



MACROECONOMIC
Analysis & Policy Studies

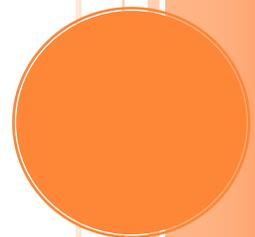
**SRI LANKA'S MACROECONOMIC CRISIS:
A SECTORAL FINANCIAL BALANCES ANALYSIS**

WORKING PAPER

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SRI LANKA'S MACROECONOMIC CRISIS: A SECTORAL FINANCIAL BALANCES ANALYSIS

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Abstract. *Sri Lanka is in deep crisis. The latest news is that the government has collapsed even as the country has almost entirely run out of fuel. While the immediate reasons for the collapse in the economy are evident, it is crucial to understand the possible policy responses available to Sri Lanka and the possible implications of these options in the short, medium, and longer-term. This paper employs the Sectoral Financial Balances (SFB) model to decipher clearly and consistently the available options and their implications on different sectors of the economy, namely the domestic private sector, the government, and the external sector.*

Keywords: *Sri Lanka, economic crisis, balance of payments crisis, sectoral financial balances, economic complexity*

JEL Classification: E390, E650, E660, F310, F320.

1. Introduction

Just as this paper reached completion, news broke out that the President and Prime Minister of Sri Lanka have been ousted from power. The country is in deep political and economic crisis. Once graciously referred to as the Wonder of Asia and the subsequent Miracle of Asia, Sri Lanka has been severely wounded as an economy in the last couple of years. With the raging economic crisis, some now liken it to Zimbabwe or Venezuela. What has reduced Sri Lanka to dismal state of economic affairs? Even as the immediate need of the country is a new government and political stability, the economic questions will need to answers.

In this paper, we delve into Sri Lanka's crisis, discern its policy options in the short, medium, and longer term, and analyse their likely consequences using the post-Keynesian, sectoral financial balances model. The essence of Sri Lanka's crisis is a cash-flow problem, not of Sri Lankan rupees (LKR) but foreign currency or US dollars (hereon \$ or dollar). In economics, this is often commonly referred to as a balance of payments crisis. The more profound question, however, is whether the crisis is a short-term shock unleashed by the

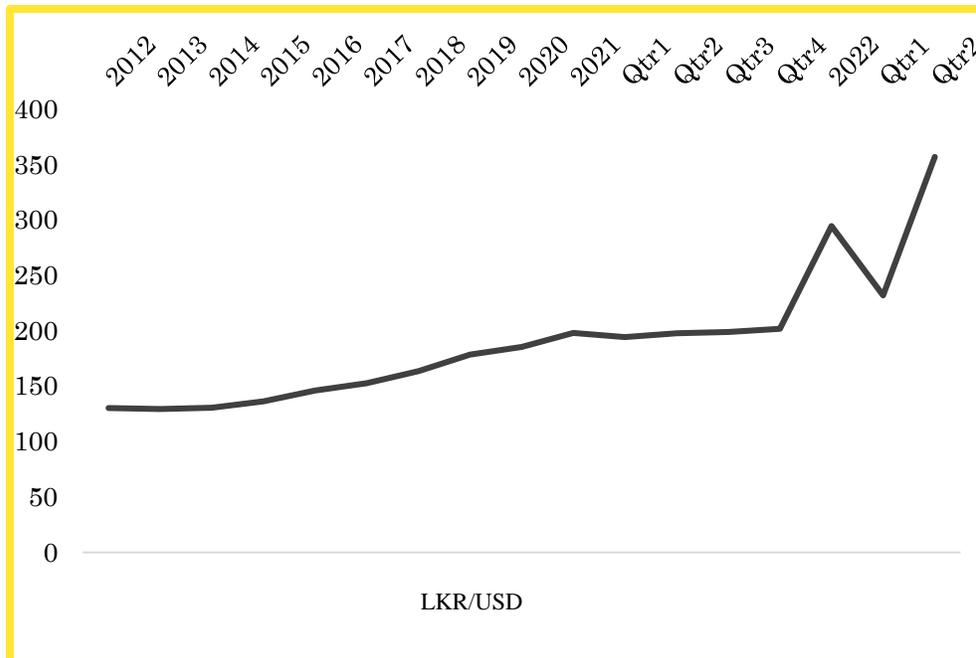
pandemic or a chronic, structural one. As we will see, the answer is perhaps a combination of both; the Covid-19 pandemic is a trigger to a brewing crisis.

Just before the pandemic, Sri Lanka was declared an "upper-middle-income country" (Jayamanne, 2019) with a per capita income exceeding \$4,000. To sustain its population's high standards of living, Sri Lanka has depended on imports even for its essentials, including fuel, food, pharmaceuticals, fabric, machinery, and automobiles, among others. Without the adequate capacity to earn the dollars necessary to match its imports, Sri Lanka faced chronic current account deficits (CAD) that necessitated recourse to capital inflows. With low levels of foreign direct investment (FDI) and only moderate private sector external borrowings, Sri Lanka recourse to sovereign external debt to fund its CAD. This trend began almost two decades ago, in 2005.

Sri Lanka, however, was able to service its debt and meet its repayment obligations without serious cause for concern. Dollar liquidity was available, although it is important to caution that low GDP growth rates since 2013 that kept imports in check could have been an essential factor that made this possible. The pandemic was not the first time the world realized that Sri Lanka was vulnerable to dollar-liquidity shocks; the impact of terrorist strikes on tourism in 2019 was a warning that came as recently as 2019. Nonetheless, it was only when the Covid-19 pandemic unfolded in 2020 that Sri Lanka sank into a deep crisis.

There are many indicators of the Sri Lankan crisis. However, the significant destabilizing impact was the sharp depreciation in the value of its currency, the Sri Lankan rupee (LKR), vis-a-vis the dollar. It is pertinent to note from Figure 1 that although the Sri Lankan rupee had been depreciating steadily over several years, it collapsed as recently as the beginning of 2022.

Figure 1: Sri Lankan rupees per US dollar, 2012-2022



Source: <https://tradingeconomics.com/sri-lanka/currency>

The crisis ultimately climaxed in April this year when Sri Lanka defaulted on its \$51 billion repayment commitments on external debt after almost entirely running out of foreign currency (AFP, 2022a), with reserves depleted to just about \$ 1.8 billion. Sri Lanka warded off the immediate effect of the default by receiving emergency aid from India and other countries. However, more recently, without aid readily forthcoming, Sri Lanka can no longer sustain imports. It is presently in dire straits facing food and fuel shortages, literally pushing it into a situation where "Sri Lankans are skipping meals as they endure shortages, lining up for hours to try to buy scarce fuel. It is a harsh reality for a country whose economy had been proliferating, *with a growing and comfortable middle class*. Until the latest crisis deepened." (Banerjee, 2022)

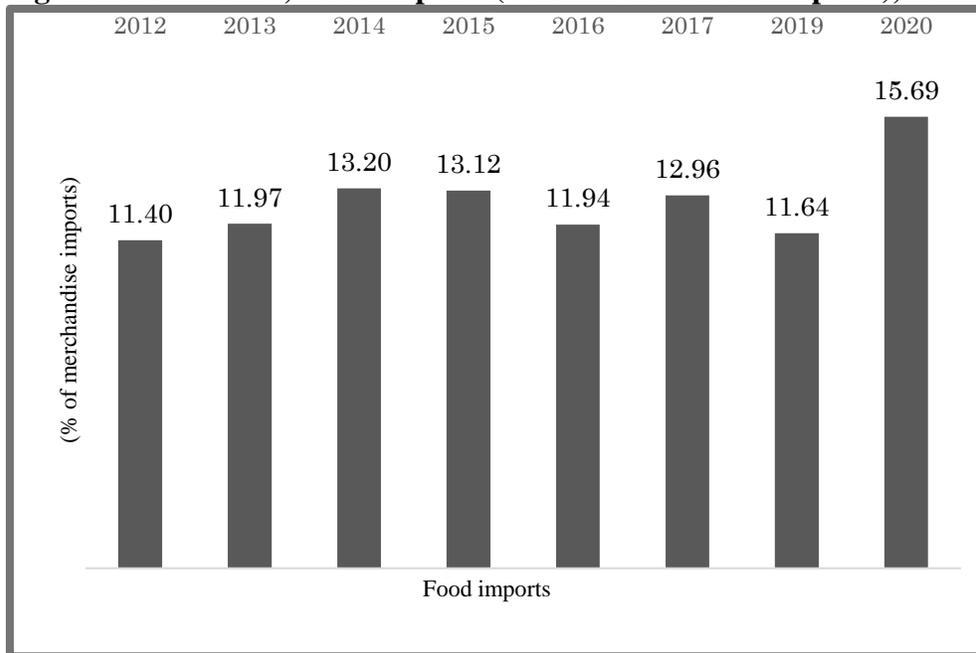
2. The root causes of the Sri Lankan crisis

The causes of the present crisis are starkly identifiable: The Covid-19 pandemic dealt a vicious blow to Sri Lanka's tourism sector, depriving it of substantial foreign exchange earnings. Tourism, which earned Sri Lanka revenues of \$ 4.3 billion in 2018 (Export.gov, 2019), fell to abysmally low levels in 2020, improved but to just about \$ 500 million in 2021 (Iqbal, 2022), and is expected to reach about \$ 800 million in 2022 (Fernando, 2022). Simultaneously, the announcement by former Sri Lankan President Gotabaya Rajapaksa on April 29, 2021, that food production must become organic to curb fertilizer and pesticide imports is another example of an equivocal combination of causes and effects. After rejecting suggestions to implement the transition gradually, the President banned several agrochemicals just days later. The policy resulted in disastrous consequences, although there is debate over the actual effect of the ban on the use of chemicals in agriculture

(Damodaran, 2022). Without the use of agrochemicals, rice yields plunged. Moreover, the policy also affected Sri Lanka's tea sector, the country's second-largest export earner. In the absence of agrochemicals, leaf disease was likely to reduce rubber industry yields, another critical export earner. The ban was ultimately lifted by late November 2021 (Jayasinghe, 2021).

With already depreciating exchange rates on account of the tourism crisis, plummeting food production, and consequently, the spike in import of essential food products (Figure 2) like rice and sugar forced Sri Lanka into a vicious loop of rising food prices, falling exchange rates, and soaring inflation. In April and again in May 2022, former President Gotabaya Rajapaksha proclaimed a state of emergency under the public security code to prohibit the hoarding of vital food products and to 'ensure public order' when violence over shortages began to erupt on the streets (AFP, 2022b).

Figure 2: Sri Lanka, Food Imports (% Of Merchandise Imports), 2012-2021



Source: <https://tradingeconomics.com/sri-lanka/food-imports-percent-of-merchandise-imports-wb-data.html>

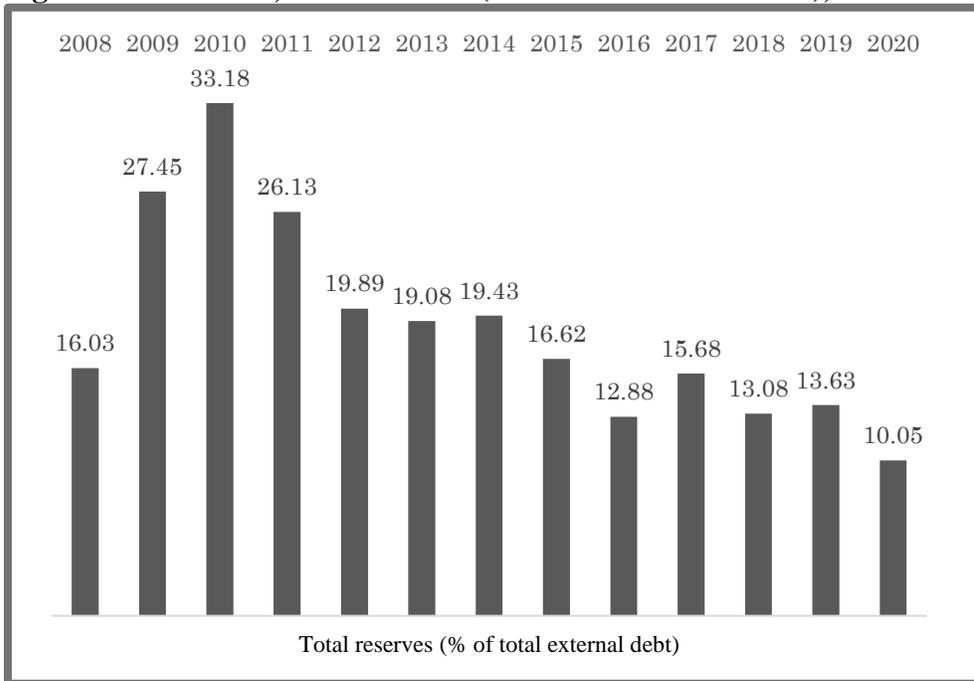
While the short-run causes of the crisis are relatively straightforward, the longer-term reason is perhaps less noticeable. Sri Lankan indulgence in foreign borrowing since 2005 was also prompted by government spending on 'consumer subsidies' that, despite improving human development indicators, proved inadequate for Sri Lanka to undertake the direct investment necessary to sustain high future growth (Athukorala & Jayasuriya, 2013). In other words, Sri Lanka could not complexify its economy with the diversification of exports and develop its local manufacturing and agricultural base to reduce its dependence on imports, particularly essentials. A world flush with dollar liquidity cheaply ensured that Sri Lanka walked the balance of payments tight rope without confronting its vulnerability to crisis.

In this context, we attempt to discern the possible macroeconomic policy options available to Sri Lanka to tackle its ongoing crisis. It is pertinent first to study the interconnections between key macroeconomic parameters for the Sri Lankan economy over the last decade.

3. Trends in Sri Lanka's vital macroeconomic parameters

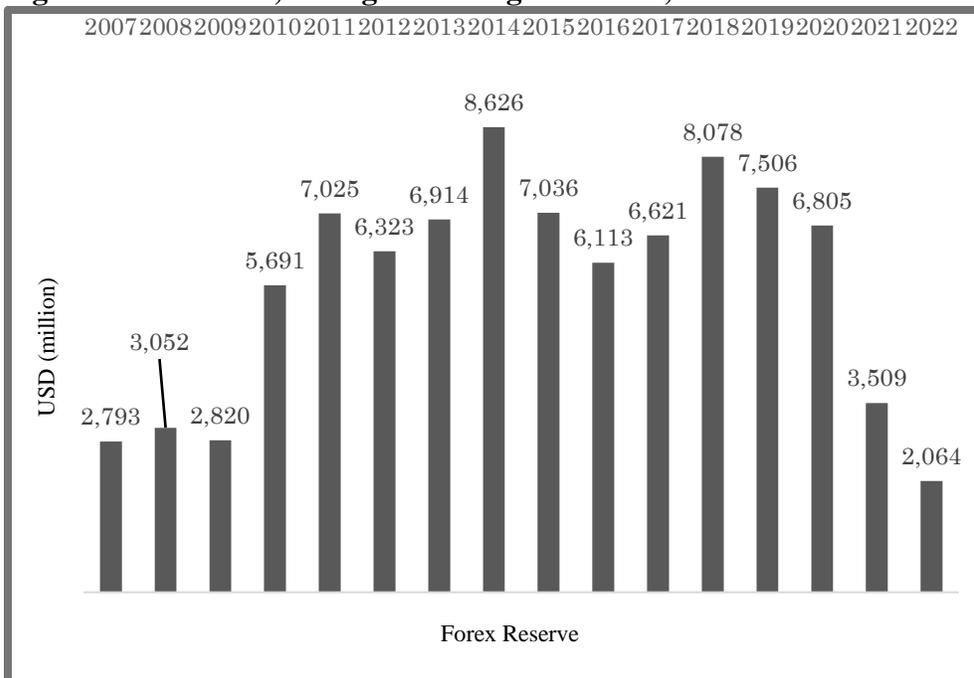
The foremost concern in the Sri Lankan crisis arises from its external sector, mainly external sovereign debt. External debt has always remained an essential source of finance for the Lankan government. While Sri Lanka could obtain subsidized loans from multilateral agencies and development partners earlier, it was forced to seek alternative international financial sources upon upgrading to a recognized middle-income country in the early 2000s (Jayamanne, 2019). Consequently, Sri Lanka issued its first International Sovereign Bond (ISB) for \$500 million in 2007, generating funds in international capital markets. Soon, Sri Lanka's foreign debt composition shifted dramatically with increasing reliance on ISBs (Public Finance.lk, nd). By October 2021, Sri Lanka's ISBs reached \$11.82 billion, accounting for 34.1 percent of total external debt (Guoquan, 2022). When an ISB matures, debt repayment requires substantial outflows of foreign currency and is imperative since delays and default severely affect sovereign ratings and terms for future borrowing. Therefore, even if the country's foreign debt-to-GDP ratio does not show a significant spike, its balance of payments is at risk. It is, therefore, more essential to observe foreign currency reserves as a percentage of external debt than the debt to GDP ratio. The deterioration in Sri Lanka's position in this regard is seen in (Figure 3), worsened by the decline in the absolute quantum of foreign currency reserves held by the Central Bank of Sri Lanka (Figure 4).

Figure 3: Sri Lanka, total reserves (% of total external debt), 2008-2021



Source: <https://data.worldbank.org/indicator/FI.RES.TOTL.DT.ZS?end=2020>

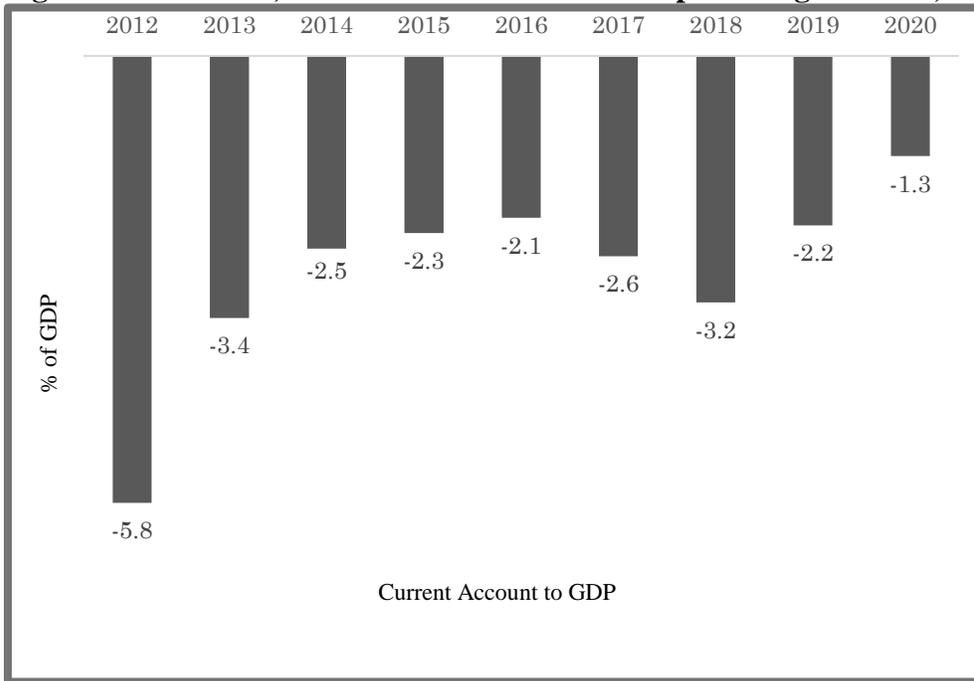
Figure 4: Sri Lanka, Foreign Exchange Reserves, 2012-2022



Source: <https://tradingeconomics.com/sri-lanka/foreign-exchange-reserves>

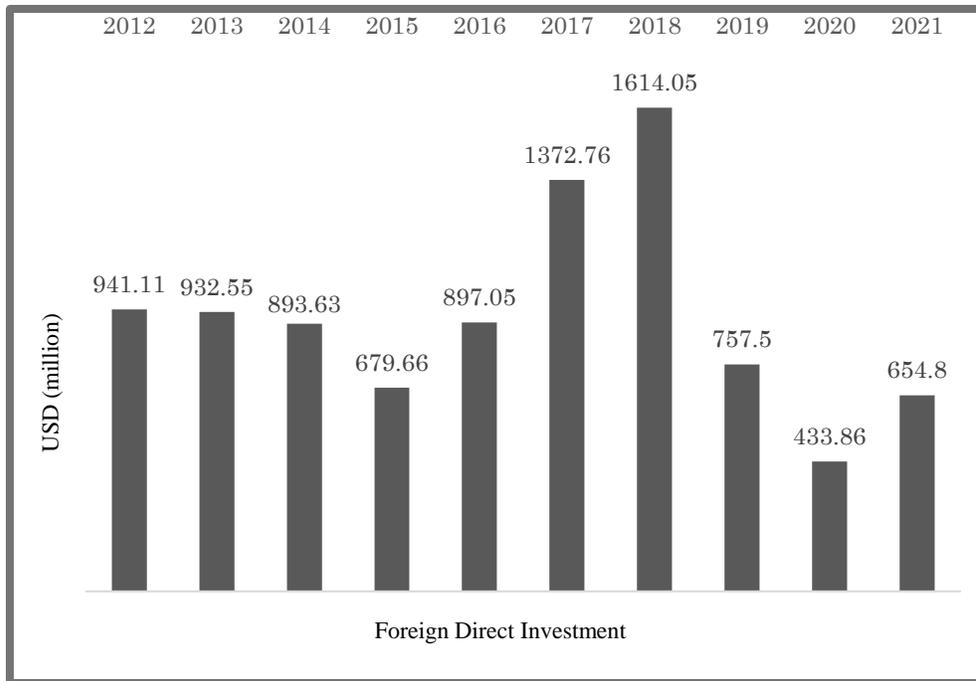
In the aftermath of the Global Financial Crisis of 2008, Sri Lanka has witnessed fundamental structural issues, including a chronic current account deficit (Figure 5) as well as low and stagnating levels of foreign direct investment (Figure 6).

Figure 5: Sri Lanka, Current account deficit as a percentage of GDP, 2012-2020



Source: <https://tradingeconomics.com/sri-lanka/current-account>

Figure 6: Sri Lanka, Foreign direct investment, Net inflows, 2012-2021

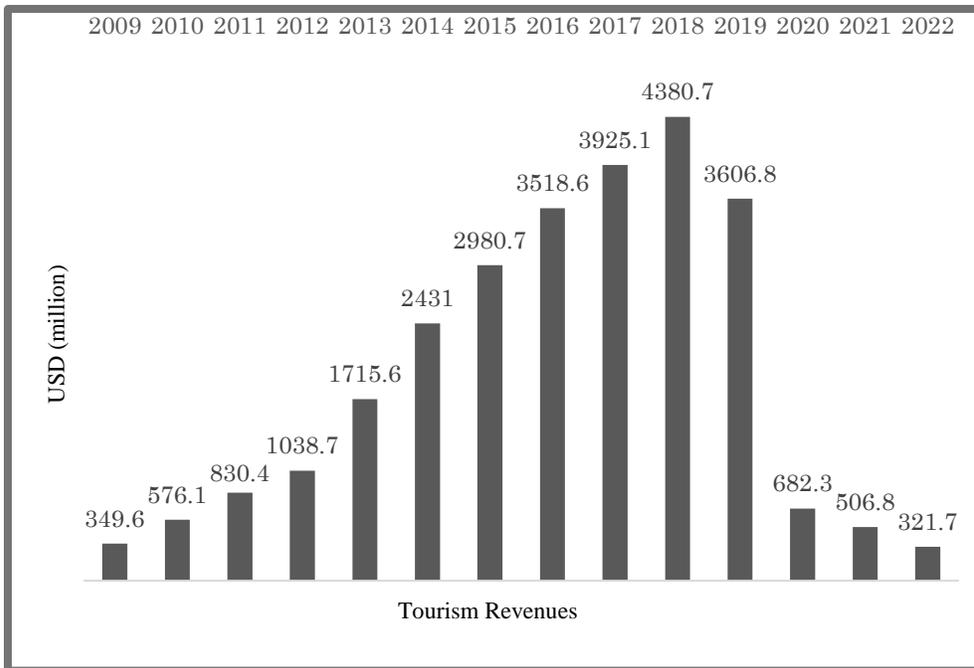


Source: <https://tradingeconomics.com/sri-lanka/foreign-direct-investment>

Furthermore, Sri Lanka has failed to diversify its exports. Almost 70% of its exports come from just a few products: articles of apparel, coffee, tea, mate, and spices, as well as rubber (Trading Economics, 2022). There is also a concentration of countries where Sri Lanka exports its products: almost 50% find their way to the USA, U.K., India, and a few European Union countries (Trading Economics, 2022).

The Covid -19 pandemic proved disastrous, an exogenous shock that shut off the country's primary source of dollar revenues, namely tourism. This collapse in tourism revenues is shown in Figure 7.

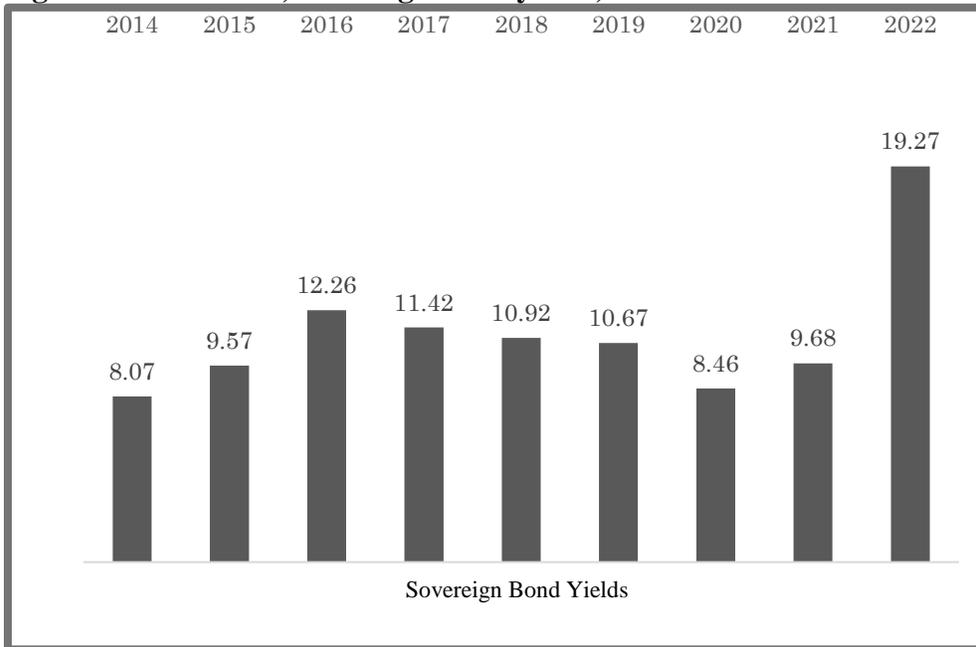
Figure 7: Sri Lanka, Tourism revenues, 2009-2022



Source: <https://tradingeconomics.com/sri-lanka/tourism-revenues>

Apart from sharply declining yields (Figure 8), the impact of a balance of payments crisis is most directly on the exchange rate. The overall balance of payments situation remains red, with figures for the first quarter of 2022 showing no significant improvement (Central Bank of Sri Lanka, 2022). Increased earnings from tourism have been compensated by a more considerable decline in workers' remittances, negatively impacting the CAD and pushing the exchange rate into the LKR 300 to the dollar territory since Q2/2022.

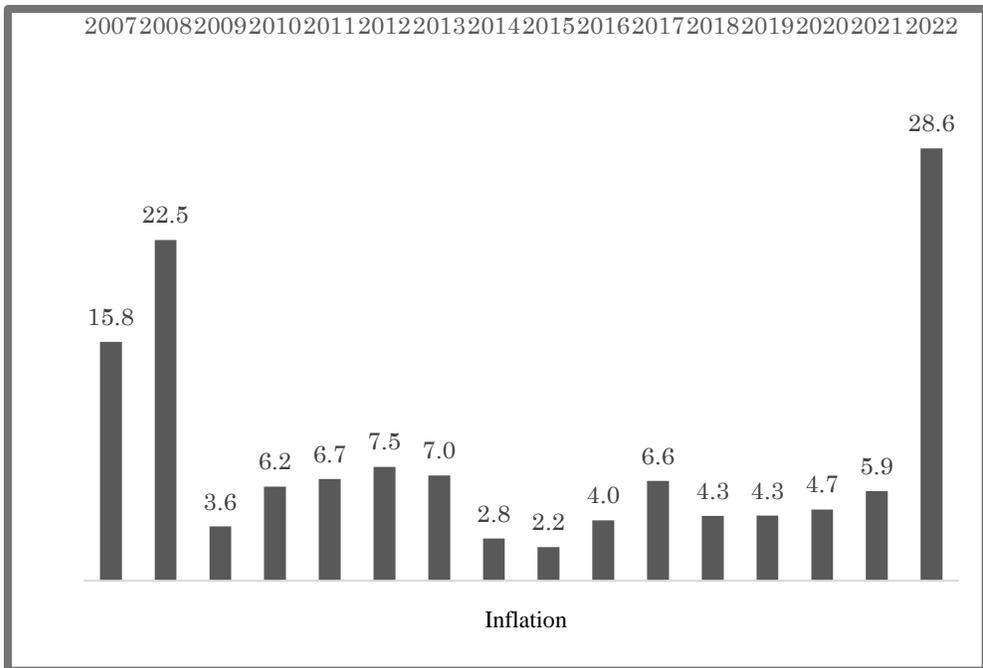
Figure 8: Sri Lanka, Sovereign bond yields, 2014-2022



Source: <http://www.worldgovernmentbonds.com/bond-historical-data/sri-lanka/10-years/>

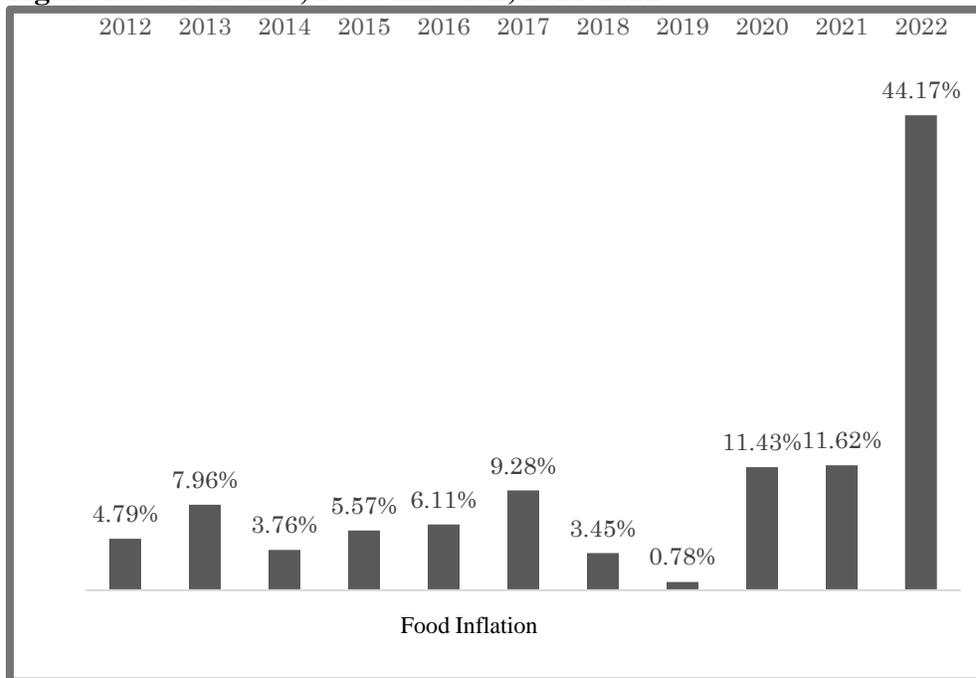
With the scarcity of dollars to pay for imports as reserves were drained from the Central Bank of Sri Lanka (CBSL), the country faced a shortage of essential goods that were simultaneously reeling from global supply chain disruptions because of the pandemic; more recently, the Russia-Ukraine conflict. Inflation surged to more than 14% (Figure 9), with food inflation raging close to 60% (Figure 10).

Figure 9: Sri Lanka, Consumer price inflation, 2007-2022



Source: <https://www.cbsl.gov.lk/measures-of-consumer-price-inflation>

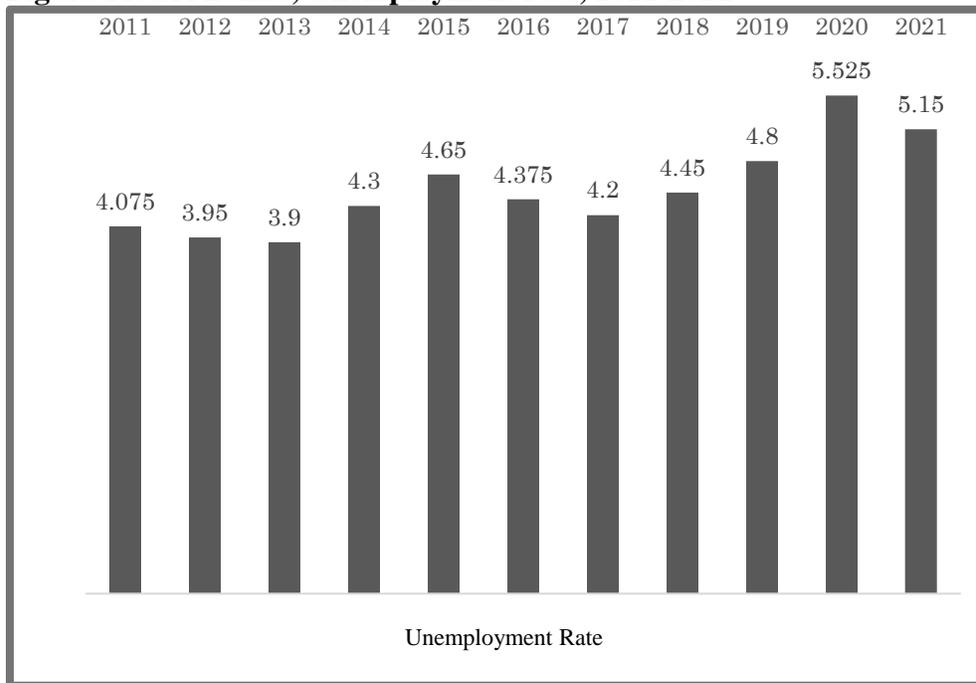
Figure 10: Sri Lanka, Food inflation, 2012-2022



Source: <https://tradingeconomics.com/sri-lanka/food-inflation>

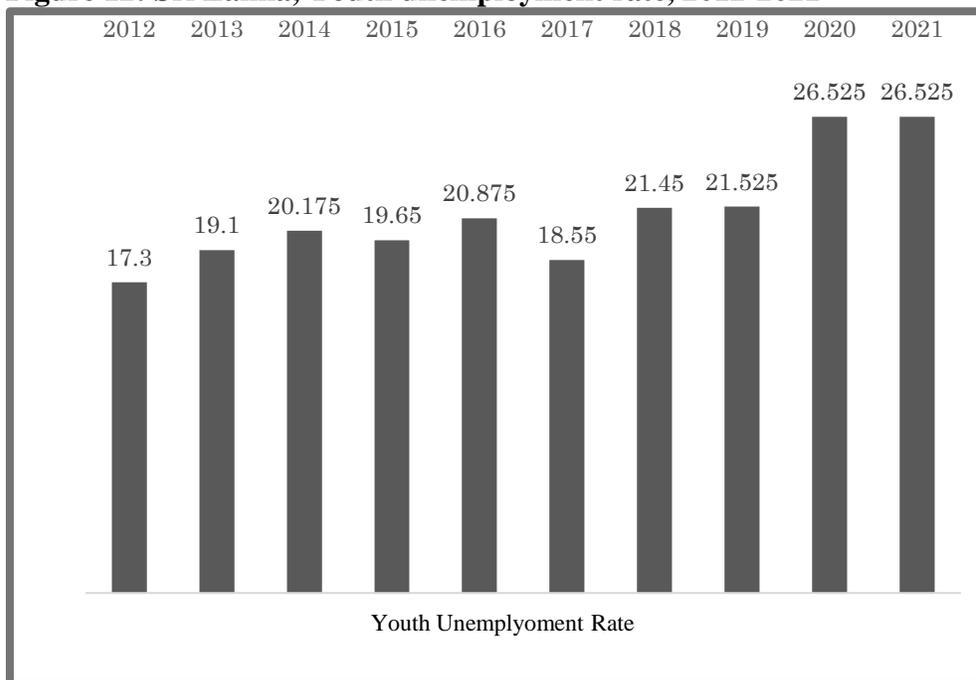
These high inflation rates have not come with robust employment either because of the weak domestic manufacturing sector and the pandemic's impact on tourism. Although overall unemployment rates have only marginally worsened (Figure 11), the decline has been stark amongst youth, where unemployment has skyrocketed to 30% in 2022 (Figure 12). Young people were particularly heavily struck by the pandemic since so many of them work in the informal sector and in industries such as tourism, transportation, and hospitality, where working remotely or from home was not possible. A majority of young people out of employment can have a negative impact on a country's economic growth and development. The social costs, as we know, are even more extensive: unemployed youth tend to feel excluded, leading to social exclusion, anxiety, and a lack of hope for the future. Moreover, Sri Lanka has also experienced a declining labour force participation rate since the 1990s, and it now stands at just about 30% of the population aged 15-24 years (Macrotrends, nd). With raging inflation and unemployment, affording even essentials such as food, water, rent, and power was becoming difficult, erupting in violence, ultimately compelling the government to declare an emergency as people poured out into the streets.

Figure 11: Sri Lanka, Unemployment rate, 2011-2021



Source: <https://tradingeconomics.com/sri-lanka/unemployment-rate>

Figure 12: Sri Lanka, Youth unemployment rate, 2012-2021

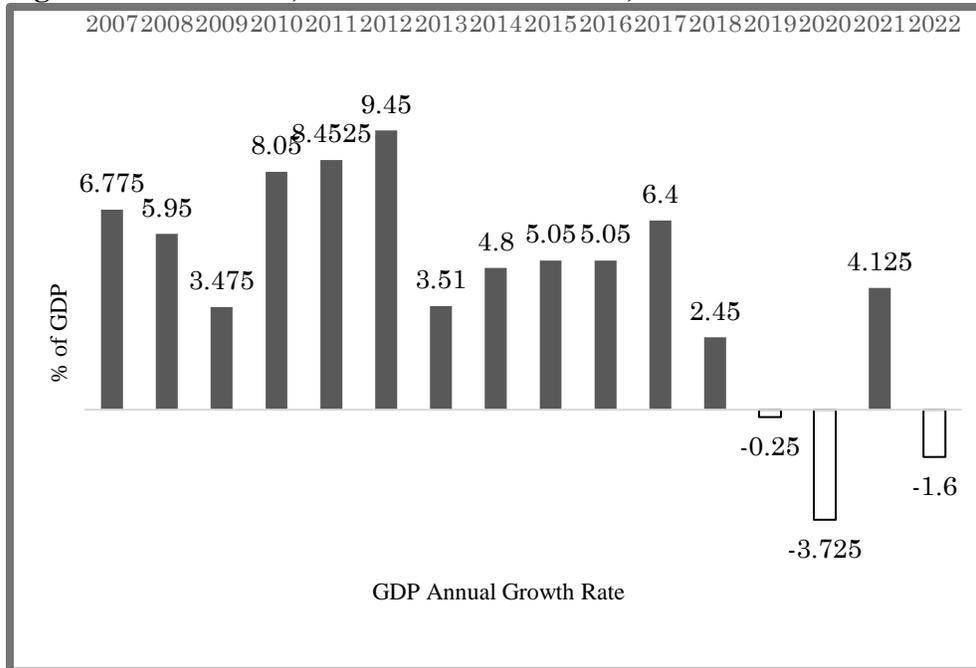


Source: <https://tradingeconomics.com/sri-lanka/youth-unemployment-rate>

The overall impact of these adverse trends on the Sri Lankan economy is also reflected in the country's GDP growth rates, which show a secular decline since 2012-13, falling from an 8-9% trajectory to just under 4% before the pandemic (Figure 13). The pandemic then

dragged GDP growth rates to a negative 3.6% in 2020 before a modest recovery in 2021 and projected subdued growth of just 2.6 in 2022 (IMF Report, 2021, p. 3).

Figure 13: Sri Lanka, Full Year GDP Growth, 2007-2022



Source: <https://tradingeconomics.com/sri-lanka/full-year-gdp-growth>

While this overview of trends reveals the nature of the Sri Lankan crisis, it is essential to study their interrelationships so that the implications of policy proposals and their trade-offs can be understood *ex-ante*. In this endeavour, the sectoral financial balances model is indispensable in bridging and establishing linkages between the various macroeconomic variables and sectors.

4. The Sectoral Financial Balances (SFB) model

The SFB model was developed by the heterodox economist Wynne Godley and is based on perhaps the most fundamental double-entry accounting axioms. Every debit has a corresponding credit, and every financial asset should have a corresponding financial liability. This model of macroeconomic analysis relies on accounting principles to ensure stock-flow consistency. It begins by dividing the entire economy into three sectors: a domestic private sector, the government sector, and an external sector comprising both private and government sectors. Since every financial asset must entail a corresponding financial liability, the sum of net financial assets across the three sectors of the economy must net to zero. Therefore,

$$(S-I) + (T-G) + (M-X) = 0 \quad \dots\dots\dots (1)$$

where S = private sector savings, I = private sector investment, G = government expenditure, T = tax receipts, X = exports, and M = imports. It is important to know that $(S - I)$ is the net financial asset accumulation by the domestic private sector *outside of itself*. For instance, when an individual (in the private sector) takes a loan from a bank, the net asset accumulation is zero within the private sector because the financial liability of the individual is exactly matched by an equal and opposite financial asset held by the bank. Consequently, a current account deficit (CAD), i.e. $(X - M) < 0$, implies that foreign investors accumulate assets in the domestic economy, or the domestic sector accumulates liabilities to foreigners. Equation (1) holds for both values of each parameter in absolute terms and when these parameters are expressed as a percentage of GDP.

Equation (1) can be expressed as:

$$(S - I) = (G - T) + (X - M) \quad \dots\dots\dots (2)$$

In other words, for positive domestic private net financial asset accumulation, either the government must run a fiscal deficit (the government must accumulate financial liabilities) and/or the country must run a current account surplus (CAS) so that foreigners accumulate net liabilities.

The SFB model raises two questions; why does the private sector desire to accumulate financial assets, and why would it desire to do so *outside of itself*? The private sector, comprised of households and firms, always desires to save and earn returns on savings. It can therefore accumulate either physical and/or financial assets. While physical assets (like gold and property) have certain advantages, they may not be the only assets private sector entities want to hold in their portfolio. They are not only inconvenient to hold and subject to theft, natural losses, or legal issues, but they are also susceptible to severe price fluctuations.

While overcoming some of these problems, financial assets may also not be safe; liabilities issued by the private sector, including equity shares, bank deposits, or corporate debt, may also suffer financial losses. For this reason, the private sector may desire to hold financial assets which are not the liabilities of other private sector entities but instead of the government. The government's liabilities, including treasury bills and bonds, are safe as they are not backed by physical assets but by the ability of governments to issue their sovereign currencies.

The SFB model provides some valuable insights while maintaining stock-flow consistency. A country running CADs must run a fiscal deficit if its domestic private sector desires positive net financial asset accumulation. In other words, if $(X - M < 0)$ in equation (2), then $(G - T)$ must be positive for $(S - I)$ to be positive. Only countries with a CAS ($X - M > 0$), like Norway, for instance, can $(S - I)$ be positive even if $(G - T)$ is negative (i.e., fiscal surpluses).

There is a possibility that the domestic private sector may be accumulating net financial liabilities ($S - I < 0$). This occurs when the domestic private sector is 'leveraging', especially during times of booms. However, continuous leveraging over long periods

becomes unviable and unsustainable since debt repayments must be made. As a result of the deleveraging process by the private sector, the economy can slip into a recessionary spiral when it reduces consumption and investment spending to increase its desire to net save and pay down debt.

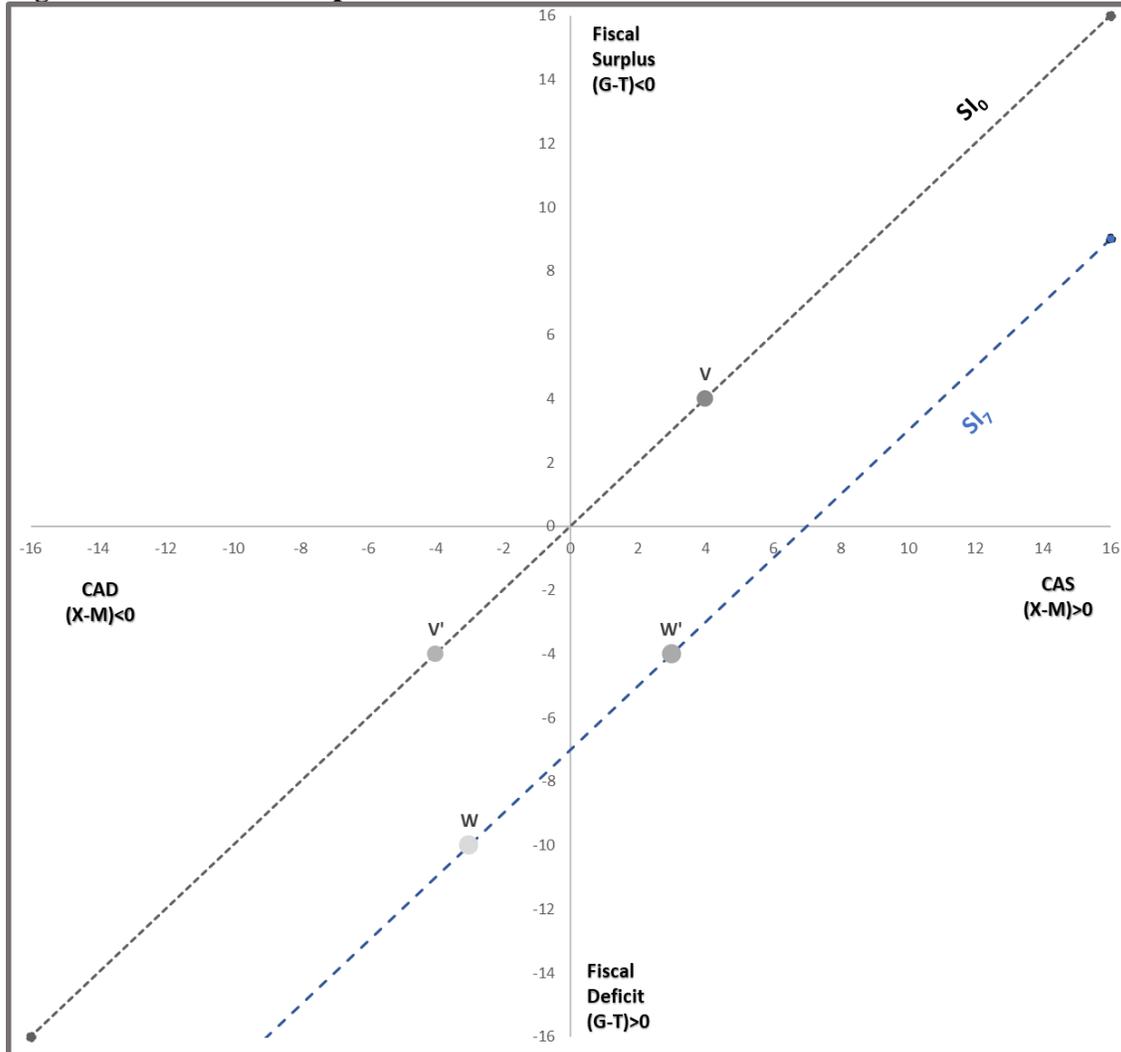
What about the government sector? Countries that issue their sovereign currencies can accumulate net financial liabilities indefinitely, which is precisely what we find in most countries. For instance, consider the case of India. The overall quantum of government internal (rupee) debt has grown over time, given that the country has perpetually run fiscal deficits since its independence in 1947. What is often not realized is that government liabilities are nothing but the assets of the private domestic sector and/or those of foreigners that allow a country to run a CAD.

The SFB model has been applied to several country studies, including China (Sivramkrishna, 2016), Turkey (Sivramkrishna and Nandipati, 2019) and Iran (Sivramkrishna and Sharma, 2019). Using the SFB model reveals the constraints to the efficacy of fiscal and monetary policies, given that stock-flow consistency must be maintained in the applications of double-entry accounting principles. It is, however, essential to note that the SFB equation does not establish cause and effect between variables. Nonetheless, applying theoretically consistent causal relationships, the SFB model provides valuable insights into the nature and policy solutions to macroeconomic crises.

5. The SFB Template

In Figure 14, we map equation (2) above onto the SFB template. All points on the 45° line, SI_0 , passing through the graph's origin are where $S = I$ or $(S - I) = 0$. For instance, at a point, say V, the current account surplus (CAS) or $(X - M > 0)$ is exactly equal in absolute terms to the fiscal surplus $(G - T < 0)$. Similarly, at point V', the fiscal deficit $(G - T > 0)$ is exactly equal in absolute terms to the CAD or $(X - M < 0)$ and therefore, $(S - I) = 0$ on the line, SI_0 .

Figure 14: The SFB template



Now consider the SI_7 , parallel to the line SI_0 . On this line, all points are where $(S - I) = 7$, or in other words, the domestic private sector is accumulating net financial assets. Consider, a point, say W, where the CAD = 3% of GDP whereas the fiscal deficit is 10% of GDP, so that $(G - T) + (X - M) = 10 + (-3) = 7$. In other words, at point W, the domestic private sector accumulates net financial assets equal to 7% of GDP. Similarly at point W', the fiscal deficit is 4% of GDP so that the CAS must be 3% of GDP, which results in $(S - I)$ of 7% of GDP, i.e., $(G - T) + (X - M) = 4\% + (+3\%) = 7\%$ OF GDP.

Note that the SI line can be drawn for absolute values of all the parameters or as a percentage of GDP.

Also, usually published data is readily available for fiscal deficits as well as current account balances. Given that the SFB equation is an accounting identity that must hold true, we can

compute (S – I). However, this may not give a precise idea of the trends regarding domestic private sector savings and investment.

6. Sri Lanka’s Sectoral Financial Balances

We now present the sectoral financial balances for the Sri Lankan economy in Table 1.

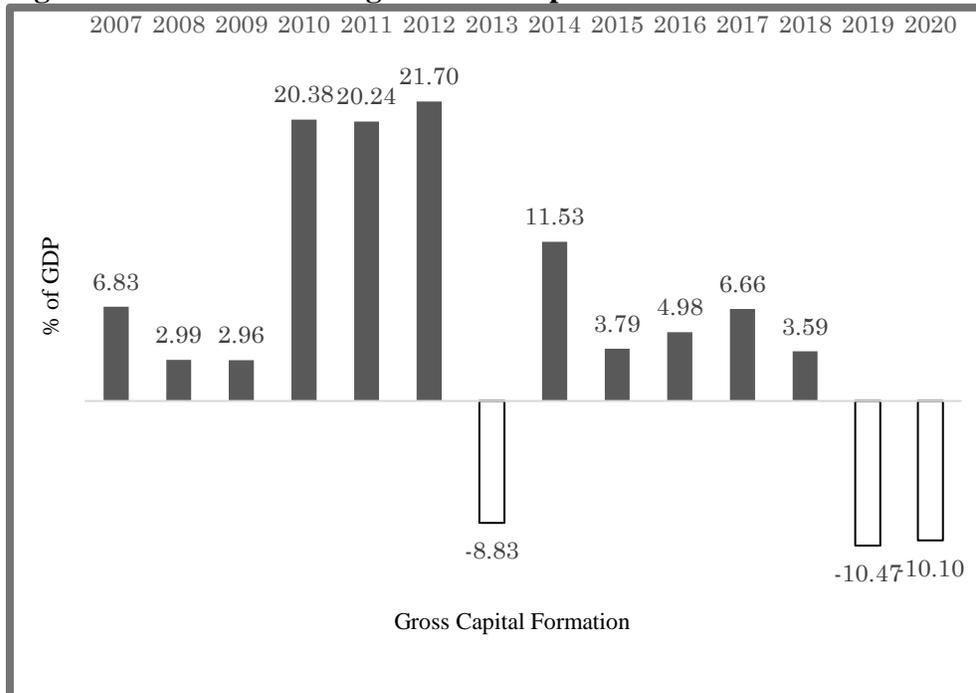
Table 1: SFB Equation (% of GDP), *projected

Year	X-Axis	Y-axis	SFB Identity
	Current account balance (X-M)	Fiscal Balance (G-T)	Domestic private sector balance (S-I)
2012	-5.82	5.60	-0.22
2013	-3.42	5.19	1.77
2014	-2.51	6.23	3.73
2015	-2.34	7.01	4.68
2016	-2.12	5.34	3.22
2017	-2.64	5.50	2.86
2018	-3.18	5.32	2.14
2019	-2.20	7.97	5.77
2020	-1.34	12.76	11.42
2021	-3.17	10.505	7.336
2022*	-2.91	10.03	7.11

Source: <https://tradingeconomics.com/sri-lanka/indicators>

The first disruption in private sector net financial asset accumulation happened in 2012-13 when it turned positive (deleveraging) from negative (leveraging). While the household savings rate may have shown a decline, the private sector gross fixed capital formation (investment) growth rate tanked sharply in 2013 (Figure 15), resulting in positive net financial asset accumulation by the private sector. A contraction in the GDP growth rate from 9.14% in 2012 to just 3.39% in 2013 reduced the trade deficit from \$ 9.4 billion to \$ 7.6 billion in 2013, so the CAD decreased from 5.82% to 3.42% of GDP.

Figure 15: Growth rate of gross fixed capital formation

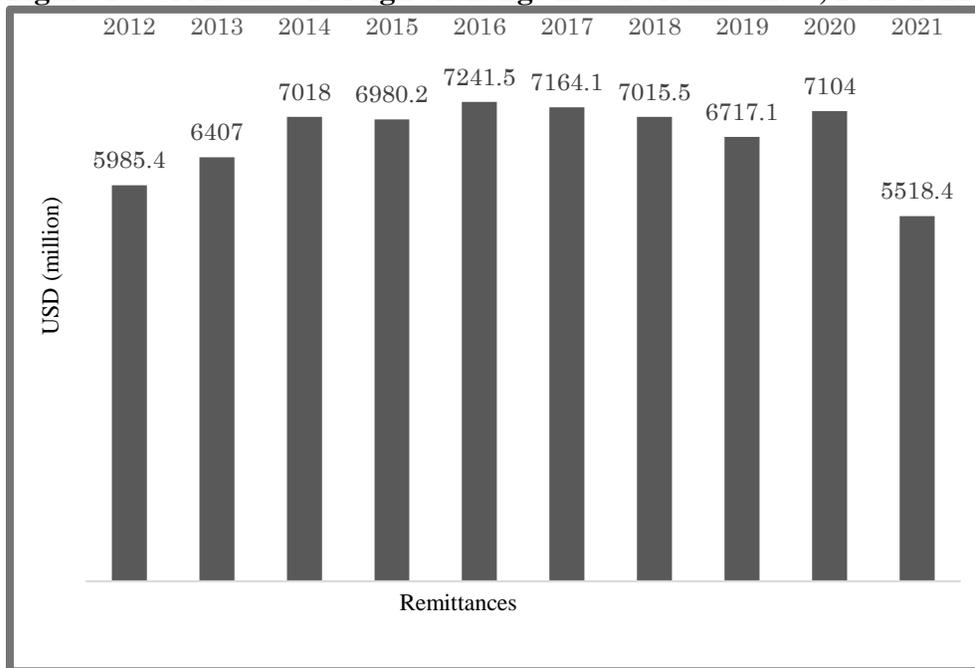


Source: World Bank data and authors' construction

This situation remained tepid but relatively stable until 2018 when domestic private sector investment spending again witnessed a sharp fall. GDP growth rates would have been heavily squeezed without countercyclical measures by the government that raised the fiscal deficit. As had happened in 2012-13, with imports being essential to sustain standards of living, this once again meant the need for funding the current account deficit through an issue of sovereign debt, which showed a sharp increase in 2018 (see Figure 8 above), partly on account of FDI inflows falling significantly from 1.8% of GDP in 2018 to just 0.8% of GDP in 2019 (IMF Report, 2021, p. 3, Table 1).

Foreign exchange inward remittances also flattened in 2018 and 2019 (Figure 16). With the domestic private sector unable to bring in the required foreign exchange either through exports and/or external borrowings for investment – the latter remaining at just about one-third of the total debt, which means that two-thirds of the total debt is government and government-guaranteed debt (Wijewardena, 2019) – there was pressure for the exchange rate to depreciate. From these trends, it is evident that to maintain the people's standard of living, imports played a key role, and the government had to indulge in foreign borrowings.

Figure 16: Sri Lanka. Foreign exchange inward remittances, 2012-2021



Source: <https://tradingeconomics.com/sri-lanka/remittances>

Before the pandemic, Sri Lanka faced a terrorist attack on churches and hotels before Easter in April 2019. Earnings from tourism saw a 20% decline in 2019 (Bhowmick, 2022) which led to the necessity of issuing sovereign bonds. Then the pandemic struck. The growing dependence on foreign borrowings through the issue of sovereign bonds further increased as foreign exchange earnings from tourism completely collapsed. Meanwhile, the increasing risks of Sri Lanka's sovereign debt and the consequent soaring yields of more than 30% signalled that the country was in the throes of a significant macroeconomic, particularly a balance of payments crisis.

We map the SFB equation on the template discussed in the previous section. It is interesting to see that the immediate reaction to the pandemic was the decision by the domestic private sector to increase their net financial asset accumulation. In 2020, the savings rate increased by more than 10%, from 22.4% of GDP in 2019 to 32.7%. With consumption expenditures falling on account of the increased propensity to save, the paradox of thrift would have played out here, with GDP growth turning hostile to -3.6% . With the investment rate increasing by just 3.5% on a lower base from 17.7% in 2019 to 21.1% of GDP in 2020, the domestic private sector savings-investment gap or net financial asset accumulation widened to 11.4% (of GDP from 5.77% in the previous year. The IMF computes this at 11.6% of GDP for 2019 and 11.6% of GDP for 2020, respectively (IMF Report, 2021, p. 37, Table 1).

The desire to accumulate net financial assets by the domestic private sector (increased savings, increased investment but at a lower rate) entails a contraction in expenditures that slows economic growth and increases the budget deficit (which acts as an automatic stabilizer). The budget deficit necessitates borrowings that increase the liabilities of the

government to accommodate the desire of the domestic private sector to accumulate financial assets. At the same time, even though imports contracted with the onset of the pandemic, exports too declined. Hence, the government had to continue funding the current account deficit through the issue of sovereign debt. With rising yields and the likelihood of default, Sri Lanka was in a debt trap. The crisis finally exploded when it defaulted on its debt in April 2022.

What does the stock-flow consistent SFB equation tell us? Suppose the domestic private sector desire for net financial asset accumulation is to remain at about 7%. The possible combinations of current account deficits or surpluses (CAD or CAS) and fiscal deficits or surpluses must lie on the SI_7 line. More significant fiscal deficits with larger current account deficits (say, point A) are not viable since this will entail a depreciated LKR and higher inflation rates as imports surge. Moreover, the Sri Lankan government will be unable to raise dollars to meet the CAD through sovereign debt in the present situation. Buying dollars in exchange for LKR in the forex market will inevitably drive Sri Lanka into a Zimbabwe-type crisis of depreciating LKR and hyperinflation.

Another option will be to pursue lower fiscal deficits along with a contraction in the CAD (or even CAS). This will come at the cost of slower (even negative GDP growth), a loss of jobs, and widespread unemployment. This could result in falling wages and even increased competitiveness of Sri Lankan exports, although the elasticity of demand for these export goods will matter. Lower CAD (or CAS) will also mean some appreciation in the LKR and possibly lower imports, depending on their elasticity of demand, which may be low because Sri Lanka imports several essential goods. Contracting the Sri Lankan economy, however, puts it at the risk of social unrest. There is also the danger of the paradox of thrift; as people pursue reaching their savings target, the actual quantum of savings may witness a decline, thereby driving the propensity to save even higher. In such a situation, the SI_7 line shifts out, worsening the situation.

The third option would be to see an improvement in the desire for spending and a reduction in savings rates. However, this will be possible only by restoring confidence in the economy so that people and businesses are willing to increase spending. The trade-off here, however, is that inflation may surge even higher as spending increases, once again driving those left out of the revival onto the streets.

Finally, the option that is perhaps most likely to play out will be the resurgence of tourism flows into Sri Lanka so that the foreign exchange crunch eases. The country returns to some level of pre-pandemic 'normalcy'. In the meantime, Sri Lanka will need external assistance for dollars, either from other countries or the International Monetary Fund (IMF). The latter is expected to finalize a bail-out package with Sri Lanka by July 2022. In this case, the IMF will most likely ask the Sri Lankan government to impose austerity measures that will contract the economy sufficiently to contain imports and restore the CAD to manageable levels.

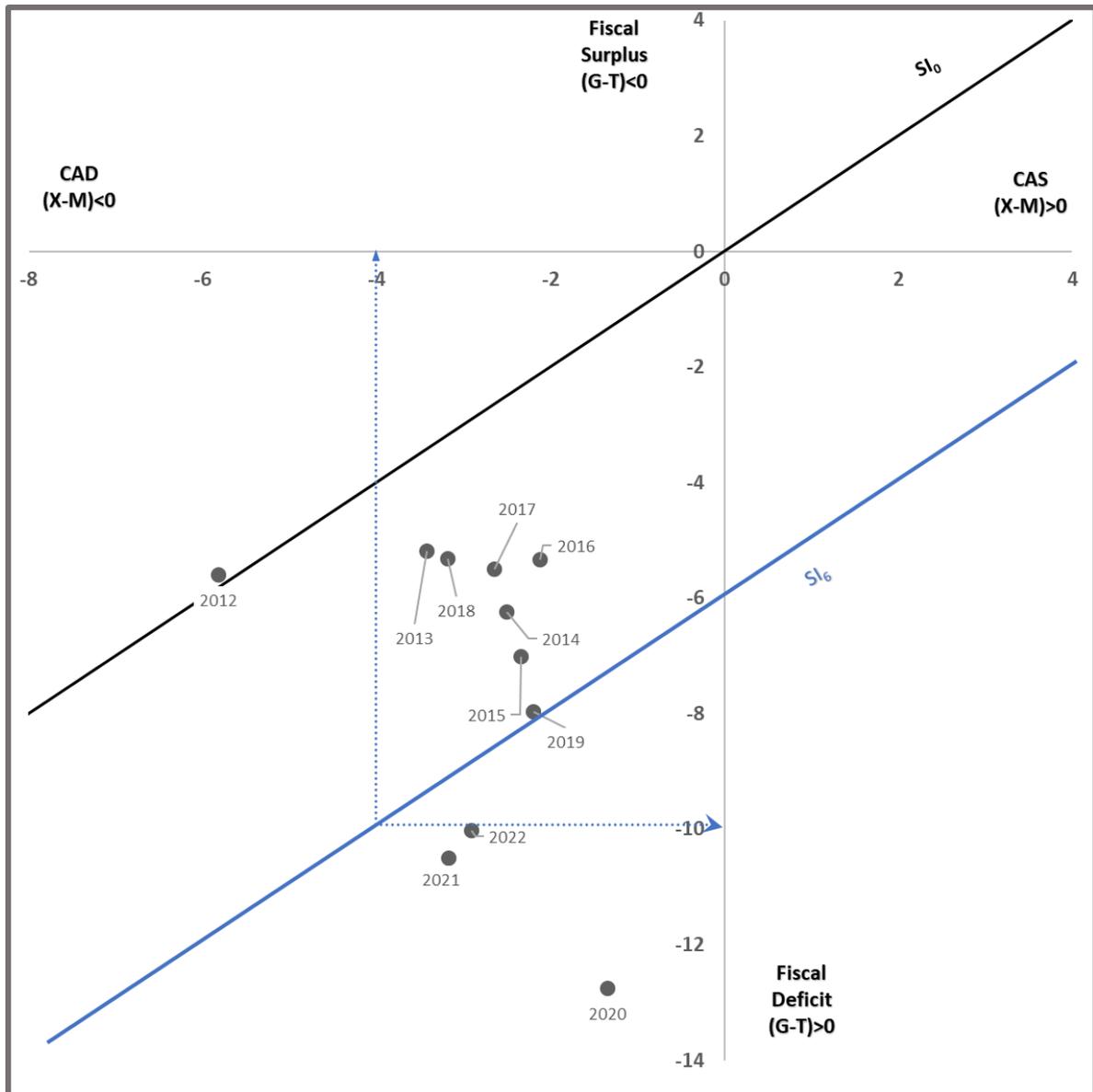
What short, medium and longer-term policy options are available to Sri Lankan state authorities in the current predicament? We begin with the possible repercussions of fiscal policies before examining those of monetary policy in the short and medium-term.

7. Fiscal policy

Sri Lanka's short- to medium-term fiscal strategy has been outlined by its Ministry of Finance, Economic Stabilization & National Policies (Ministry of Finance, Economic Stabilization and National Policies, 2022). Though the objectives appear extremely ambitious, such as 6% GDP growth, a low budget deficit, low unemployment, and low inflation, the document also mentions austerity measures - that are likely to be proposed by the IMF - through expenditure cuts and tax increases, the latter of which could also control inflation.

With tourism likely to improve gradually with the abating of the pandemic, the domestic private sector net financial asset accumulation has been projected by the IMF to stabilize at around 7%. This is shown in the figure as the dotted green line. Suppose the government pursues its objective of a 4% budget deficit target. In that case, the viable policy space from the stock-flow consistent SFB equation is to turn the current account deficit into a surplus of 3%. This can happen only through a significant contraction in the economy that pulls down imports significantly while simultaneously increasing the competitiveness of exports. This adjustment process has also been termed 'internal devaluation' and was widely practised in several European economies, including Portugal, Spain, and Ireland. However, it will not only result in high rates of unemployment and falling wages but destabilize the economy through widespread social discontent at a time when food inflation rates are close to 60%. Contraction in the current account deficit also depends on the elasticity of Sri Lanka's import demand and its exports.

Figure 17: Mapping the SFB equation for Sri Lanka, 2012-2022



The IMF projections (IMF Report, 2021, p. 37, Table 1) seem reasonable. As the savings rate begins to fall (improvement in consumption expenditure) and thereby the desire for net financial asset accumulation by the private sector to stabilize at around 6%, the situation is likely to become more manageable with around 4% current account deficits and 10% fiscal deficits. The current account deficit will mean that Sri Lanka's sovereign debt must be sustained at about \$ 60 billion. The CAD will be contained at close to 4% if the tourism sector is restored, which has only seen a slight increase to \$ 0.6 billion in Q1/2022. Foreign exchange reserves will remain at unsafe levels of \$2-3 billion, covering a meagre 1-2 months of imports. Sri Lanka's vulnerability to shocks will remain high in the medium term.

8. Monetary policy

The Central Bank of Sri Lanka's monetary policy has targeted inflation by increasing interest rates and tightening bank liquidity. This is expected to tame inflation and, at the same time, stabilize the LKR by encouraging dollar inflows for investments in Sri Lankan debt instruments. However, while curbing demand, a contractionary monetary policy stand may also increase the desire for more significant savings while reducing investment spending, thereby increasing the desire for net financial asset accumulation by the domestic private sector. While this may slow down growth and check aggregate demand and consequently the current account deficit, more lavish investment spending may be required for robust longer-term growth. Pursuing an expansionary monetary policy in Sri Lanka is challenging due to its overdependence on necessary imported commodities.

9. Longer-term policies for Sri Lanka

The SFB equation encapsulates the heart of the Lankan crisis: the economy is driven by the requirement to fund the country's current account. Typically, autonomous inflows of foreign money into the domestic private sector, as in the case of Sri Lanka, could cover the deficit to a great extent. However, because the private sector cannot leverage capital to enhance investment and growth, it is up to the government to raise dollars either through direct investments in the public sector (autonomous inflows) or by accommodating inflows through the issuance of bonds.

The longer-term solution to this problem is three-fold: first, the need for Sri Lanka to diversify its exports across goods, especially high value-added products, and across countries. Dependence on commodities and low value-added goods (OEC, Sri Lanka, nd) to few countries will make it vulnerable to shocks and quickly drag the economy into crisis. Second, Sri Lanka would have to lower its dependence on imports of essentials (ibid), particularly food, energy, and pharmaceutical products.

Both these steps, namely, diversification of exports and lessening dependence on imports, will require planned strategies to complexify the economy. Sri Lanka's economic complexity index (ECI) position in the world is present -0.51 , with a global rank of 82 out of 127 countries (ibid). Intuitively, economic complexity implies that one can infer how complex an economy is “by looking at the activities that it can thrive, and by looking at the other places where those activities are present.” (OEC, Methods, nd).

Over the last two decades, Sri Lanka's complexity has improved from 2013, but its position has remained at around 80th in the world. This extended period has coincided broadly with Sri Lanka incurring large amounts of foreign debt to build its infrastructure, including hydroelectric plants, roads, railways, ports, and airports. These investments have failed to improve its ECI substantially. Moreover, there are strong claims that many of these infrastructure projects are not commercially viable and have failed to improve productivity (Asia Sentinel, 2015).

Bringing about economic complexity requires more than the building of physical infrastructure. Labour force participation rates remain low in Sri Lanka. For instance, "young Lankans shun skilled and non-skilled jobs with a monthly payment of around Rs. 25,000-40,000 in factories and hotels but prefer to work as trishaw drivers instead. Currently, we have around 1.2 million trishaw drivers." (Weerakkody, 2018). Women's labour force participation also remains at just about 30%; "almost 2.8 million of the labour force constitutes economically inactive women. This is in spite of the fact that educated and qualified women outnumber men" (ibid).

Overcoming these problems will require structural changes among the people and the Sri Lankan economy. In a world where technology is changing at an ever-increasing rate, Sri Lanka will face enormous challenges in bringing about the required changes to overcome its vulnerability to foreign exchange crises and prevent it from falling into the middle-income country trap.

10. Conclusion

The news coming from Sri Lanka gets more dismal by the day. The most recent situation is that the country has literally run out of fuel. With almost no dollars available, Sri Lanka is facing a massive power shortage forcing even schools to close and students to go online. An early IMF bail-out seems to be Sri Lanka's best hope to deal with the present condition. Over the next couple of years, a revival of tourism earnings would put the country back on track, although vulnerability to shocks would still be high. In the longer term, the country will need to complexify both its export sector as well as its internal economy. This is a lesson that many countries have to learn – Saudi Arabia, Argentina, and Venezuela – some have already embarked on their journeys to do so. Sri Lanka must begin to do so if it wishes to ensure long-term macroeconomic stability.

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