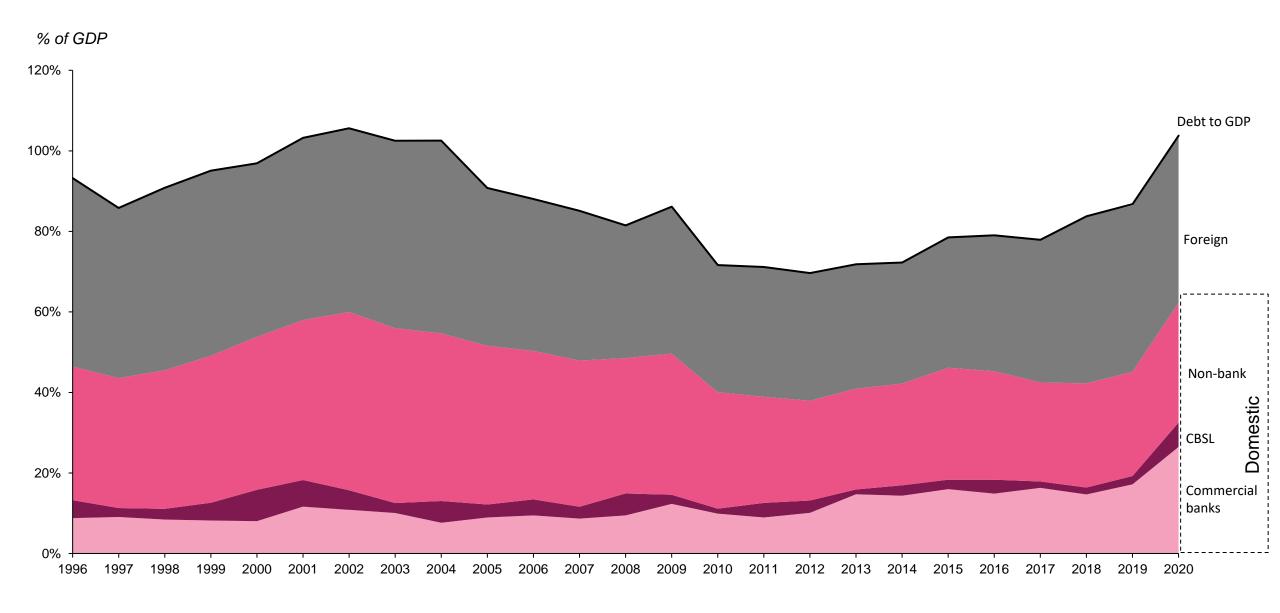
We have a lot of debt...we pay a lot in interest... market instruments are

expensive

Apenaive						
As at end-2020						
Total Outstanding	Total Outstanding Government Debt		% of GDP			
LKR 15	,117 B	n	103.8%		.8%	
Average interest rates						
Total Debt		Domes	Domestic Debt		Foreign Debt	
7.5%	,	11.	11.8%		4.2%	
Interest:	L	KR 980 Bn	71.4% of revenue		27.0% of expenditure	
SLE	DB'S		ISB's		B's	
5.9%		6.7%				
ATM	A	M at issuance	ATM		ATM at issuance	
0.92 years		2.6 years	4.6 years		8.75 years	



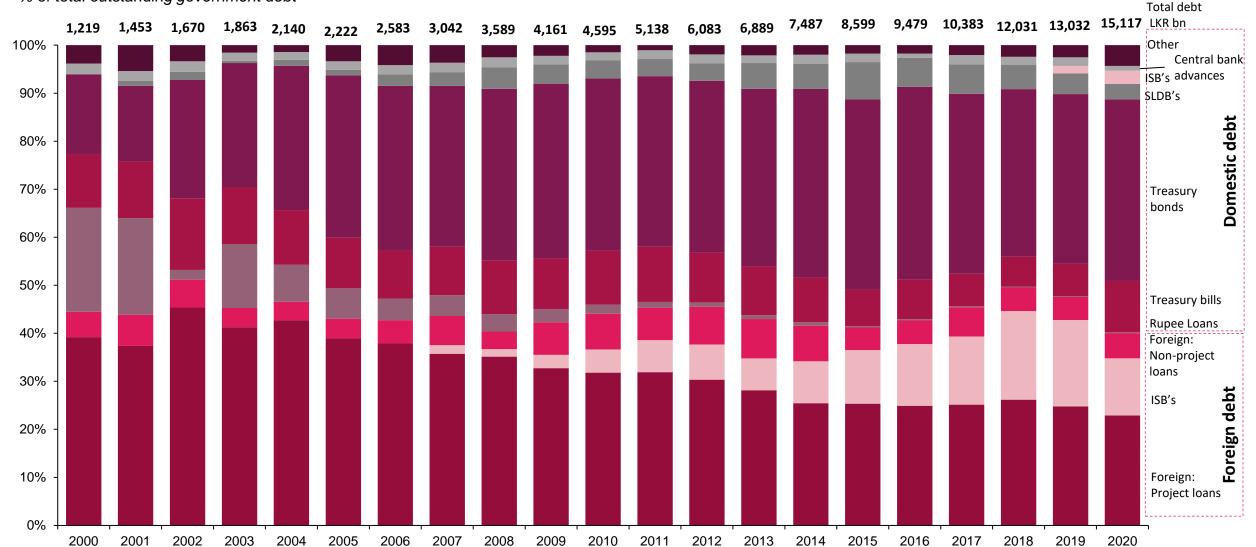
Who owns the Debt?





Debt composition – note rise in ISBs

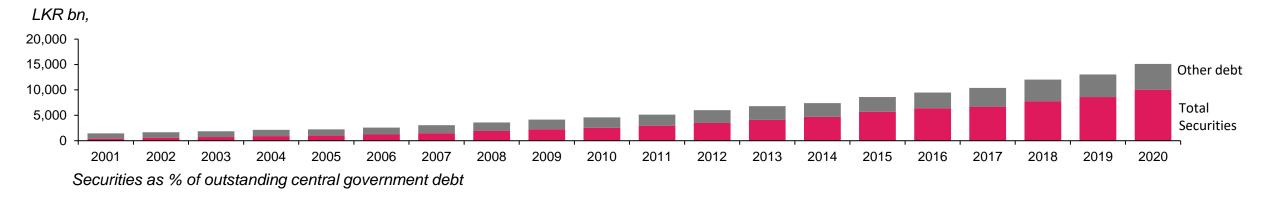
% of total outstanding government debt

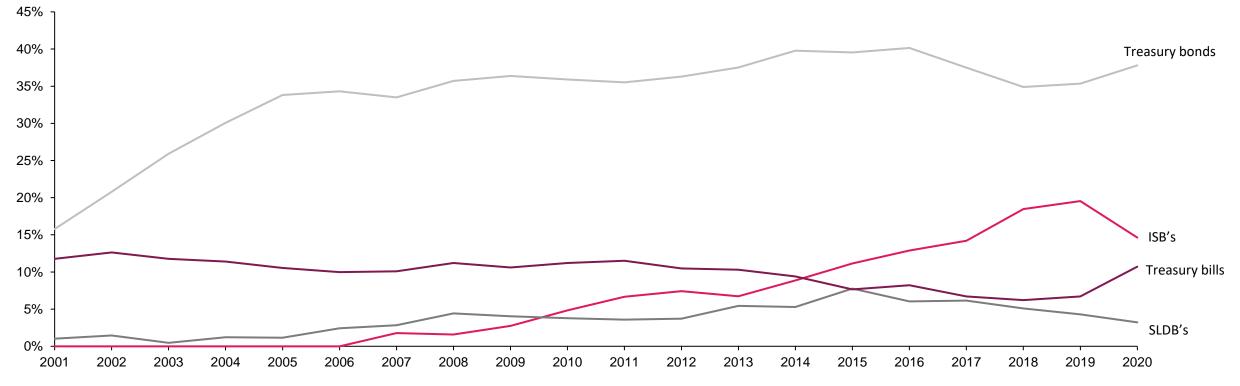


Note: Non project loans include commodities and rupee denominated T-bills and T-bonds held by foreigners; SLDB: Sri Lanka Development Bonds Source: CBSL, Advocata Research 24



Debt securities comprise a major part of the debt

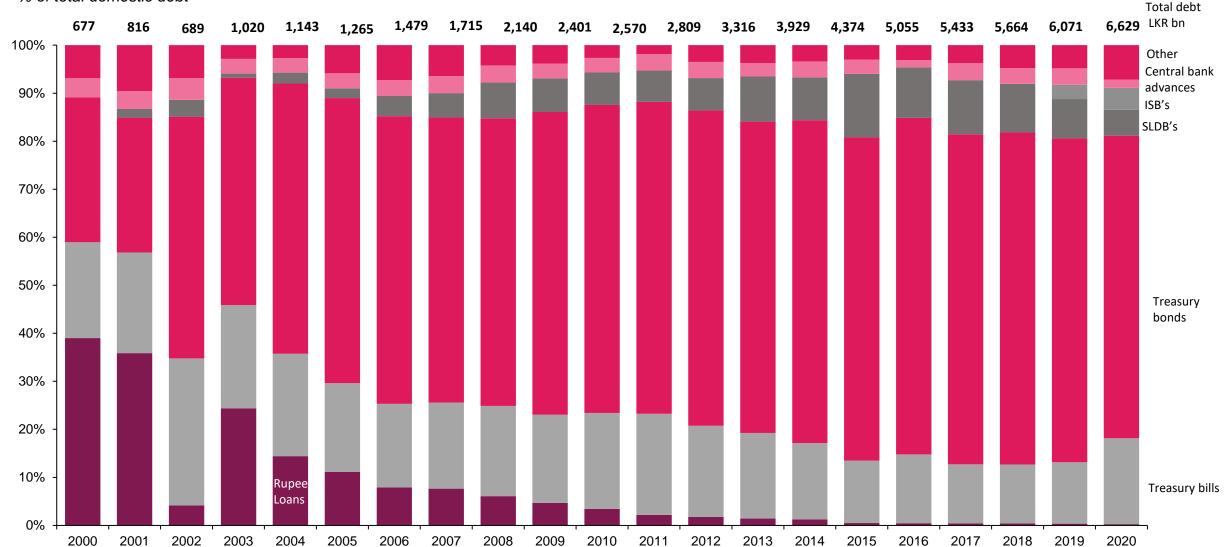






Domestic debt by instrument



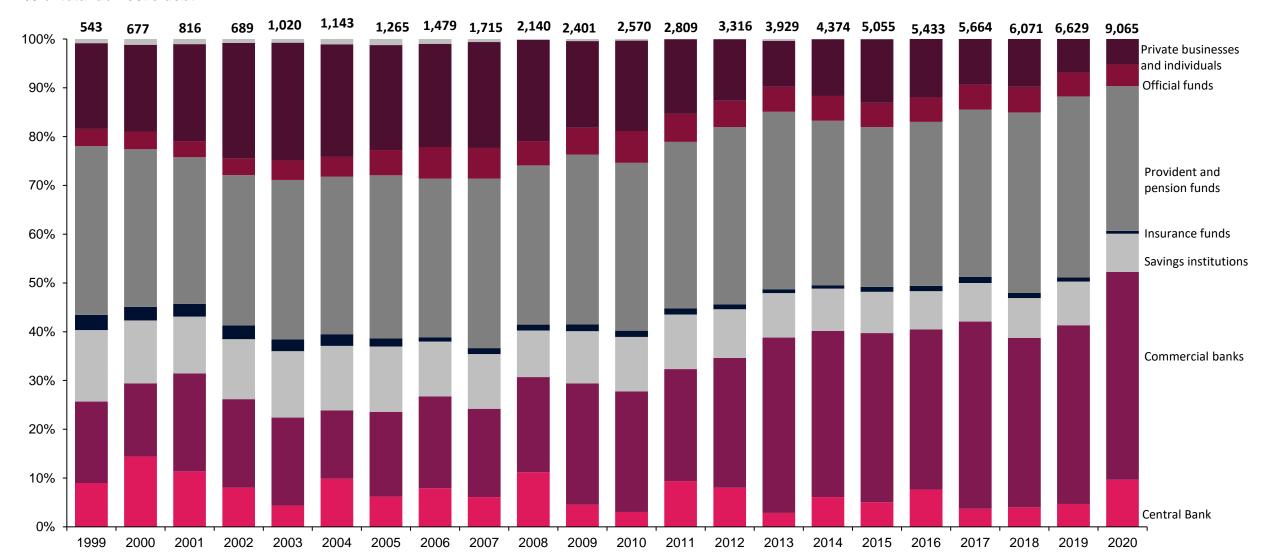


Note: Non project loans include commodities and rupee denominated T-bills and T-bonds held by foreigners; SLDB: Sri Lanka Development Bonds Source: CBSL, Advocata Research



Domestic debt by ownership

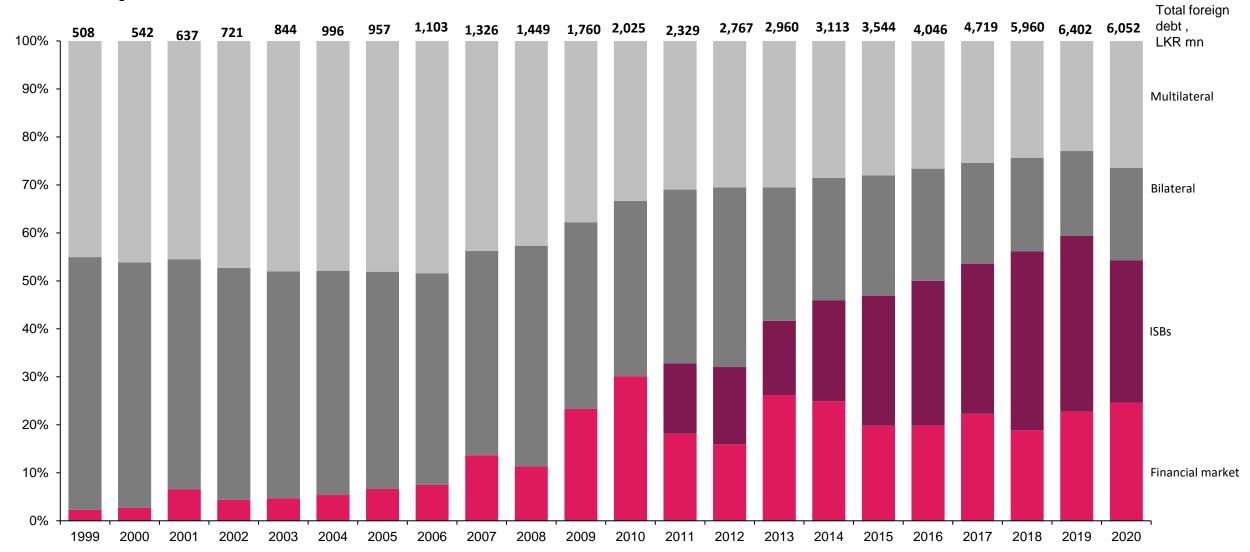
% of total domestic debt





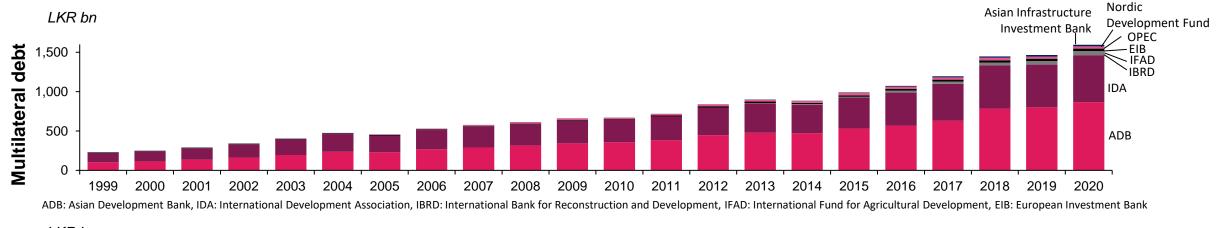
Foreign debt by type

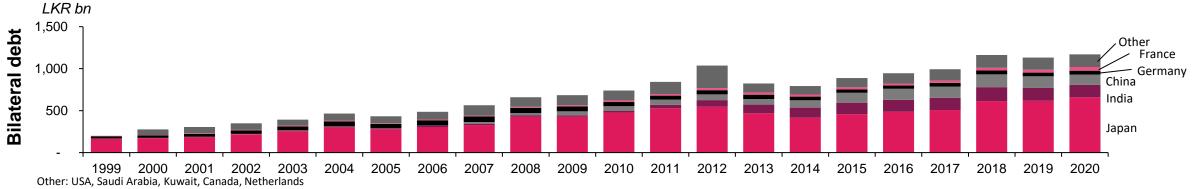
% of total foreign debt

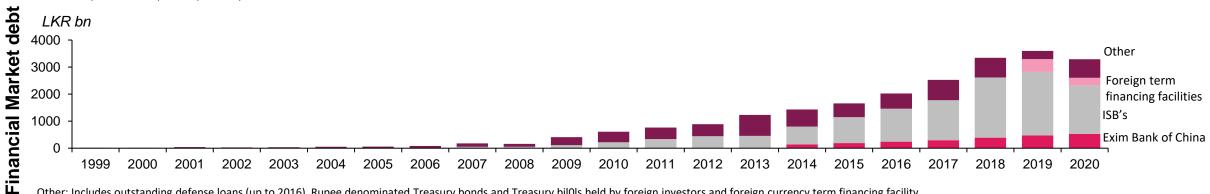




Foreign debt ownership



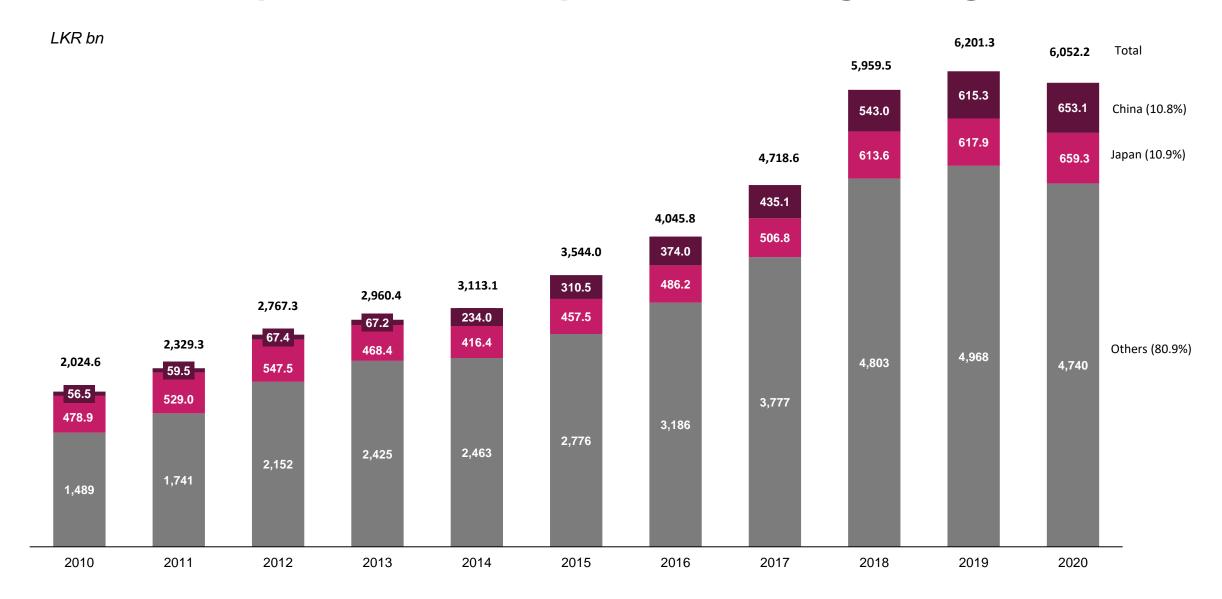




Other: Includes outstanding defense loans (up to 2016), Rupee denominated Treasury bonds and Treasury bilOls held by foreign investors and foreign currency term financing facility



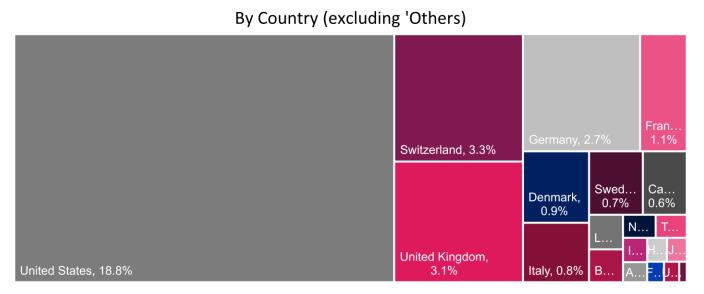
Chinese and Japanese ownership of Outstanding Foreign Debt





Top 20 holders of Sri Lankan International Sovereign Bonds

Investor	Investment Value	% Outstanding
BlackRock Inc	1,016	7.8%
Neuberger Berman Group LLC	307	2.4%
Allianz SE	297	2.3%
UBS AG	239	1.8%
Capital Group Cos Inc/The	205	1.6%
HSBC Holdings PLC	172	1.3%
JPMorgan Chase & Co	168	1.3%
Invesco Ltd	139	1.1%
Prudential PLC	122	0.9%
Goldman Sachs Group Inc/The	100	0.8%
T Rowe Price Group Inc	99	0.8%
Nordea Bank Abp	89	0.7%
BNP Paribas SA	73	0.6%
Franklin Resources Inc	72	0.5%
Intesa Sanpaolo SpA	70	0.5%
Credit Suisse Group AG	70	0.5%
Massachusetts Financial Services C	70	0.5%
Danske Bank A/S	70	0.5%
Credit Agricole Group	55	0.4%
Ashmore Group PLC	53	0.4%
Others	9,564	73.3%



By Institution Type (excluding 'Others')



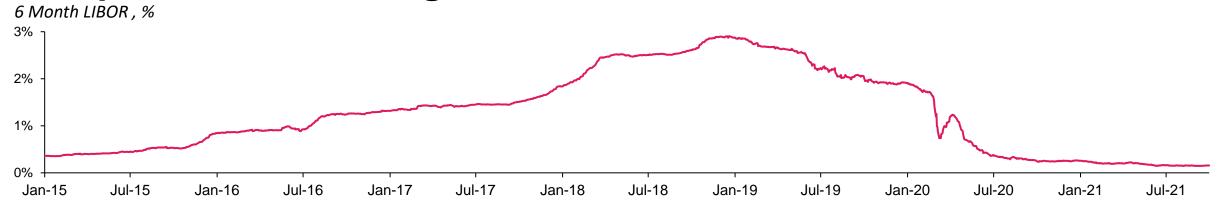


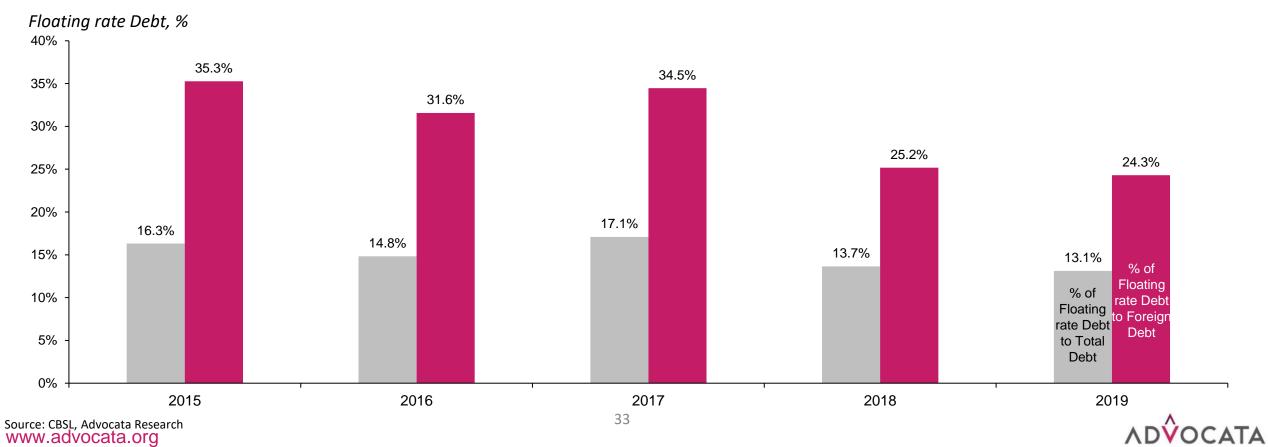
ISB Holdings are not constant – rebalancing and flows

	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021
BlackRock Inc	93,812	109,307	104,833	110,837	115,061
Neuberger Berman Group LLC	33,466	38,366	38,366	40,366	40,366
FIL Ltd	31,854	30,556	30,779	30,731	30,731
Allianz SE	26,350	25,750	15,950	15,950	15,950
UBS AG	24,246	28,012	28,006	27,956	21,966
Ashmore Group PLC	20,539	20,539	19,941	17,632	17,632
Candriam Investors Group	15,900	15,900	5,900	2,900	2,900
Nordea Bank Abp	15,650	11,991	12,091	12,091	11,891
Massachusetts Financial Services Co	13,863	16,363	16,363	17,863	17,563
JPMorgan Chase & Co	13,545	13,545	16,645	16,145	17,095
Prudential PLC	13,200	12,900	12,900	12,900	12,900
HSBC Holdings PLC	11,903	203	0	0	10,000
Abrdn Plc	11,880	680	0	0	0
M&G PLC	10,000	10,000	10,000	10,000	10,000
Credit Suisse Group AG	7,000	7,000	7,200	7,200	12,100
Danske Bank A/S	6,181	6,204	6,177	6,155	6,250
Deustche Bank AG	5,800	4,700	3,900	3,300	3,100
Banque Lombard Odier & Cie SA	5,500	0	0	0	0
Pictet Funds SA	5,360	5,860	5,860	3,947	3,947



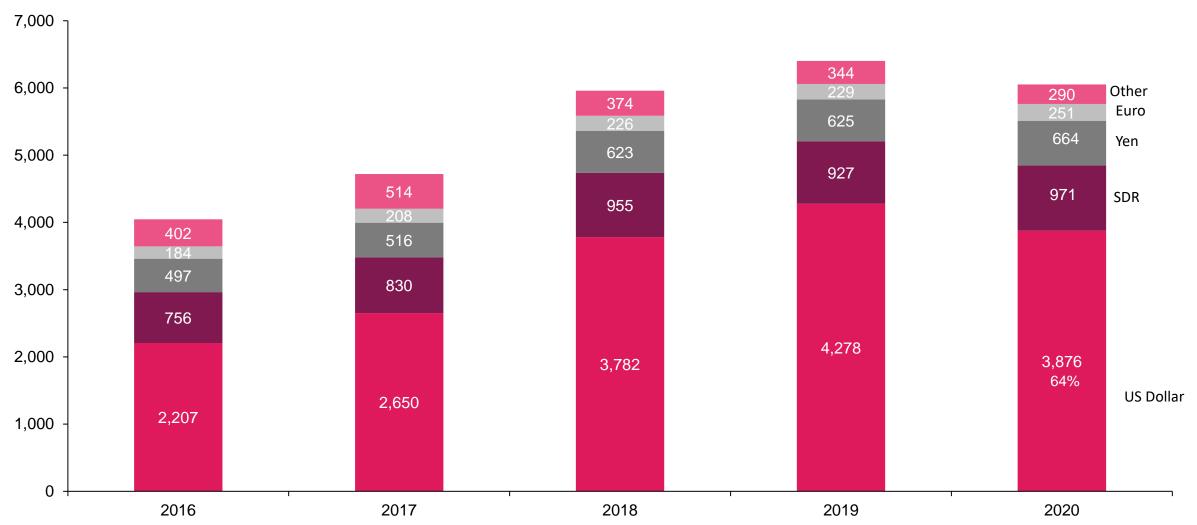
Composition of Floating Rate Debt





Foreign Debt- Currency Composition

Currency Composition of Foreign Debt, LKR Bn

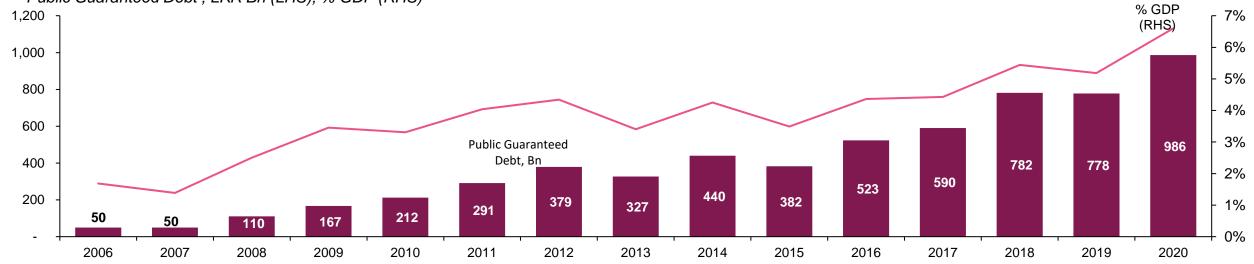




Off balance sheet debt

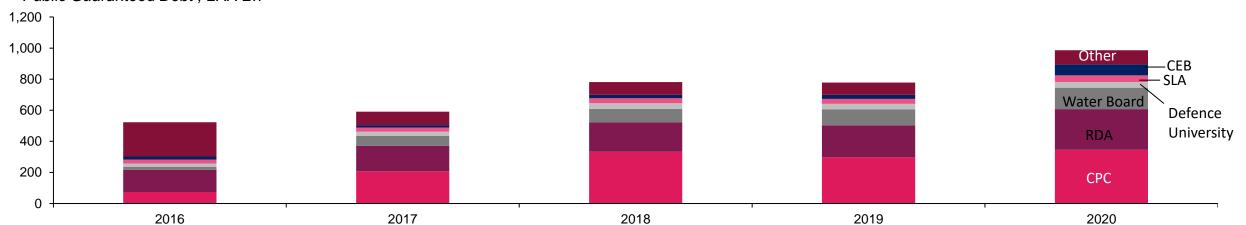
Publicly Guaranteed Debt increases to 5.2% of GDP in 2019

Public Guaranteed Debt , LKR Bn (LHS), % GDP (RHS)



Most Guarantees are given to CPC and RDA borrowings

Public Guaranteed Debt , LKR Bn





Debt Servicing



Government debt and its costs are on the rise

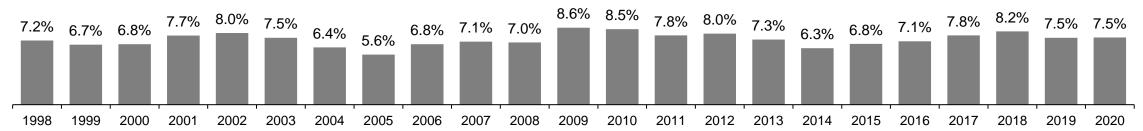
Interest cost on debt, LKR bn Domestic Foreign



Average cost of debt

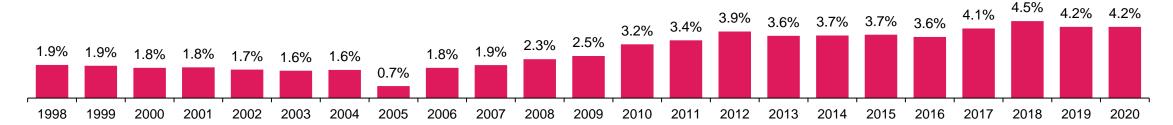
Total debt

Interest, %



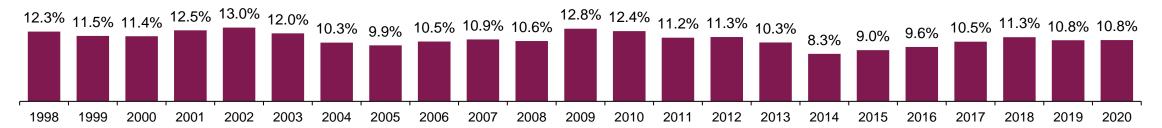
Foreign debt

Interest, %



Domestic debt

Interest. %

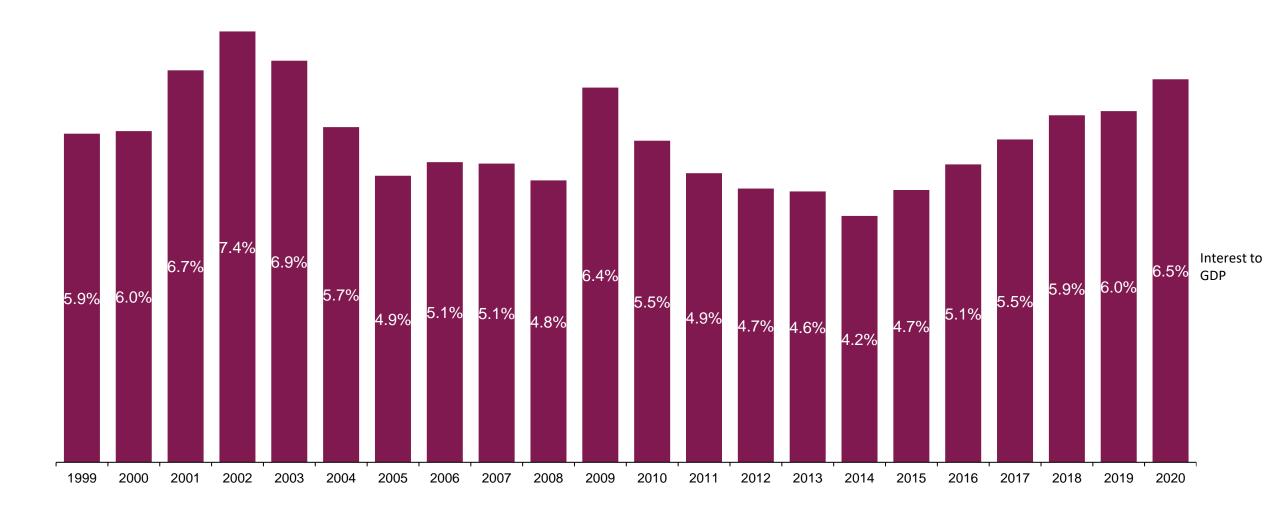




Increasing proportion of National Income spent to service Debt

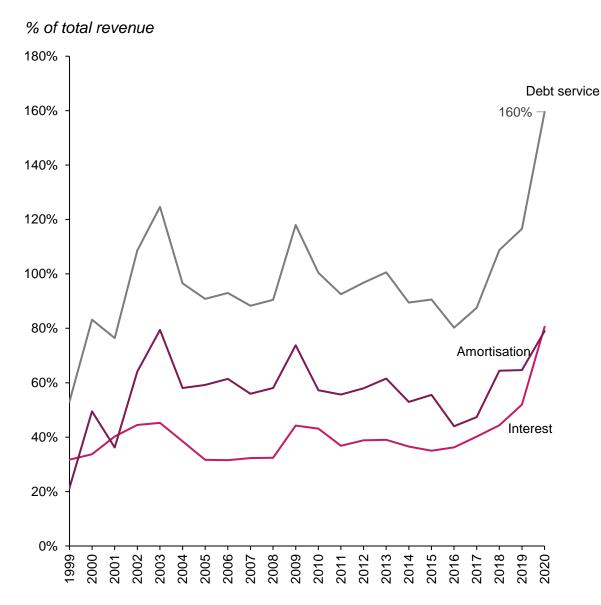
Interest as a percentage of GDP

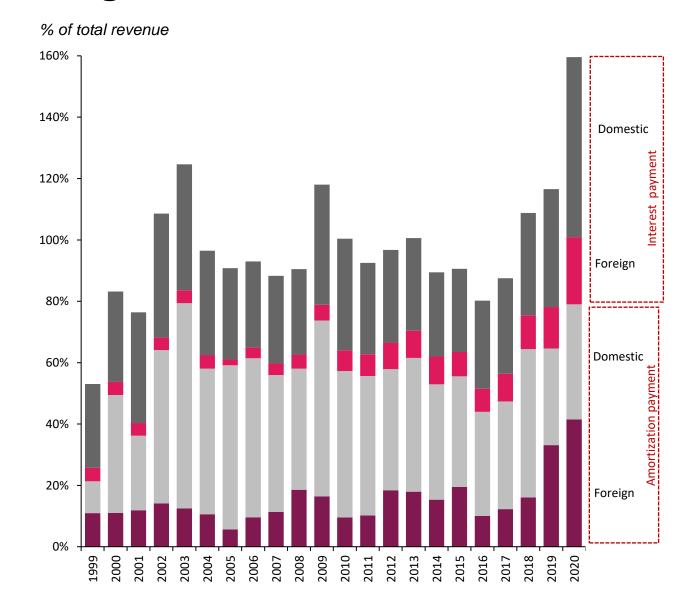
%





Interest and Amortization as percentage of revenues





Source: CBSL, Advocata Research



Debt Management



Market structure and infrastructure

What we have

Laws governing Sri Lanka's debt

- Appropriation Act (annually by the parliament) sets the borrowing limit
- Fiscal Management (Responsibility) Act (No. 3 of 2003)
- Foreign Loans Act No.29 of 1957
- Monetary Law Act No.58 of 1949
- Registered stock and securities Ordinance No. 7 of 1937 (as amended)
- Local Treasury Bills Ordinance No.8 1923 (as amended)

Fragmented Institutions governing Sri Lanka's debt

- Treasury
 - Department of external resources
 - Department of national budget
 - Department of treasury operations
- Public Debt Department CBSL

What we need

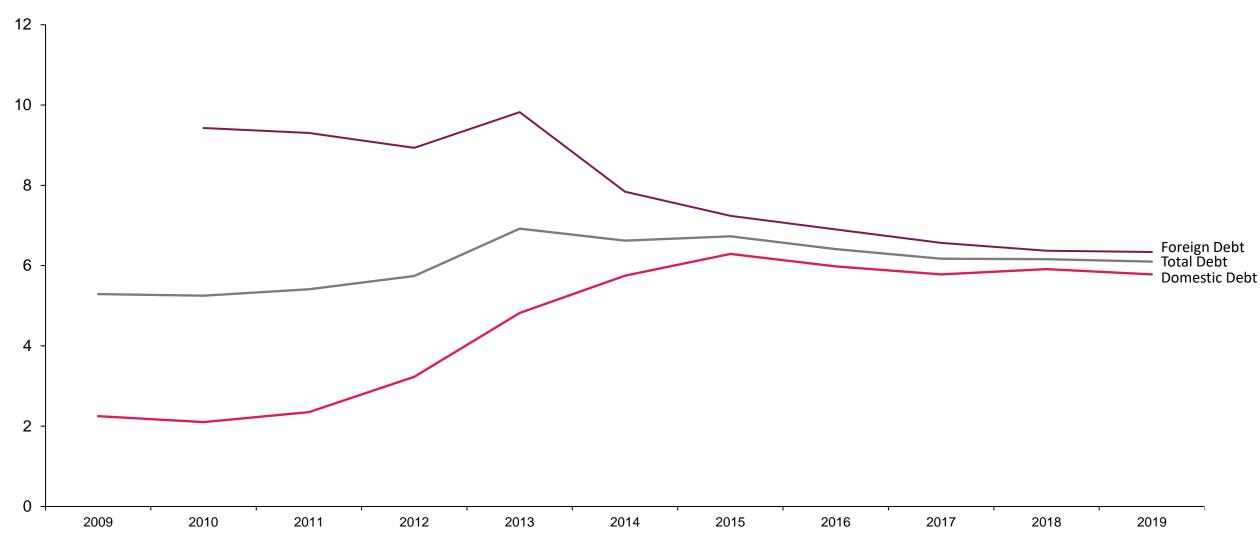
- A centralized public debt office under the treasury
- No electronic market for GSEC trading weak price discovery and transparency
- Lack of large-scale retail participations (approximately 40,000 active CDS accounts)
- No Central Counter Party (CCP)
- SLDBs need to be dematerialized and made fungible by issuing based on price NOT yield





Maturity of Domestic Debt pushed back while maturity of Foreign debt has been brought forward

Average Time to Maturity, years



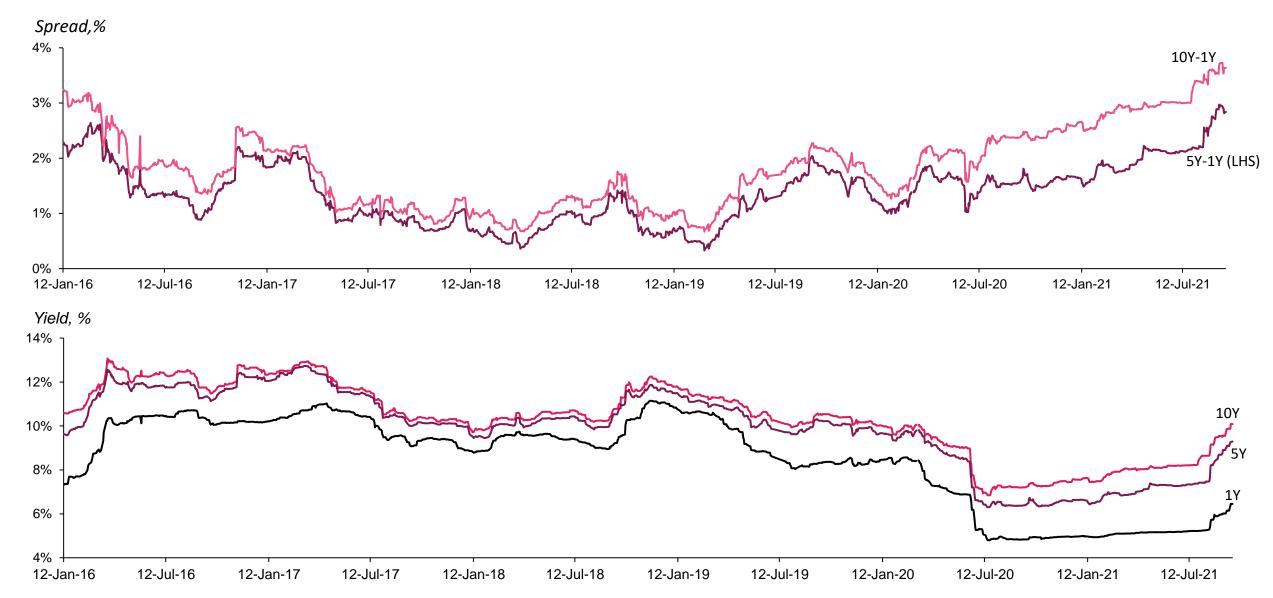
Note: ATMs of Foreign currency debt are in house estimates Source: CBSL, Advocata Research



Domestic debt management

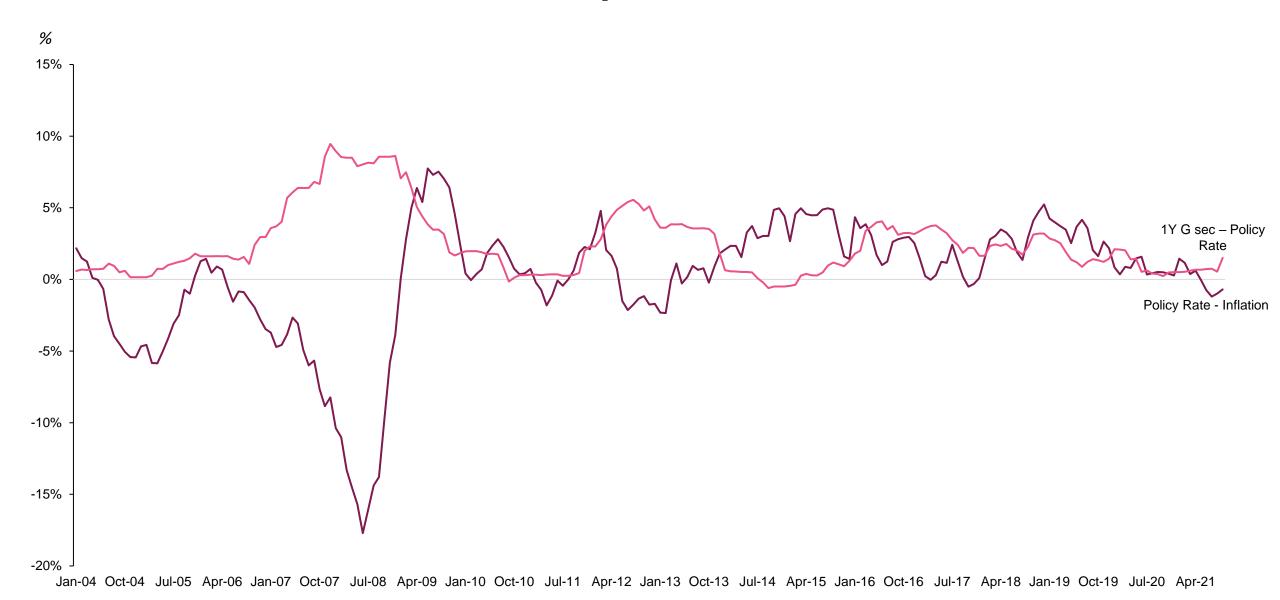


Term spread for G-sec



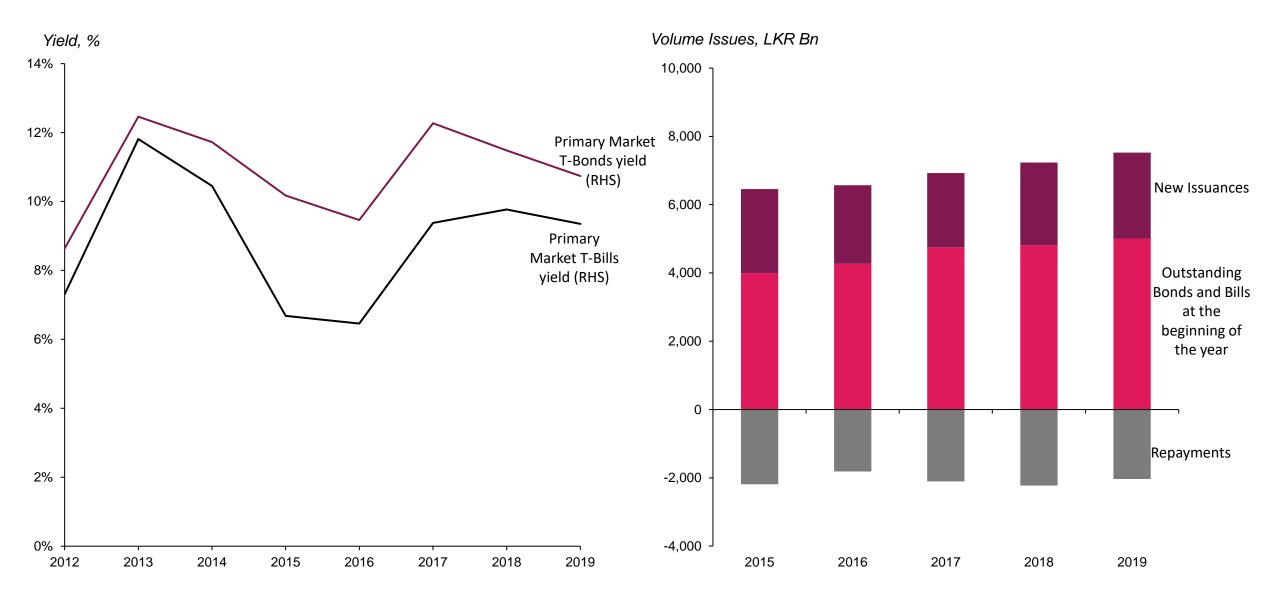


Inflation Effect and Financial Repression Effect





Weighted Average Yield Rates for G-Sec



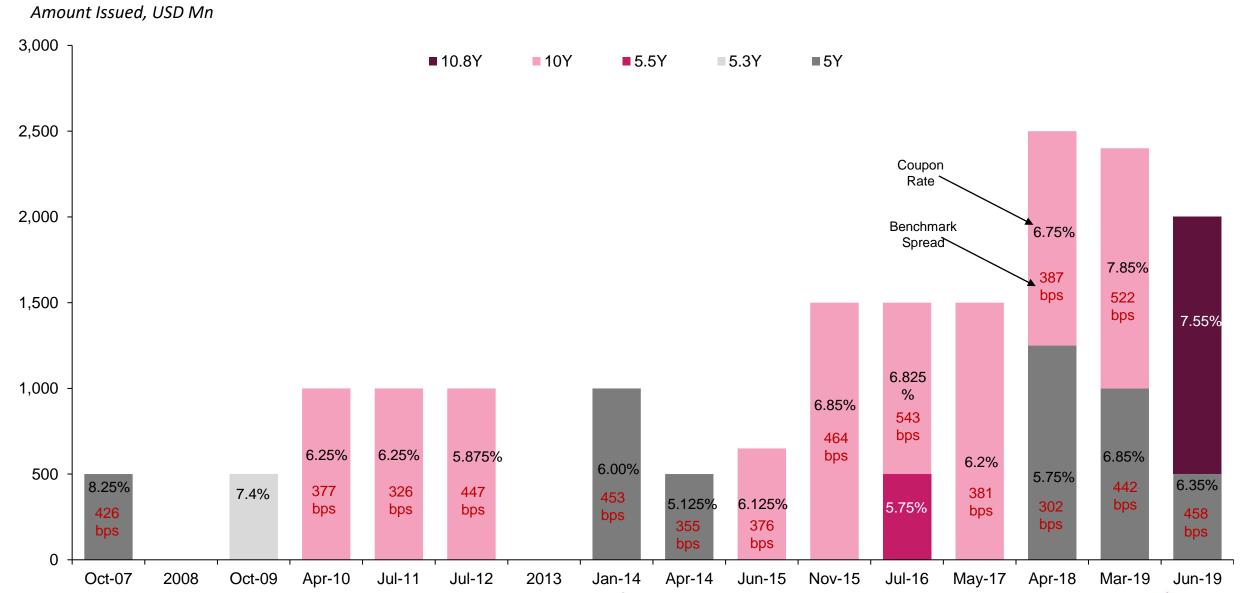
^{*} T bills volume issued show net issuance for the year Source: CBSL, Advocata Research WWW.advocata.org



External debt management



ISB's were issued at high coupon rates



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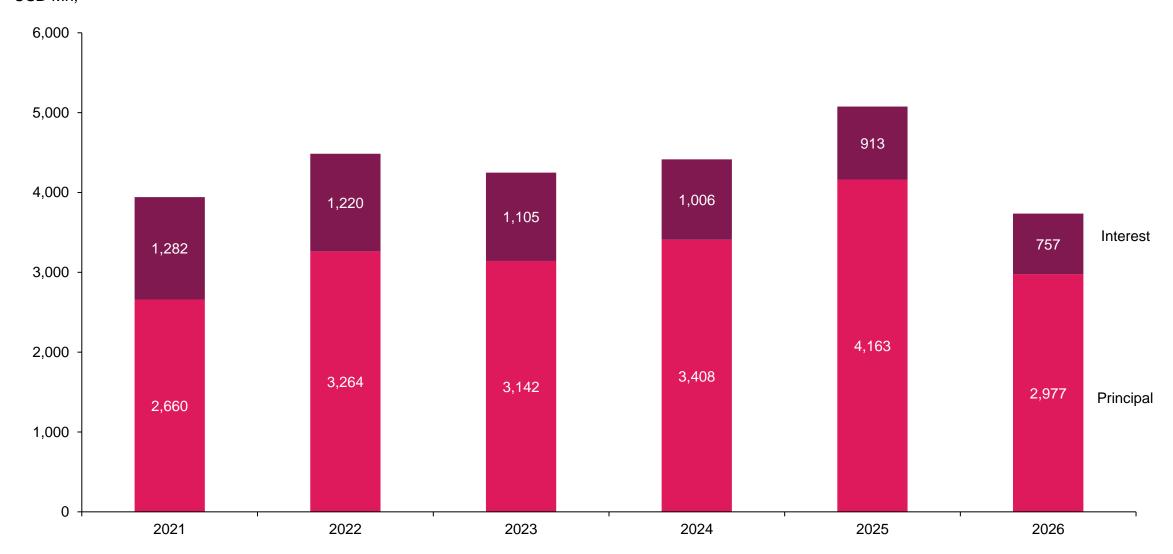
36% of ISBs have classic collective action clauses, which are harder to restructure

ISB maturities USD Bn, 1.6 Classic CAC Double limbed CAC 17.1% 20.5% 16.0% Yield to 1.4 maturity 17.2% 1.2 35.9% 16.6% 1.0 19.1% 49.3% 28.0% 0.8 0.6 20.9% 25.1% 43.3% 0.4 0.2 6.20% 5.88% 5.75% 6.85% 6.35% 6.13% 6.75% 5.75% 6.85% 6.83% 7.85% 7.55% Coupon 0.0 March July April March November July April March January June June May 2022 2022 2023 2024 2024 2025 2025 2026 2027 2028 2029 2030



Foreign obligations are evenly spaced out

Foreign debt service forecast 2021-2025 *USD Mn*,



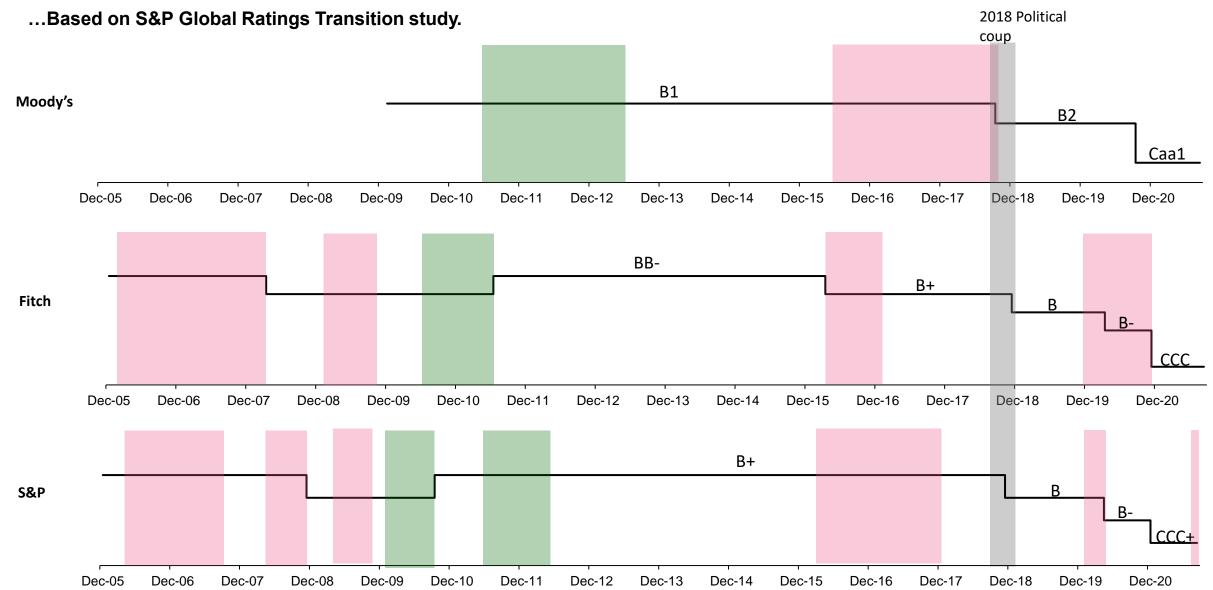
Note: *as of end 2020 Source: Ministry of Finance, Advocata Research www.advocata.org



Current Market Conditions

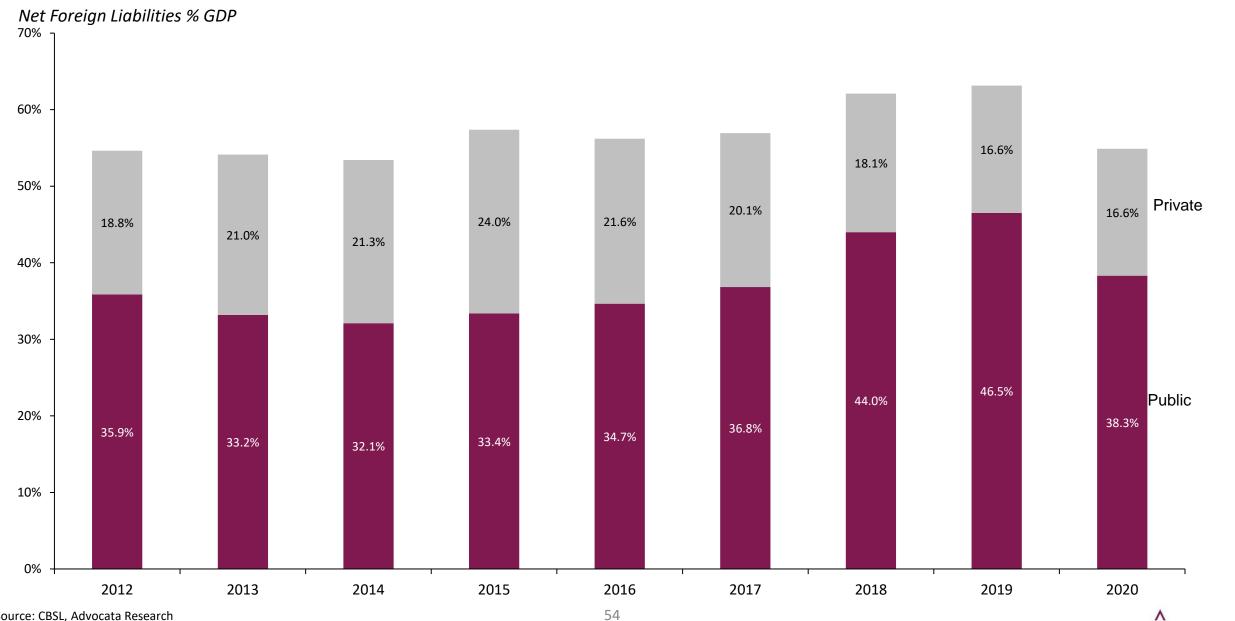


42% Chance of Selective Default within one year of downgrade...





Net foreign Liabilities % GDP...Private Sector is also sizeable



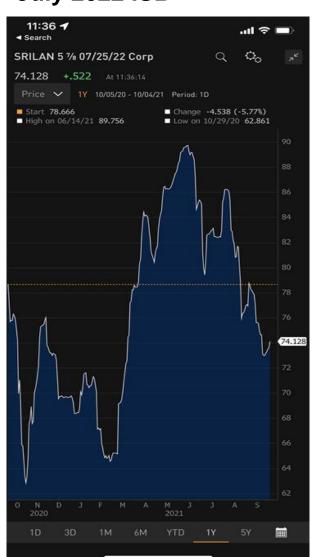
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Sri Lanka ISB trends....Short term market access is not possible

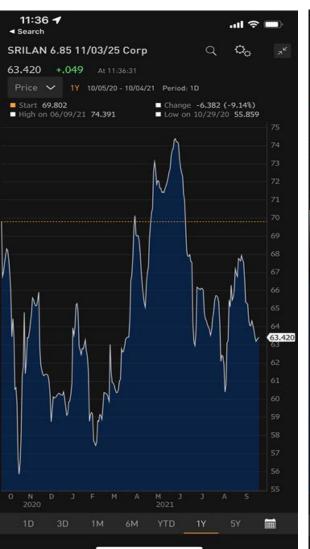
January 2022 ISB



July 2022 ISB



November 2025 ISB



March 2030 ISB



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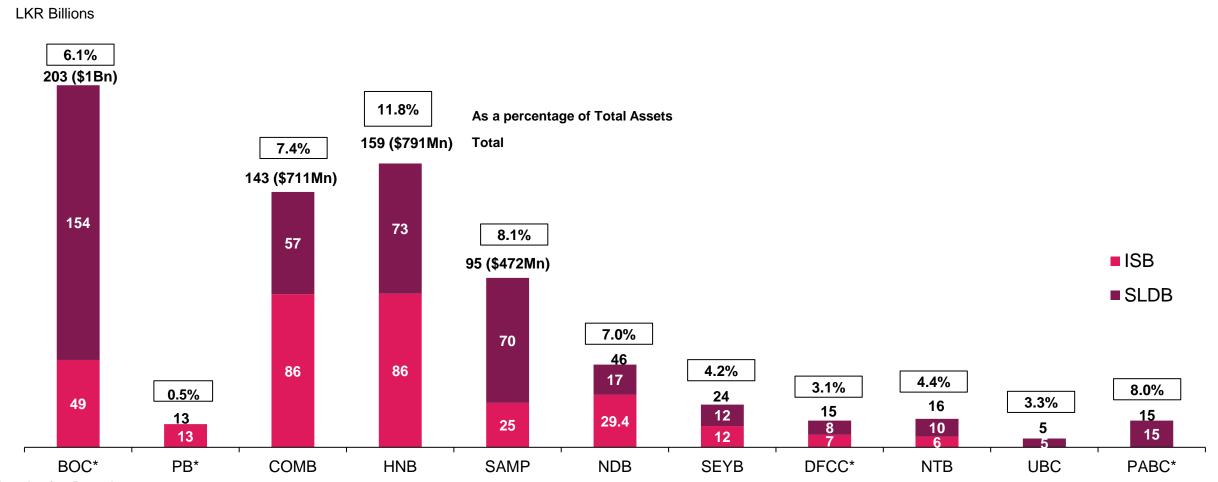
Implied Reprofiling Duration

June 2030 Bond			
Current Market Price	61.556		
Time to Maturity	8 years 9 months		
Coupon rate	7.55%		
Assumed Exit Yield	8%		
Implied duration of reprofiling	6 years and 3 months		

March 2029 Bond			
Current Market Price	61.655		
Time to Maturity	7 years 6 months		
Coupon rate	7.85%		
Assumed Exit Yield	8%		
Implied duration of reprofiling	6 years and 6 months		



Income earned by way of interest on any sovereign bond denominated in foreign currency including SLDB's are exempt from Income taxes effective 01 April 2018

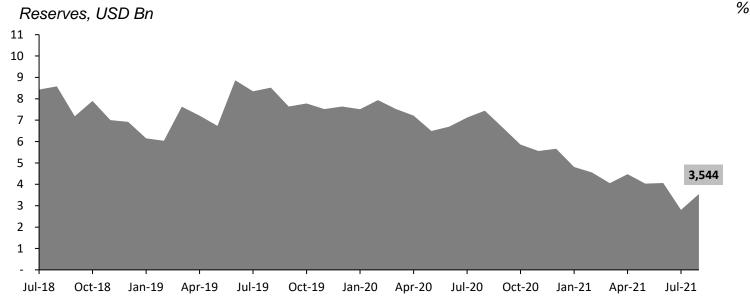


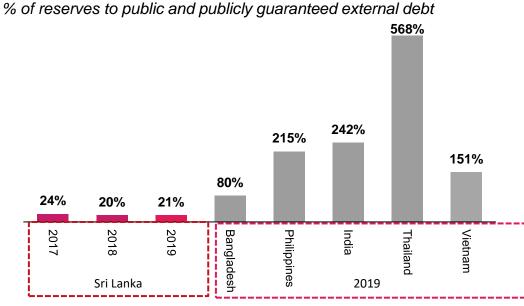
*Note: As of 31 December 2020
Source: Annual Reports, Advocata Research

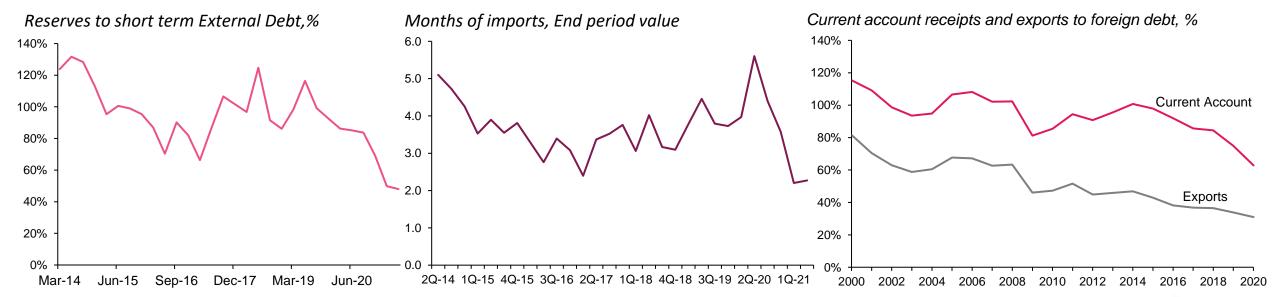
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Stress Indicators



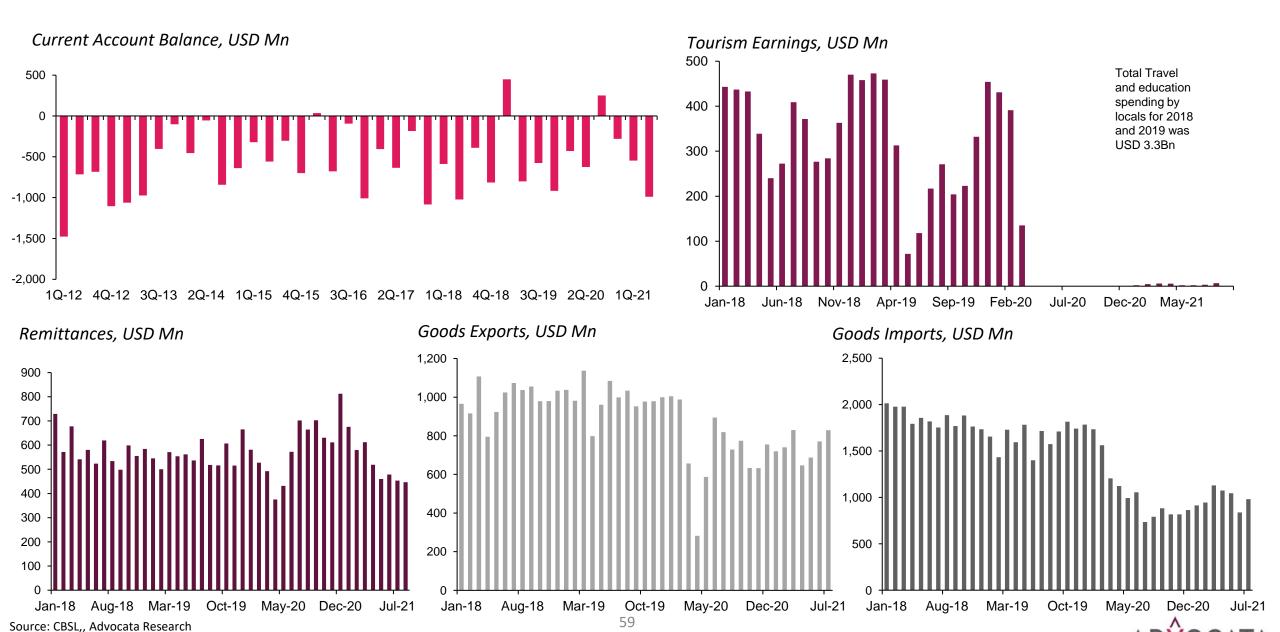




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Current account and impact on currency

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We need to borrow each year to bridge the current account deficit – FDI gap



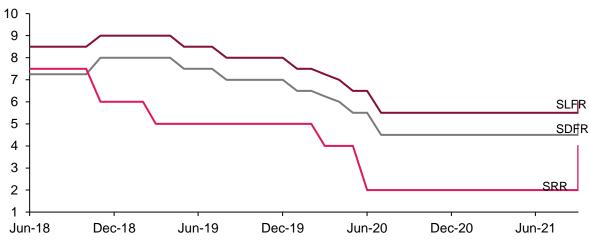
Currency is being managed in a narrow band



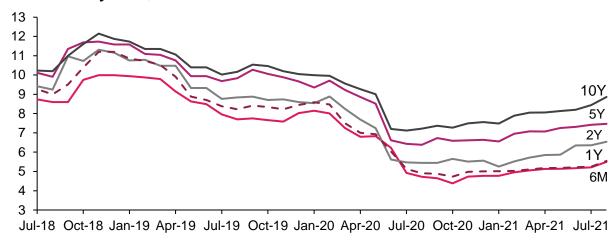
Policy rates and SRR were cut, and G-Sec yields fell

CBSL cut policy rates by 250bps and SRR by 300 bps in 2020,

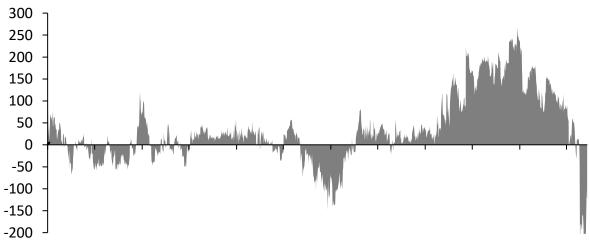
Policy rates, %



Subsequently G-sec yields fell across the board G-sec yields, %



Overnight Liquidity, LKR Bn



Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21

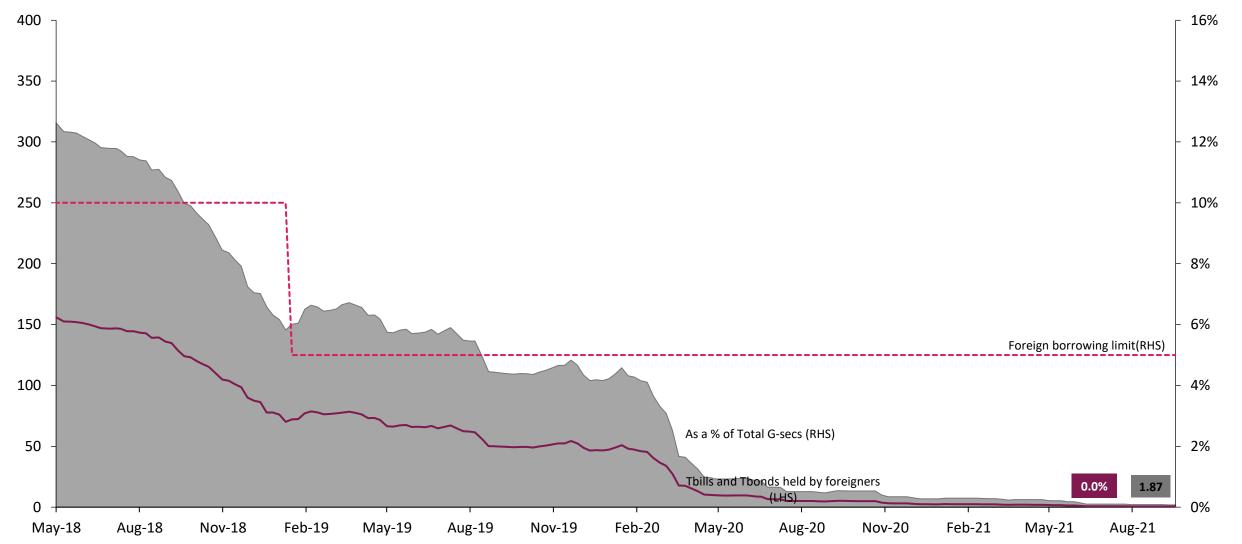
Government Securities rates, %





Foreigners have left the domestic debt market...trying to get them back through zero cost swaps

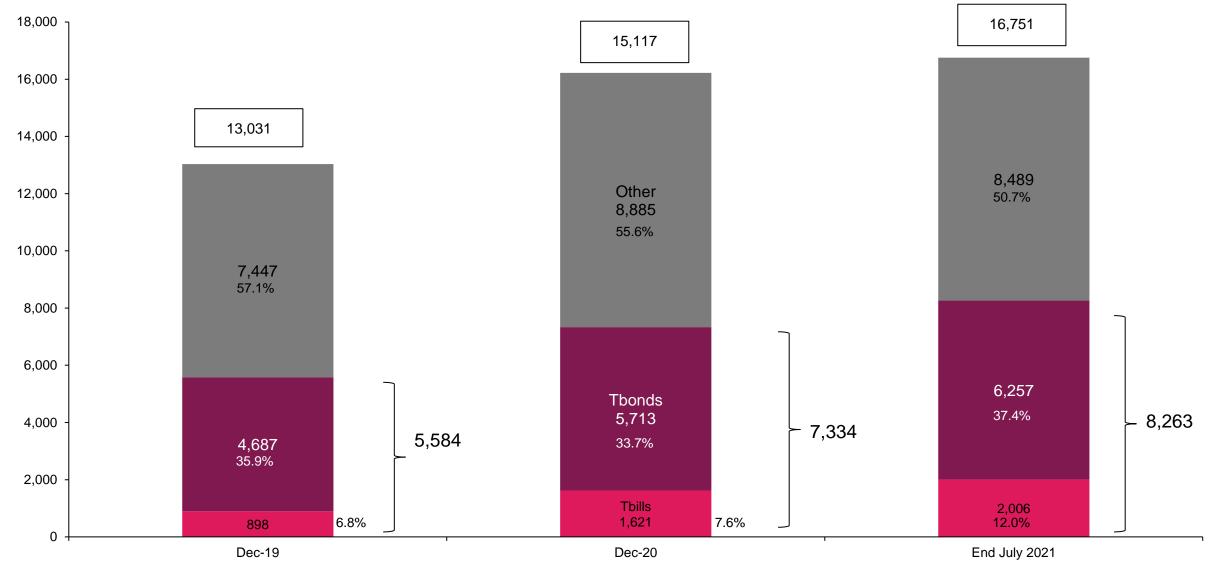
LKR, Bn(LHS); % of total government securities (RHS)





Current Deficit Financing mainly through GSECs...T-bill share increased

Outstanding Government Debt, LKR Bn



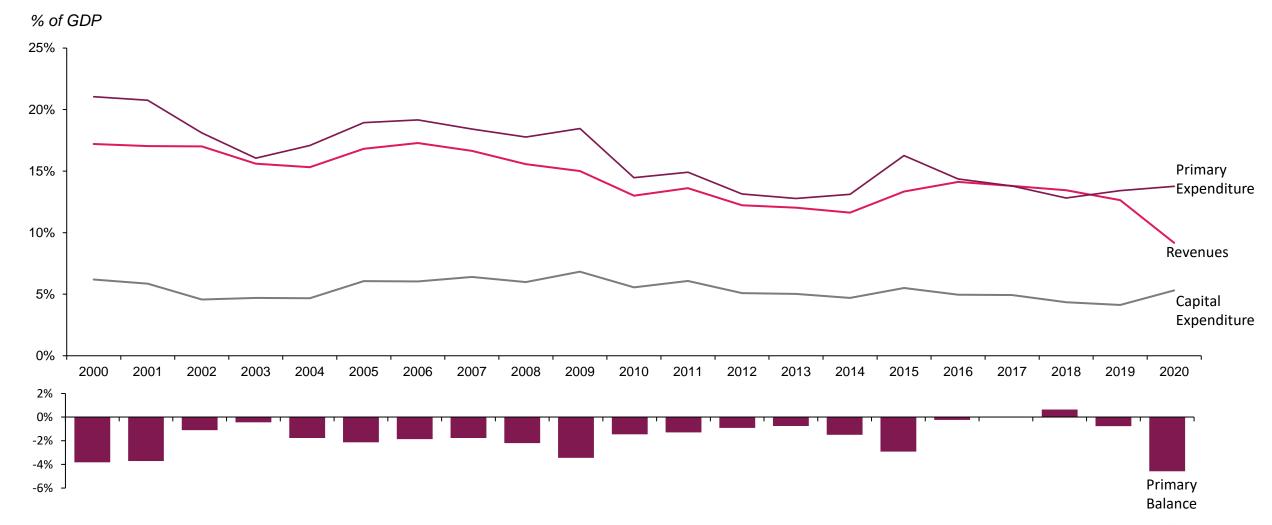


Reducing debt short of default



Fiscal Consolidation

- Denotes budgetary measures taken by the government to improve its fiscal position and reduce debt to GDP
- Four Leavers Size of adjustment, pace and duration, feasibility and durability



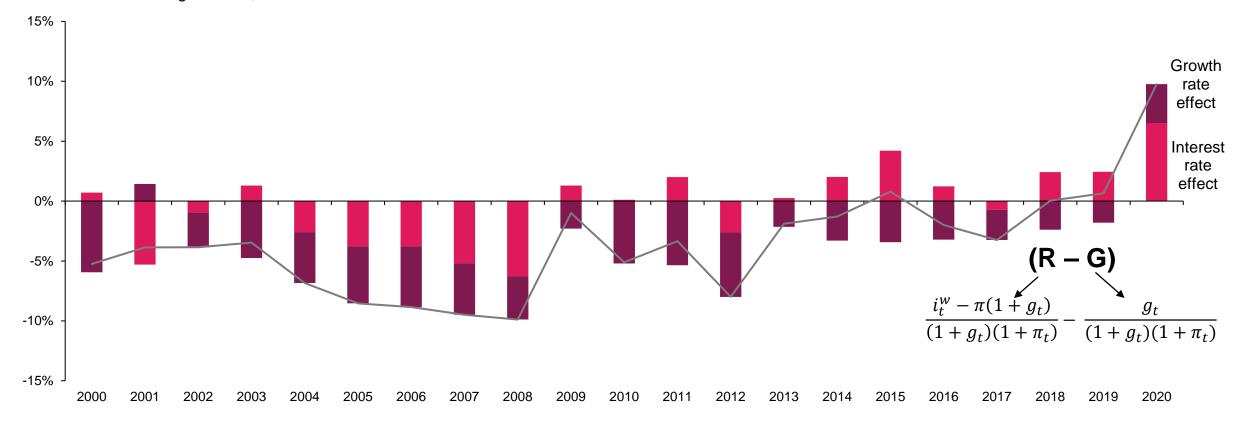


Growing out of debt

How it works:

- Growth boosts GDP in the Debt/GDP ratio
- Primary balance improves through higher tax revenues from higher growth and lower spending on unemployment benefits

Contribution to Change in debt, %





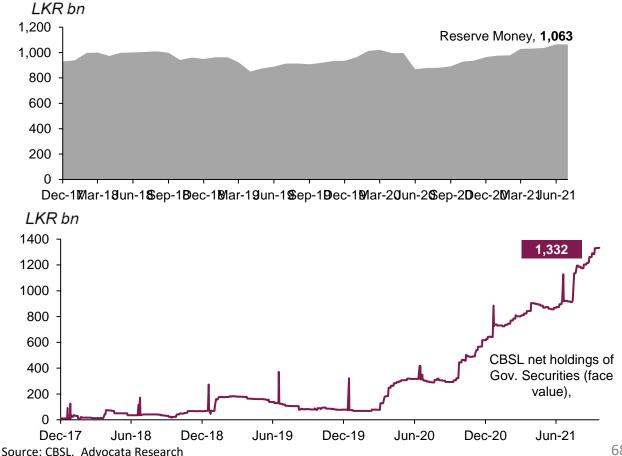
Monetary Policy

How it works:

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By printing money and reducing the burden on pre-existing liabilities

Seignorage: profits made by central bank from holding interest bearing assets funded through money printing



Inflating the debt away

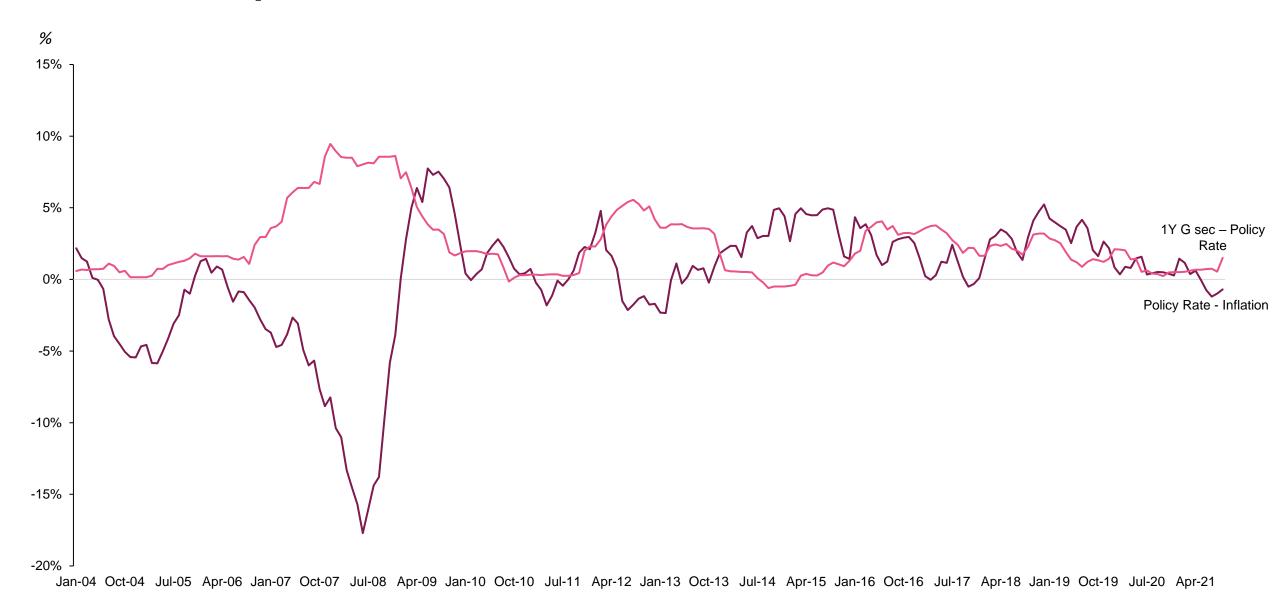
Amendments to the monetary law act 1. Objectives of CBSL 2. Functions of CBS 3. Governance and Organization

- 4. Coordination Council
- 5. Monetary policy framewor
- 6. Reporting and Publication
- 7. Supervision and resolution of financial institutions
- 8. Macroprudential Authority
- 9. Relationship with parliament government and p
- 10. Financial provisions
- 11. Internal and external audit



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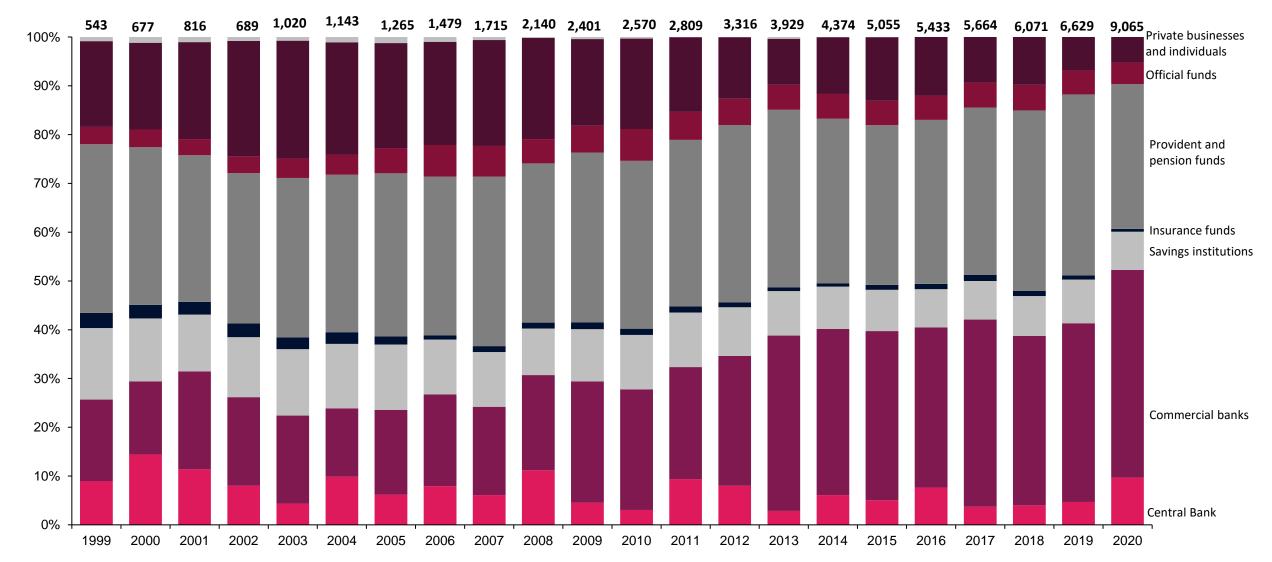
Financial Repression & Inflation Effect





Financial Repression - Captive sources for domestic debt

% of total domestic debt



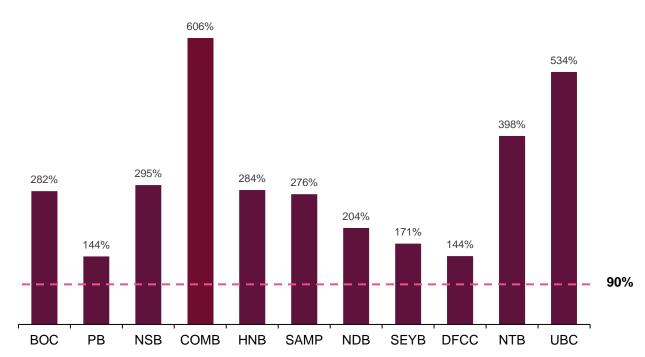


Financial Repression and Capital Controls

Policies that create a captive audience for government debt, allowing governments to issue debt at a rate below what the market would charge had there been no restrictions

* Liquid Assets (Banking Act No. 30 of 1988) Every licensed commercial bank shall maintain liquid assets in such amount determined by the Monetary Board not be less than 20% and not more than 40% of the total of its liabilities, less its liabilities to the Central Bank and to the shareholders.

Liquidity Coverage Ratio



As at 30 June 2021

Capital transfers pre-restrictions

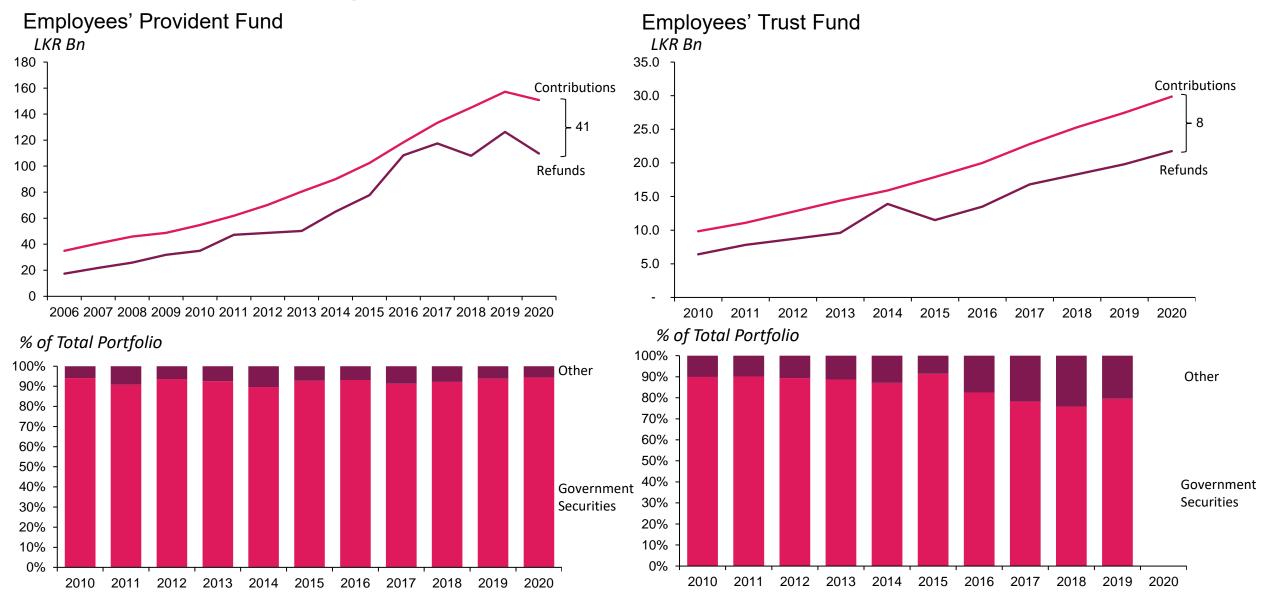
- A company listed in the Colombo Stock Exchange (CSE), buying shares or foreign sovereign bonds up to a value of USD 2,000,000 in any one year.
- A company not listed in the CSE and are buying shares or foreign sovereign bonds up to a value of USD 500,000 in any one year.
- An individual or a partnership buying shares or foreign sovereign bonds up to a value of USD 200,000 & USD 300,000 respectively for lifetime.
- A Company setting up overseas offices up to USD 300,000 per calendar year.
- Permitted outward remittances through Outward Investment Accounts (OIA).
- The above transfers were restricted in April 2020. Further transfers through PFCA and BFCA accounts have been restricted up to USD 20,000.

The following were extended effective July 2021 for a further period of 6 months

- Investments financed through FCY borrowings from out of the country.
- Additional capital infusion for working capital purposes up to USD 15,000 to an established subsidiary
- Limitation on repatriation of funds under the migration allowance up to USD 30,000 for the first time and USD 10,000 for emigrants who have already claimed the allowance



Contractual Savings Institutions are captive sources





Contributions to public debt reduction in non-default episodes









Typical IMF programs for middle income countries

IMF lending aims to give countries breathing room to implement adjustment policies in an orderly manner, which will restore conditions for a stable economy and sustainable growth. It has a catalytic effect that improves market access.

Purpose	Facility	Financing	Duration	Conditionality
Present, Prospective or potential BoP need	SBA	GRA	Up to 3 years, but usually 12-18 months	Ex-post
Protracted BoP need. Medium-term assistance	EFF	GRA	Up to 4 years	Ex post with focus on structural reforms
Actual and urgent BoP need	RFI	GRA	Outright purchase	No Fund supported program/ ex-post conditionality, but prior actions possible



IMF - Assessment of Debt Sustainability, Market Access, and Fund Lending

Assessment of Debt Sustainability, Market Access, and Fund Lending

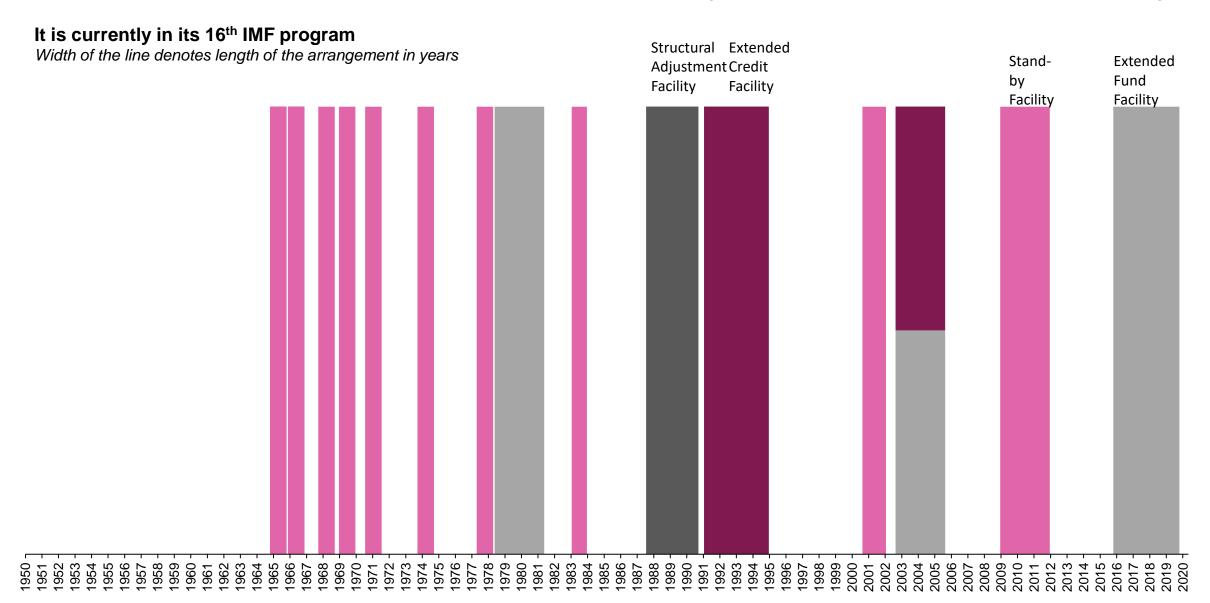
Member has market access	Normal Fund lending	Normal Fund lending	Unlikely
Member has lost market access	Normal Fund lending	Reprofile	Upfront debt reduction
	Debt sustainable with high probability (i.e. market access loss is temporary)	Uncertain	Debt unsustainable with high probability

Sri Lanka IMF Quota – USD 800 Normal Access - Annual Limit – 145%, Total Limit – 435% Exceptional Access – 500%

Low DSA Debt Burden Indicators High

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Sri Lanka has spent 42% of the last 70 years under an IMF facility







Thank you