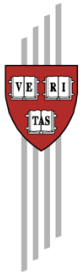
Towards a Sustainable Recovery for Lebanon's Economy

Ricardo Hausmann, Ugo Panizza, Carmen Reinhart,
Douglas Barrios, Clement Brenot, Jesús Daboin Pacheco,
Clemens Graf von Luckner, Frank Muci and Lucila Venturi

CID Faculty Working Paper No. 439

November 2023



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Growth Lab

About the Growth Lab

The Growth Lab's multidisciplinary team, led by Professor Ricardo Hausmann, pushes the frontiers of research on economic growth and development policy. The Growth Lab advances academic research on the nature of economic growth and conducts applied, place-based engagements that aim to understand context-specific growth processes, address key constraints, and identify promising opportunities. Key frameworks developed at the Growth Lab include Growth Diagnostics and Economic Complexity. Growth Diagnostics is a systematic methodology that aims to identify the most binding constraints to better growth outcomes, allowing policymakers to take the most impactful actions. Economic Complexity is a growing field of research that sees the economy as composed of distributed knowledge and productive capabilities that must be networked in order to be used and sees growth as the expansion of both the underlying knowledge and its uses. Through its research and teaching activities, the Growth Lab has become a global thought leader offering breakthrough ideas, methods, and tools that help practitioners, policymakers, and scholars understand how to accelerate economic growth and expand opportunity across the world.

About this Report

This report was drafted as part of the Growth Lab's independent research agenda on growth collapses. Exploring the causes of major growth accidents and the policy solutions to address them forms an integral part of the Growth Lab's research agenda.

We acknowledge financial support provided by Growthgate Partners. Growthgate did not determine any parts of the design, execution, or interpretation of the research. All opinions, findings, and conclusions or recommendations expressed in this report are those of the authors.

About the Authors

Ricardo Hausmann. Founder and Director of Harvard's Growth Lab and the Rafik Hariri Professor of the Practice of International Political Economy at Harvard Kennedy School. He has served as principal investigator for more than 50 research initiatives in nearly 30 countries, informing development policy, growth strategies, and diversification agendas at the national, regional, and city levels. He is also an External Faculty of the Santa Fe Institute where he serves as the Co-Chair of the Science Board. His research focuses on the underlying mechanisms driving economic development, particularly the role of knowledge, structural transformation, and complexity in the economic activities of a country. Previously, he served as the first Chief Economist of the Inter-American Development Bank (1994-2000) where he founded the Research Department, and as Minister of Planning of Venezuela (1992-1993).

Ugo Panizza. Professor of Economics and Pictet Chair in Finance and Development at the Graduate Institute of International and Development Studies in Geneva. He is a Vice President and Fellow of CEPR, Director of the International Centre for Monetary and Banking Studies, Fellow of the Fondazione Einaudi and Editor-in-Chief of Oxford Open Economics and International Development Policy. His research interests include international finance, sovereign debt, banking, and political economy. He has extensive work and research experience in Latin America, the Middle East and North Africa.

Carmen Reinhart. Minos A. Zombanakis Professor of the International Financial System at Harvard Kennedy School. From 2020-2022 she served as Senior Vice President and Chief Economist at The World Bank Group. She served as Chief Economist of Bear Stearns, Policy Advisor and Deputy Director at the International Monetary Fund, a member of the Advisory Panel of the Federal Reserve Bank of New York, and Congressional Budget Office Panel of Economic Advisors, among others. Her pioneering work has helped inform our current understanding of financial crises in both advanced economies and emerging markets.

Douglas Barrios. Director of Policy Research at Harvard's Growth Lab.

Clement Brenot. Senior Research Manager at Harvard's Growth Lab.

Jesús Daboin Pacheco. Research Fellow at Harvard's Growth Lab.

Clemens Graf von Luckner. Research Fellow at Harvard's Mossavar-Rahmani Center for Business and Government.

Frank Muci. Policy Fellow at the London School of Economics.

Lucila Venturi. Research Fellow at Harvard's Growth Lab.

Acknowledgments

We are deeply grateful to Dan Azzi, Lee Buchheit, Chris Canavan, Ishac Diwan, and Mark Walker for their feedback and suggestions. We would also like to thank Harvard University faculty and Growth Lab colleagues for their suggestions and comments. We extend our appreciation to our colleagues at international organizations for their valuable comments and insights. We also thank the members of the Lebanese diaspora who initiated our discussions on Lebanon's economic situation and contributed to the research project that made this report possible.

Data and Information Disclaimer

This report is based on information available as of July 2023, in cases updated to September 2023.

Furthermore, the estimates contained in this report were made in the context of significant data limitations and should be interpreted as tentative and subject to revision. All figures, statistics, and analyses provided herein are reflective of our best understanding of the information publicly accessible at the date of drafting. Lebanon's economic situation is evolving rapidly, and the availability, level of detail, quality, and timeliness of economic and financial data are all limited. Any subsequent changes or developments occurring after July 2023 are not fully accounted for in this report. Distortions arising from accounting at multiple exchange rates also complicate the interpretation of official statistics. As a result, significant judgment was applied in preparing the numbers and calculations contained in this report.

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Executive Summary

Lebanon's current economic crisis ranks among the worst in recent history. GDP has collapsed by 38% in real terms. The Lebanese lira, which was fixed to the dollar in 1997, has lost more than 98% of its value on the parallel market. The government has defaulted on its debt, and depositors are unable to access their funds held at commercial banks. Consolidated public sector debt, including both government debt and commercial banks' claims on the Banque du Liban (BdL), represents more than seven times the current GDP. Public services delivery has crumbled. In short, the country is undergoing a debt crisis, a banking crisis, a currency crisis, and a growth collapse. Four years into the crisis, a resolution remains elusive, and each passing day increases the economic and social burdens faced by the population.

Given the increasing cost of delaying a resolution, we propose a strategy for Lebanon's economic recovery that addresses all the dimensions of the crisis while recognizing the need to rapidly kick-start the economic recovery.

We propose transitioning as soon as practical to a monetary system based on full dollarization. In a context of weak policy credibility and recognizing that the economy and the financial system are already highly *de facto* dollarized, we deem official dollarization the superior alternative. A flexible exchange rate system with inflation targeting, in an already highly dollarized economy, would lead to high and volatile interest rates and an unstable and fragile macroeconomic setting, that will slow down the recovery.

We suggest a bank restructuring that is informed by our understanding of the origins of the crisis. The insolvency of the commercial banking system is caused by the fact that the main asset of banks – dollar deposits at the BdL – has lost the bulk of its value because of BdL's own insolvency. In turn, the BdL is insolvent because its dollar liabilities, accumulated mostly in the process of funding the public sector, are multiples of its dollar assets, courtesy of a massive currency mismatch. With the depreciation of the currency, the mismatch has translated into a large negative equity position. Despite its seigniorage power (*i.e.*, its ability to issue currency in Lebanese lira), the magnitude of its net dollar liabilities makes the BdL insolvent.

We propose to resolve the insolvency of the banking system by converting, as soon as practical, ~USD 76 billion in commercial bank dollar deposits at the BdL into interim restructuring certificates. These certificates will consist of new local-law instruments that will represent a claim on the government (as opposed to the BdL). 90% of those certificates will be distributed to bank clients in exchange for their commercial bank deposits above a threshold, which we tentatively estimate at around ~USD 100,000-150,000. These numbers imply that the remaining deposits at the BdL and banks will be more than fully backed by international reserves.

As a consequence of these operations, commercial banks' balance sheets will represent a small fraction of their pre-crisis size. This will also mean that the statutory equity required will also have diminished. Still, it is likely that the equity position of a large proportion of banks will stand below the advisable capital-asset ratio in a dollarized economy, which we estimate at about 15%. We propose that the BdL provide capital injections in the form of subordinated debt to ensure that all banks have sufficient capital. Bank shareholders will have to buy out BdL's loan at book value within two years if they wish to retain control of their institutions. This will leave the country with a solvent, although much smaller banking system. BdL will also emerge from this operation with a solvent, though a smaller balance sheet, given the reduction in its dollar liabilities to banks. As a result, the Lebanese economy will be in a position to start its recovery process and, in particular, will regain access to its remaining deposit base. This will allow the banking system to resume domestic credit operations, even if the public debt restructuring takes more time.

Through the mechanism of the interim certificates, the bulk of the insolvency will have moved to the government. The certificates will be restructured together with the Eurobonds and other claims on the government, in accordance with an IMF program. The haircut will need to be large enough to make the debt sustainable, after taking into account of the new borrowing that will be needed to finance the recovery of the economy. Through this sequence of operations, the economy will have solved the over-indebtedness problem in the banking system, the BdL, and the government.

We propose to target a 3% of GDP primary surplus by 2030, which represents a 6 percentage-point improvement over the current estimated deficit. The proposed fiscal adjustment is gradual because of the need to balance the immediate needs for reconstruction and recovery of public services with the medium-term needs to service the resulting debt. This transition will require additional financing which we estimate at ~USD 8 billion and a haircut of the existing debt plus the interim certificates which we tentatively estimate at around ~82-90%.

To make this program feasible, the government will need to shore up its revenue base. Part of the rise in revenues will come from the disinflation process, which will eliminate the unfavorable effects of inflation on the fiscal accounts. The new monetary framework will also mechanically contribute to increased revenue, by changing the way tariffs, excises, and VAT on imports are assessed. In addition, we propose to broaden the VAT tax base and increase its rate from 11% to 15%, as well as strengthen efforts to increase income taxes and tax collection.

This crisis resolution plan will enable the economy to narrow the gap with its potential, but also to develop new drivers of growth. Full dollarization, the rapid resolution of the banking crisis and a gradual resumption of credit, improved fiscal accounts, and the eventual resolution of the debt crisis will underpin economic recovery. This recovery will have to go beyond restoring the previous economic structure, which lacked dynamism, and increasingly rely on newer sources of growth based on the country's evolving comparative advantage. Industries with production and export potential

include high-quality agro-processed products, increased tourism activities, the expansion of knowledge-intensive business services, and the exploitation and use of natural gas resources. In all these endeavors, ambitious diaspora engagement will prove crucial.

1. Where We Are: Lebanon's Economic Catastrophe

1.1 Overview

Since 2019, Lebanon has grappled with one of the most severe economic collapses in recent history. Between 2018 and 2022, real output contracted by about 38%, while nominal output measured in US dollars plummeted from USD 55 billion to around USD 16.2 billion in 2023.[1] A new wave of emigration has enlarged Lebanon's existing diaspora. The economic collapse began with a sudden stop in capital inflows in October 2019 that laid bare the unsustainability of macroeconomic policies, leading to a currency, banking, and sovereign debt crisis (i.e., a triple financial crisis). The COVID-19 pandemic and the devastating explosion at the Port of Beirut exacerbated the collapse, but the triple financial crisis had by far the largest negative impact (Harake, Jamali, & Abou Hamde, 2020). A resolution to the crisis remains elusive, as little progress has been made toward a comprehensive stabilization program.

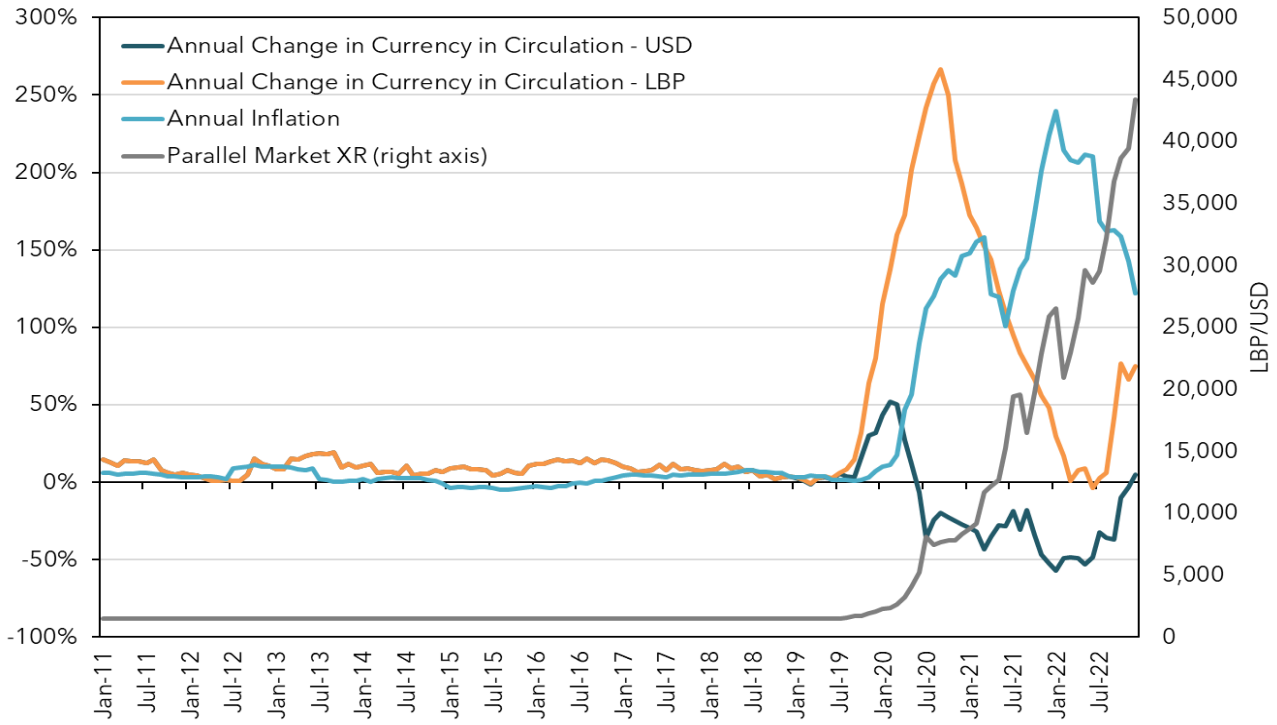
The collapse in economic activity was large even when compared to similar crises. While triple financial crises tend to be extremely costly, the magnitude of the output collapse witnessed in Lebanon dwarfs that of other comparable crises. For instance, output decreased by 26.3% in the 2009 Greek crisis, 18.4% in the Argentinean crisis of 2001, 11.4% in the Cyprus crisis of 2012, 10.3% in the crisis suffered by Iceland in 2007, and 8.9% in the 2009 Spanish crisis. Several factors explain the extraordinarily large size of the Lebanese collapse. First, the size of the pre-crisis current account deficit, at 24% of GDP, was unusually large. The sudden stop in capital inflows required a substantial and swift contraction in imports, which declined from USD 33 billion in 2018 to USD 19 billion in 2021. Second, the economy was exceptionally leveraged: broad money, at 260% of GDP in 2017, was the second highest in the world, after Hong Kong. The banking system on the eve of the crisis, including its dollar-denominated assets, had a balance sheet equal to 470% of 2018 GDP. During the first 40 months of the crisis, it contracted by 36% in nominal terms and was decimated in inflation-adjusted, mark-to-market terms. And finally, the inefficient allocation of scarce foreign exchange during the crisis - consequence of its distorted multiple exchange rate regime - caused shortages of critical inputs, such as raw materials, intermediate inputs, and fuel, which significantly constrained production.

The crisis has led to a massive currency depreciation and runaway inflation, as the government has relied increasingly on monetary financing of its deficit. The Lebanese pound has been in freefall since 2019 when Banque du Liban (BdL) became unable to sustain the pegged exchange rate of 1,507.5 LBP/USD, which had been in place since 1997.[2] Since the collapse, multiple

1 Due to lack of official data, real GDP growth figures are taken from the Article IV of June 2023 (International Monetary Fund (IMF), 2023b).
2 The terms Lebanese pound and Lebanese Lira are used interchangeably throughout this report.

exchange rates have appeared, resulting in additional inefficiencies in the monetary and foreign exchange markets. For instance, the Sayrafa platform, which supplies foreign currency at subsidized rates to a selected group of beneficiaries (public servants, importers, and some individuals and corporations), has generated significant arbitrage profits. The World Bank (2023) estimates that participants may have profited by as much as USD 2.5 billion since the platform's initiation. Moreover, the platform has not reached its stated objective of stabilizing the Lebanese pound, as gross reserves have in fact decreased by USD 4.8 billion over the period July 2021 to January 2023. BdL eventually devalued the official exchange rate by 90% to 15,000 LBP/USD in February 2023, but that new rate remains far from the parallel market rate, which reached 92,500 LBP/USD on July 17, marking a 98% depreciation of the lira since the start of the crisis.[3] The unresolved fiscal crisis has fueled base money growth, inflation, and currency depreciation in the parallel market, pushing annual inflation to 171% in 2022 and 269% by April 2023 (Figure 1). The prices of food and non-alcoholic beverages saw an average increase of 240% in 2022 (World Bank, 2023).

Figure 1. Currency in Circulation Growth, Inflation, and Parallel Market Exchange Rate



Source: Own elaboration based on BdL, CAS and lirarate.org.

3 There are other exchange rates besides the official and parallel market rates, notably the official Sayrafa rate that was introduced by BdL and applies to certain transactions only. This sector- and purpose-specific exchange rate broadly follows but remains below the parallel market rate.

High inflation and the deposit freeze have led to a dollarized, cash-based economy. Dollar-denominated deposits have been largely trapped in commercial banks since October 2019. These trapped deposits have been dubbed 'lollars' (for Lebanese US dollars, or US dollars in Lebanese banks), in contrast to "fresh" US dollars which are either banknotes or electronic dollars deposited in the banking system after the beginning of the crisis and thus not subject to withdrawal restrictions. As Figure 2 shows, lollars trade at about 10:1 against the dollar, reflecting widespread expectations that lollar deposits will not be made whole. The size of lollars deposits has been declining as Lebanese households and firms with dollar debts to banks purchased lollars to pay back their dollar-denominated liabilities. It is estimated that these operations led to a 75% reduction of the private sector's dollar liabilities vis-a-vis banks between August 2019 and January 2023. In addition to the large devaluation, Lebanese lira deposits in different banks are also not treated equally and cannot move freely across financial institutions. They are called Bira (bank lira) and have differing prices against cash lira depending on the institution. Dysfunction in the Lebanese banking system has led to a collapse of the payments system and has pushed consumption and other economic activity into a cash-based dollar-denominated informal system. This situation has heightened money-laundering concerns and has led to an erosion of the tax base and a decrease in government revenues.

Figure 2. Lollar to Dollar Exchange Rate (in Cents)

Source: Multiple parallel marketplaces, including Facebook/WhatsApp and Telegram Groups and broadcasts.

1.2 Financial and Debt Situation

Lebanon's public sector (including BdL) carries an extreme debt load of USD 120 billion, which was 218% of pre-crisis GDP but now represents 740% of the estimated 2023 GDP.[4] This large stock of debt exists in spite of the fact that local currency debt was liquidated by inflation. Foreign currency debt and arrears currently stand at approximately USD 31 billion for the central government[5] and USD 89 billion for BdL[6], putting the total USD-denominated debt for the consolidated public sector at USD 120 billion or 740% of GDP. Eurobonds and accrued interest comprise virtually all the central government debt. They have traded as low as five cents on the dollar since default, in expectation of a significant haircut in a future restructuring. Dollar-denominated deposits from domestic banks comprise virtually all of BdL's liabilities. These massive liabilities emerged from two processes: the accumulation of public and external deficits in the decades before the crisis and the development of very large currency mismatches between the government, the BdL, banks, and the public, which massively redistributed wealth after the devaluation of the lira. Over the last decade, the BdL began attracting USD commercial bank deposits to finance the government and its holdings of international reserves with rising and eventually unsustainable interest rates. Between 2013 and 2018 commercial bank deposits at the BdL increased by USD 67.9 billion, reaching USD 124.5 billion in August 2019. Behind this increase was a large rise in mostly dollar deposits at banks, which reached USD 171 billion on the eve of the crisis.

In contrast, international reserves on the eve of the crisis stood at just 44.7 billion, implying a huge currency mismatch. Reserves declined to 27.8 billion by January 2023. Lebanese assets consist mostly of gold and other foreign assets on BdL's balance sheet (which total USD 24 billion, after netting out presumed central bank holdings of government-issued Eurobonds). It should be noted that there is uncertainty regarding BdL's actual financial position: its gold was audited in November 2022, but the auditing firm was not disclosed, and the report was not released to the public (Reuters, 2022). The government also owns various illiquid assets like ports, real estate, and various monopolies that could be sold for approximately USD 4-10 billion, according to our estimates. However, privatizing these assets would widen future fiscal deficits, as state concessions are profitable for the government. As depicted in Figure 3, consolidated foreign currency liabilities exceed foreign currency assets by USD 91 billion or around 560% of the estimated 2023 GDP.

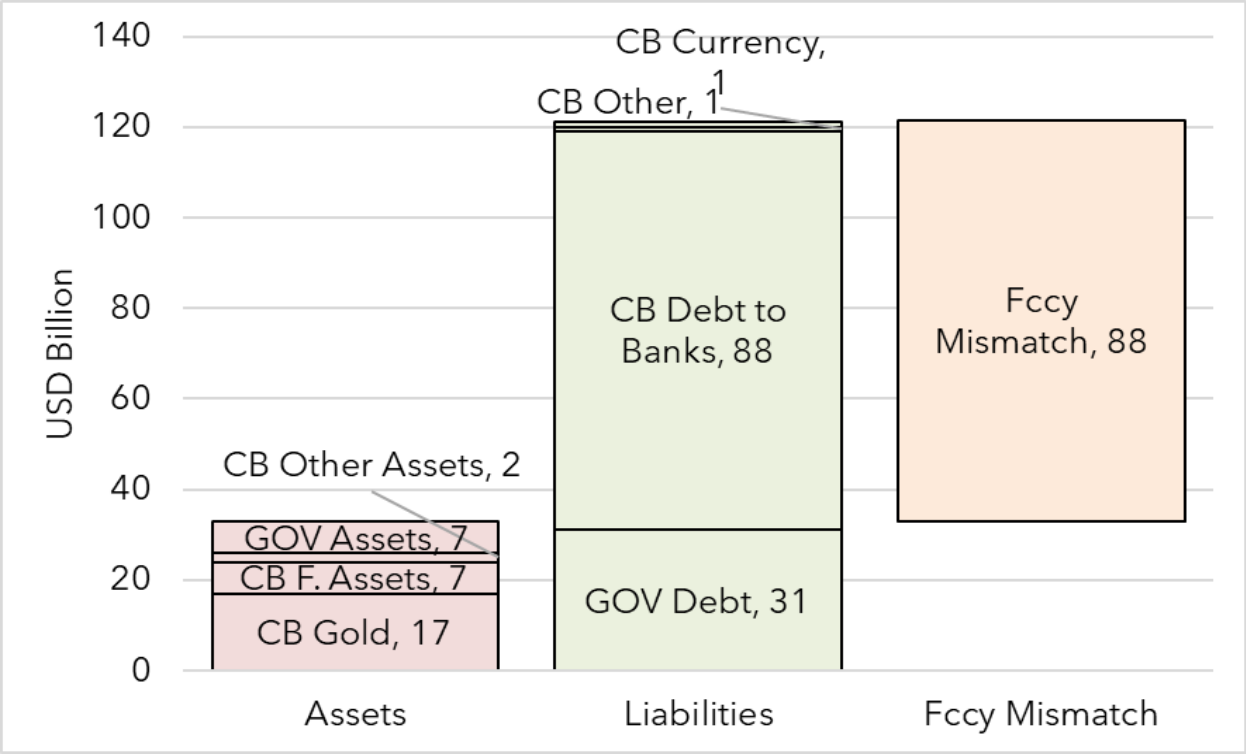
BdL's net international reserves are deeply negative. Our estimates point to a noticeable and large currency mismatch between assets and liabilities. BdL has a negative net international reserve (NIR) position of approximately USD 65 billion or 401% of the estimated 2023 GDP (Figure 4). Central

[4] Unless otherwise noted, figures in this section are consolidated figures including both the balance sheets of the government and the BdL. This consolidation is necessary given the BdL's prominent role in financing past fiscal deficits and the resulting large amount of debt of fiscal origin that is technically carried by the BdL.
[5] Netting out BdL's presumed Eurobond holdings of $7.5 billion and the associated past due interest.
[6] Netting out public sector deposits.

banks in countries with similar levels of income per capita typically have net foreign assets of around 20% of GDP.[7]

Given the size of the debt stock and the scale of the crisis, Lebanon's obligations cannot be paid in full. Even in a "miracle" scenario with Lebanon growing like Singapore since the 1980s[8], sustaining large primary balances like Jamaica in the recent past, and achieving a 100% Eurobond debt write-off, central bank net liabilities would remain at more than 560% of GDP. In short, without a haircut on both the Central Government's Eurobond debt and the central bank's obligations to the domestic financial system, Lebanon has no path to debt sustainability (here loosely defined as a non-exponentially growing debt path).

Figure 3. Consolidated Government Balance Sheet

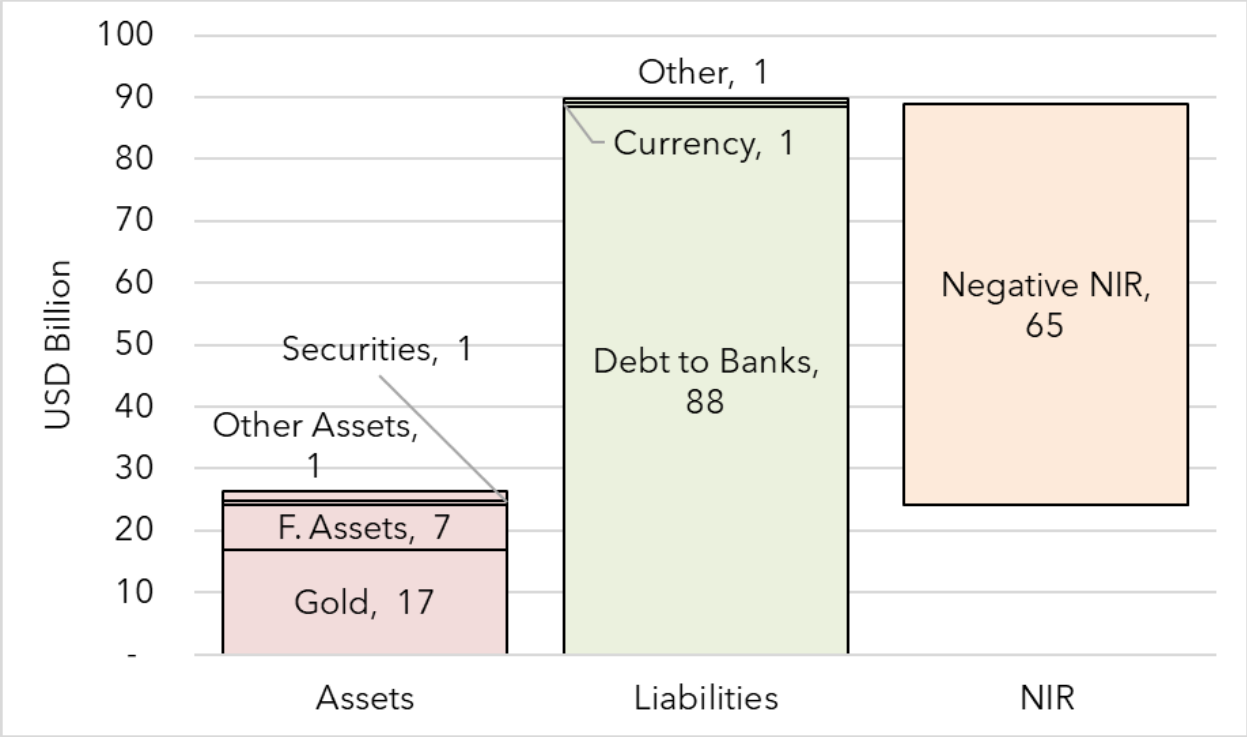


Source: Banque du Liban, own calculations. Note: Local currency is converted into USD at the parallel-market exchange rate. Presumed Lebanese Eurobond holdings with face value of USD 7.5 billion are not counted in foreign assets.

[7] This average is from the World Bank's World Development Indicators, which define net foreign assets as "the sum of foreign assets held by monetary authorities and deposit money banks, less their foreign liabilities." For most countries, there is a very small difference between gross and net reserves, as central bank liabilities are typically denominated in local currency (cash and bank reserves) and not in foreign currency. Exceptions include countries characterized by large macroeconomic imbalances such as Argentina, Turkey, and Venezuela.

[8] Singapore's growth in the most extraordinary decade from 1987 to 1997 was 9%. What makes Singapore the often referred to poster child of economic development, is the persistence of high growth, with a 7% average since 1970.

Figure 4. Pre-Restructuring: BdL Balance Sheet



Source: Banque du Liban, own calculations. Note: Local currency is converted into USD at the parallel-market exchange rate. Presumed Lebanese Eurobond holdings with face value of USD 7.5 billion are not counted in foreign assets.

Empirical evidence from sovereign defaults since 1900 shows that on average, these experiences leave scars in the economy that lead to depressed growth even a decade post-default (Table 1) (Farah-Yacoub, Graf Von Luckner, Ramalho, & Reinhart, 2022). Even if Lebanon were to defy these expectations and return to its pre-default long-term growth trend, it would require record-breaking primary surpluses to achieve debt sustainability. Figure 5 portrays scenario analyses of where the debt-to-GDP ratio will stand in five years over a grid of average growth and primary surplus combinations. Green (red) shading indicates downward (upward) sloping debt paths. Even with an unrealistic interest rate assumption (these estimates assume the Lebanese government will borrow internationally offering a yield of 6.8%) a sustainable debt path is essentially unachievable without significant debt relief.[9]

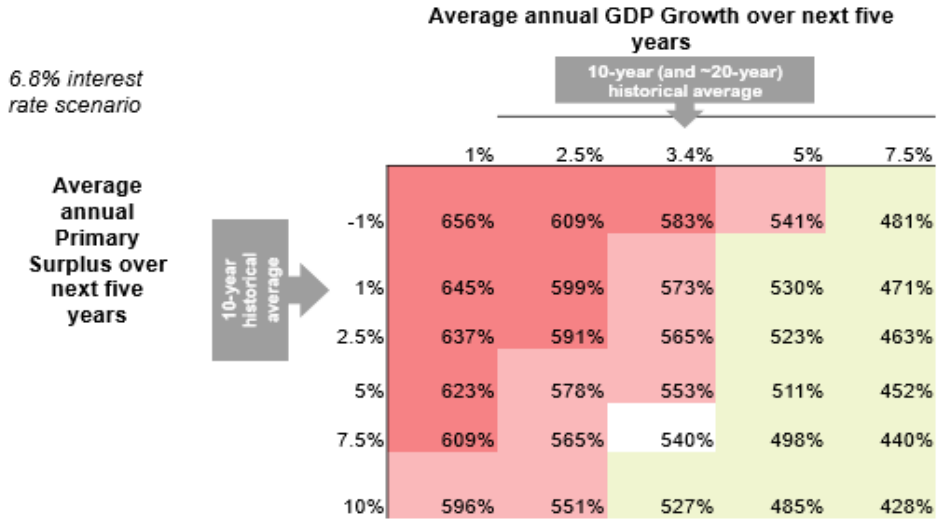
[9] The assumed interest rate is based on the average coupon rate on outstanding Eurobonds. However, with a debt to GDP above 500% there is arguably no scenario in which the market would lend to Lebanon at these rates. Even less so in today's higher interest rate environment.

Table 1. CAGR of Real GDP Growth after Growth Collapses, Banking Crises, and Sovereign Debt Restructurings[10]

	3 years CAGR (%)			5 years CAGR (%)			10 years CAGR (%)		
	Growth Collapses	*Banking Crises*	*Post restructuring*	*Growth Collapses*	*Banking Crises*	*Post restructuring*	*Growth Collapses*	*Banking Crises*	*Post restructuring*
Mean	6.5	4.3	3.3	5.3	4.3	3.0	4.7	3.6	3.0
Median	6.3	4.4	3.5	5.3	4.8	3.3	5.0	4.1	3.2
SD	3.7	2.5	2.9	2.7	2.1	2.7	2.0	2.3	2.3
Min	0.1	0.8	-8.5	0.4	1.1	-8.6	0.1	-0.6	-5.6
Max	16.0	8.9	12.6	13.2	8.8	9.0	10.1	6.6	7.4
10th percentile	1.8	0.8	-0.4	1.7	1.3	-0.3	2.2	-0.5	0.7
25th percentile	3.7	2.6	1.4	3.5	2.7	1.4	3.0	2.4	2.0
75th percentile	8.9	5.2	5.1	7.0	5.5	4.7	6.0	5.6	4.3
90th percentile	11.0	8.8	6.7	8.3	8.1	6.1	7.3	6.5	5.6
# of crises	44	12	167	44	11	164	42	11	156

Source: Own elaboration based on World Development Indicators, Barro (2006), Reinhart and Rogoff (2014), Cruces and Trebesch (2013), and Asonuma and Trebesch (2016).

Figure 5. Stock of Debt under Different Scenarios of GDP Growth and Primary Surplus[11]



Source: Authors' calculations, with data on debt stocks from various sources (World Bank IDS, ABL, Bloomberg, Banque du Liban).

As a result, Lebanon requires extreme debt relief. A sustainable debt load for Lebanon is on the order of USD 25 billion, or a quarter of the current stock. This can be seen with a simple back-of-the-

[10] Growth collapses refer to those declines in real GDP of at least 15 percent from peak to trough for at least a minimum of 3 years. For growth collapses and banking crises, the recovery occurs when real GDP reaches the latest peak prior to the crisis. Growth Collapses and Banking Crises figures were calculated based on those occurring between 1960-2022 and Post Restructuring figures include restructurings that happened between 1975 and 2020.

[11] Green (Red) = downward (upward) sloping debt path.

envelope calculation. Consider the equation of motion for debt dynamics $\frac{D_{t+1}}{Y_{t+1}} = \frac{D_t}{Y_t} \times \frac{1+g}{1+r} - pb$ where *D* is the debt stock in USD, *Y* is GDP in USD, *g* is the nominal growth rate of GDP in USD, *r* is the average cost of borrowing in USD, *pb* is the primary fiscal balance and *t* indicates the time period. Assume that the debt-to-GDP ratio is stable across time, which is expressed by $\frac{D_{t+1}}{Y_{t+1}} = \frac{D_t}{Y_t} = \frac{D}{Y}$. Under this stability assumption, the stock of debt that stabilizes the debt-to-GDP ratio is given by:

$$D_{stable} = Y \times pb \times \frac{1+g}{r-g}$$

Assuming optimistically a post-recovery nominal GDP of USD 35 billion (over 100% higher than the current level of USD 16.2 billion), a long-run primary surplus of 3% of GDP, a growth interest differential (r - g) of 3%[12], the debt stock that stabilizes the debt to GDP ratio is USD 35 bn. Moreover, to get there, the country will need significant new debt, which we estimate at around USD 8 billion, so the amount of legacy debt that can be serviced is at most USD 27 billion, which is just 22.5% of the current consolidated public debt stock of USD 120 billion.

1.3 Fiscal Accounts and Government Operations

The steady decline in fiscal revenues and expenditures since 2019 has crippled the government's ability to provide essential public services (Figure 6). While GDP declined by 38%, the share of government revenues and primary expenditure in GDP declined to almost a third of its pre-crisis levels, severely limiting public sector operations. Access to healthcare, electricity, and administrative services has been significantly affected. The decline in revenues has been mostly driven by an important reduction in value-added tax (VAT) and income tax collection. The decline in expenditures has been mostly due to a large decline in real public sector wages and a significant decrease in fuel imports by Electricité du Liban (EdL). In addition, non-monetary sources of funding have disappeared given the collapse of the banking system and the external default.

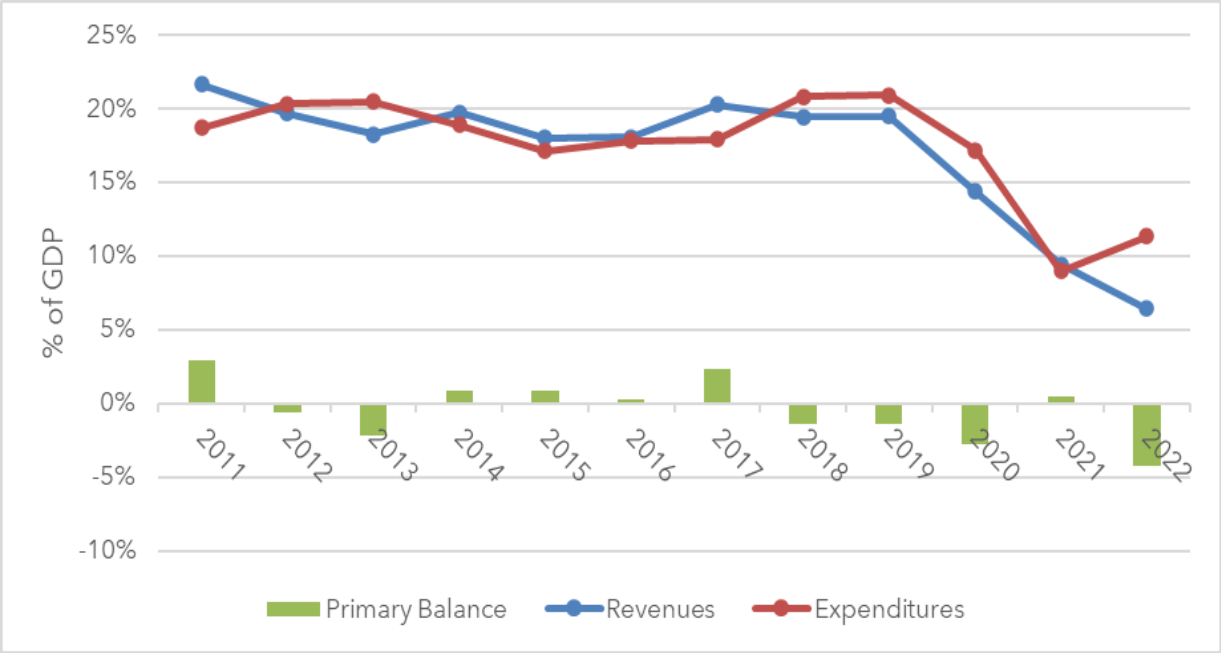
Aside from the Tanzi effect, falling fiscal revenues are attributable to diminished tax compliance and the application of an overvalued real exchange rate for taxes on imports (Figure 7).[13] The overvalued exchange rate impacts the collection of tariffs and VAT on imports, whereas the decline in tax payment compliance primarily affects income tax and domestic VAT (International Monetary Fund (IMF), 2023c). Other significant factors contributing to the reduction in government revenues include outdated excise rates and a significant fall in the income from government-owned assets, like the port, Casino du Liban, and the telecommunications company.

[12] The growth interest differential averaged 4.3% in the 2013-2018 period.

[13] The Tanzi Effect refers to the negative correlation between inflation and tax revenue. As inflation increases, real tax revenue decreases due to lags in tax collection and general inefficiencies in the tax system (Tanzi, 1977).

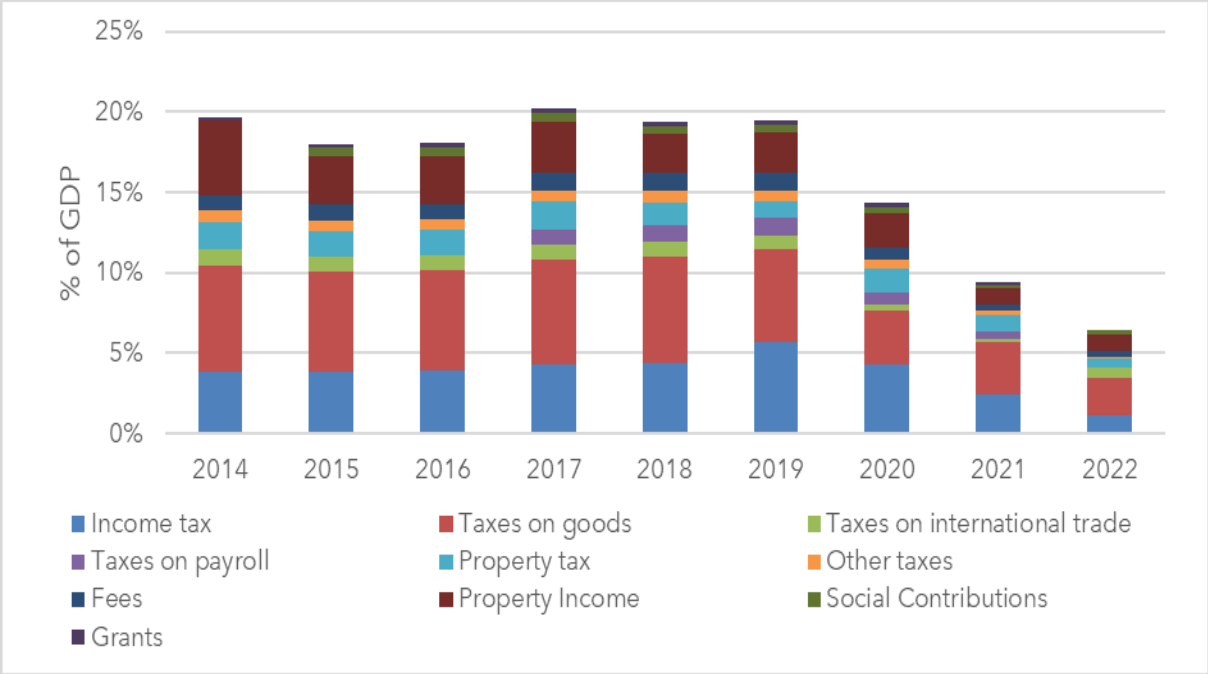
The decline in expenditures is linked to the decrease in the real average public sector wage and the significant drop in fuel purchases by EdL (Figure 8). Given the constraints on access to foreign currency, the State has not been able to purchase as much fuel as in the years before the crisis. This has led to a reduction in the subsidy to EdL, but also in EdL's capacity to generate electricity. A temporary freeze of the public wage bill has led to an 85% decrease in real wages, which, in turn, has resulted in a collapse in healthcare (Fleifel & Abi Farraj, 2022) and education services (Bahous, Bassar, & Ouaiss, 2022) and widespread strikes in the Public Administration (Chehayeb, 2022); (International Monetary Fund (IMF), 2023b). Thus, the current reduction of expenditures is not sustainable in a stable and growing economy.

Figure 6. Revenues and Primary Expenditures as a Share of GDP (1997-2021)



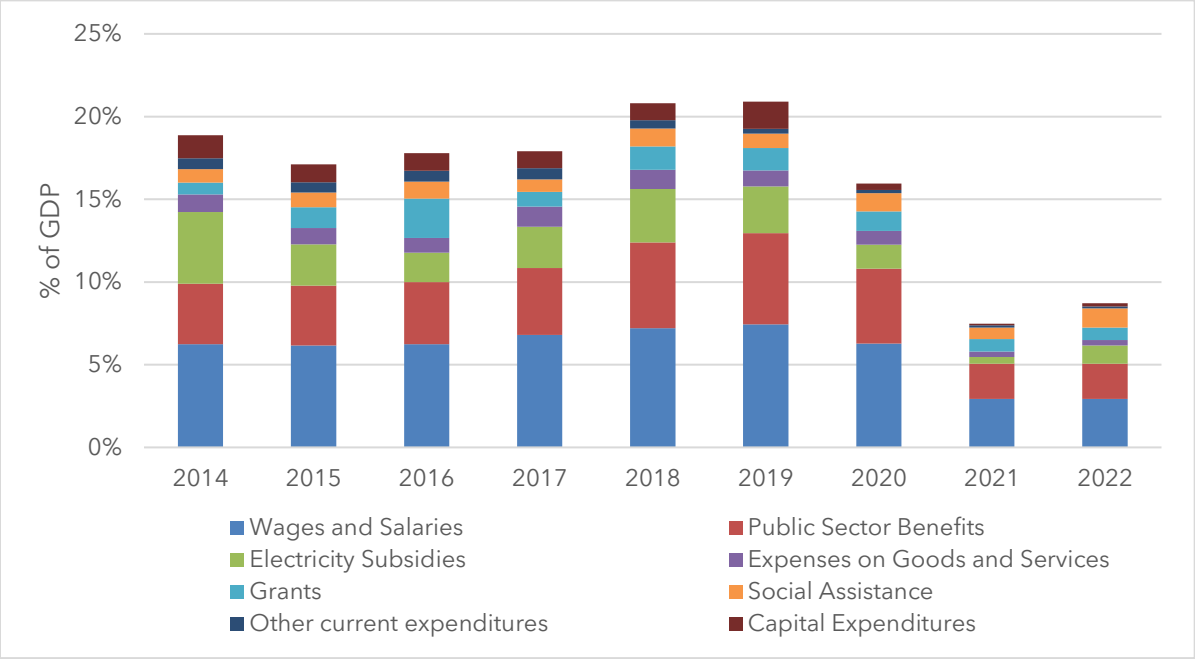
Source: Own elaboration based on International Monetary Fund-GFS and IMF (2023b), World Development Indicators (WDI)

Figure 7. Composition of Fiscal Revenues as a Share of GDP (1997-2021)



Source: Own elaboration based on International Monetary Fund-GFS and IMF (2023b), World Development Indicators (WDI)

Figure 8. Composition of Primary Expenditures as a share of GDP (1997-2021)



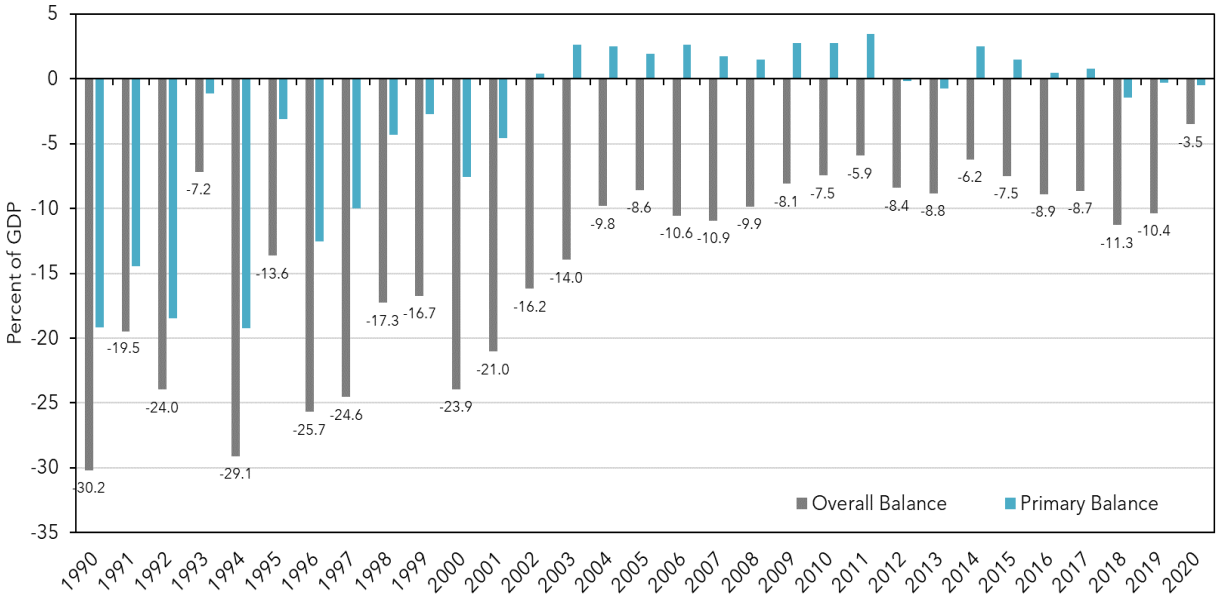
Source: Own elaboration based on International Monetary Fund-GFS and IMF (2023b), World Development Indicators (WDI)

2. How We Got Here: Causes of Lebanon's Collapse

2.1 The Financial Legacy of Post-War Reconstruction

The post-Civil War reconstruction left the country in a precarious fiscal and debt position. The urgent need to swiftly rebuild basic physical infrastructure after the civil war resulted in high fiscal deficits, financed through mounting levels of public debt (Figure 9 and Figure 10) (Diwan and Chaoul, 2023). Part of these reconstruction efforts were planned assuming foreign assistance that never materialized and, hence, financed by issuing more domestic debt than initially planned. Between 1992 and 1997, the fiscal and primary deficits averaged 20.7% and 10.7% of GDP, respectively. Public debt surged from USD 2.9 billion to USD 16.5 billion, increasing from 50% of GDP to 104.4% of GDP in just five years. While most of this debt was domestic, external debt, largely from bilateral and multilateral sources, also experienced a sharp rise during this period.[14]

Figure 9. Fiscal Balances



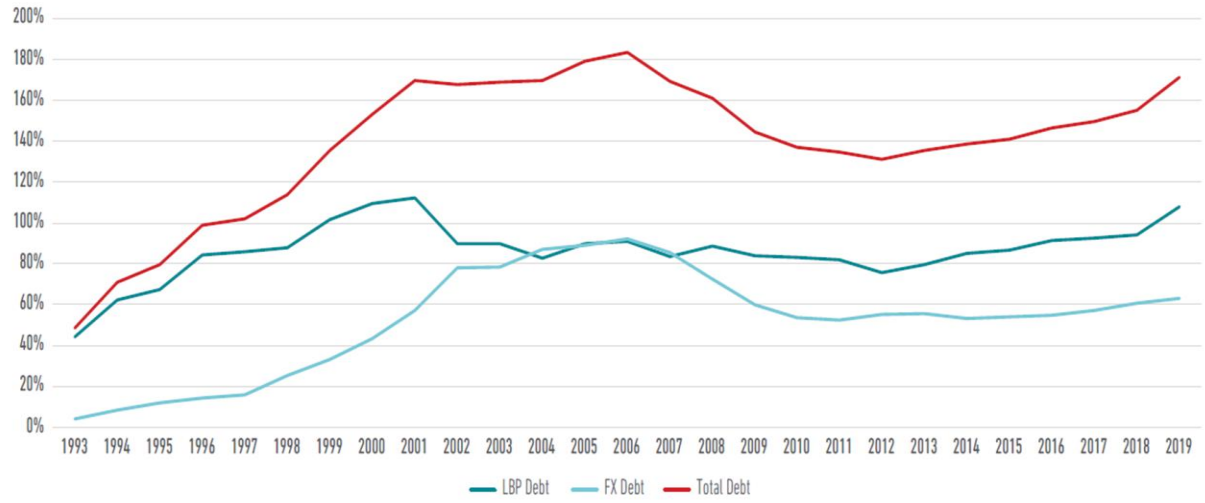
Source: Own elaboration based on World Economic Outlook.

While the primary deficit was reduced after 1994, the overall deficit did not decline in the following years because of ballooning debt service charges. Between 1992 and 1997, the primary deficit decreased from 18.4% to 10% of GDP. However, interest payments escalated from 5.5% to 14.6% of GDP or from 46% to 91% of total government revenues. (Figure 11). The increase in the

[14] Domestic debt climbed from USD 2.8 billion to USD 14.3 billion, equivalent to an increase from 47.4% to 90.1% of GDP. External debt, on the other hand, rose from USD 0.2 billion to USD 2.2 billion, accounting for a shift from 3.4% to 13.9% of GDP (Kubursi, 1999).

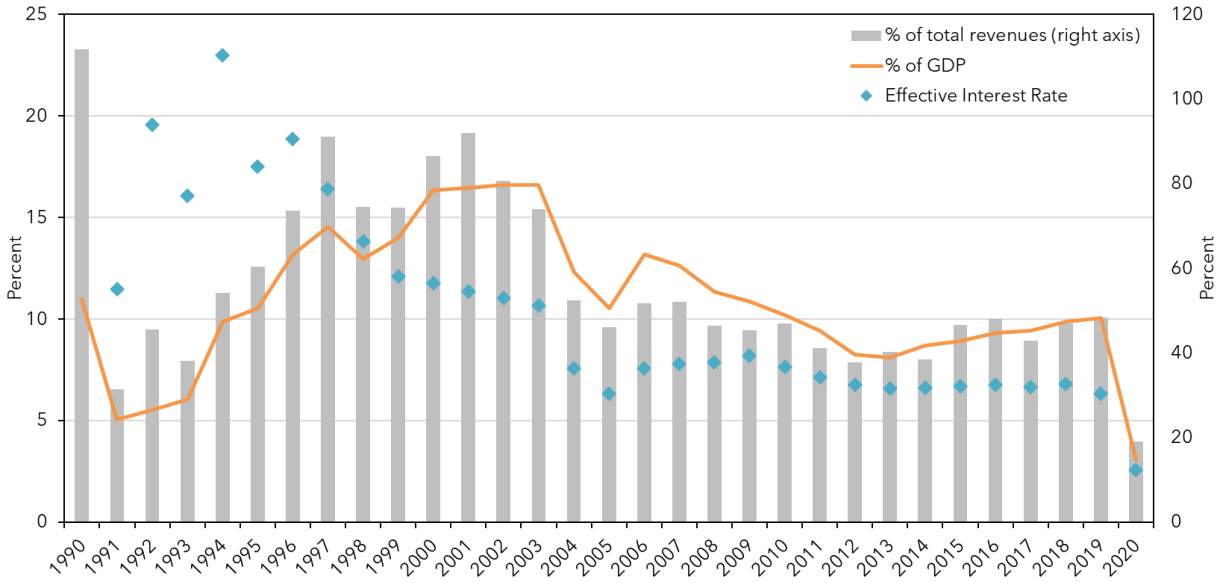
interest burden was not driven solely by the size of the debt but also by rising interest rates. Notably, the effective interest rate during the 1994-97 period averaged 18.6% (Figure 11).

Figure 10. General Government Gross Debt (% of GDP)



Sources: World Bank (2022)

Figure 11. Interest Payments and Effective Interest Rate



Source: Own elaboration based on World Economic Outlook.

Partly with an eye to lower interest payments, the lira was pegged to the dollar in September 1997. Before this, the country had been trapped in a situation where high interest rates were needed to compensate depositors for their fear of devaluation, but these rates had the effect of widening the

fiscal deficit, requiring monetary issuance, hence validating the high depreciation expectations. The peg was intended to break this vicious cycle, by renouncing currency depreciation. However, interest payments remained high. By the year 2000, they still represented 16.4% of GDP. This unsustainable situation was addressed through the Paris I (2001) and Paris II (2002) international conferences on Lebanon's reconstruction. In these conferences, donor countries agreed to provide the country with significant debt relief and additional concessional lending in exchange for greater fiscal discipline and structural reforms. Between 2000 and 2003 the primary balance underwent a major adjustment, moving from a 7.6% deficit to a 2.6% surplus, an adjustment of 10.2 percentage points of GDP in 3 years. However, in this period, interest payments remained above 16% of GDP. They declined by 6.1 percentage points of GDP between 2003 and 2005, as official debt relief agreements materialized. However, these major changes were not enough to stabilize the debt-to-GDP ratio, which actually increased from 148% of GDP to 179% between 2000 and 2005.

In short, despite international support and some debt reduction assistance through the Paris Conferences, the economy was left in a precarious position at the beginning of the 2000s. As the government accumulated too much debt, fiscal sustainability became reliant on maintaining high growth in nominal GDP (real growth plus inflation).

2.2 A Lack of Sustainable Growth Drivers

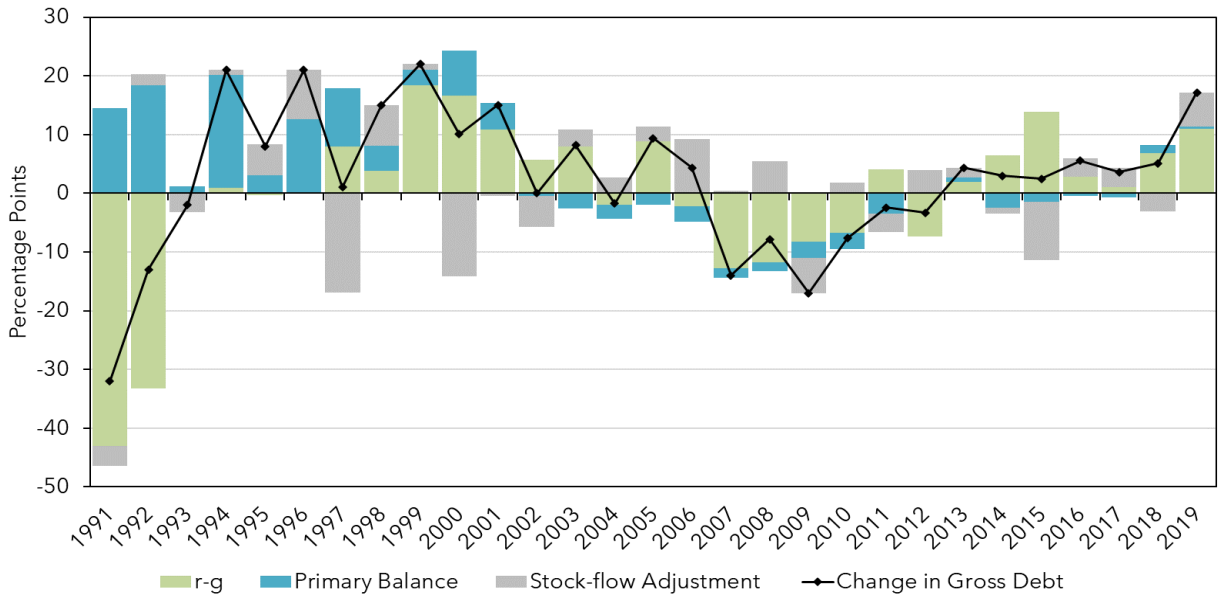
Given the high existing public debt-to-GDP ratio, debt dynamics since the early 2000s were dominated by the interest-growth differential (r - g), which dwarfed movements in the primary deficit (Figure 1). When the public debt stock is high, the dynamics of the debt-to-GDP ratio become primarily determined by the race between the interest rate (r), which adds to the debt service requirements, and the nominal growth of the economy itself, which increases the country's ability to service that debt. In the 2000-2005 period, (r - g) averaged 5.5%, but this changed to an average of -4.6% between 2007 and 2011, thanks to the economic boom in that period. Together with an improvement in the primary balance, which moved from -0.8% in the 2000-2005 period to 2.4% in the 2007 to 2011 period, the negative interest-growth differential led to a rapid decline in the debt-to-GDP ratio from 183% in 2006 to 131% in 2012. However, starting in 2013, the interest-growth differential turned positive again and averaged 3.9% between 2013 and 2018. Coupled with a smaller average primary surplus of 0.5%, this led to a significant increase in the debt-to-GDP ratio which went from 131% of GDP in 2012 to 155% in 2018.[15]

These changes in the interest-growth differential were driven mainly by changes in the real growth rate and to a lesser extent by changes in inflation, with nominal interest rates playing essentially no role. Annualized average real growth increased from 3.5% between 2000-2005 to 7.4% in the 2007-2011 period and dropped to 1.2% over 2013-2018 (Figure 13). Inflation went from 0.4%

[15] These numbers do not account for the large quasi-fiscal deficit at the BdL during this period.

in 2000-2005 to 5.0% in 2007-2011 and to 2.1% in 2013-2018. By contrast, interest rates fell from 9.8% in 2000-2005, to 7.7% in 2007-2011. In the 2013-2018 period, they appeared to fall further to 6.7% in 2013-2018. However, this was a mirage: in fact, the economy had lost access to capital markets and the government started to fund itself with the BdL. To attract deposits, the BdL had to offer rapidly rising interest rates, which eventually precipitated the crisis. Therefore, the crisis was not caused by a major deterioration in primary deficits but by a changing ability to finance the pre-existing large debt ratio that put the country in a position that was highly vulnerable to swings in the interest-growth differential. Between 2011 and 2018 the country went through the longest low-growth period since the end of the civil war, convincing markets of the unsustainability of the debt, which led to the 2019 crisis.

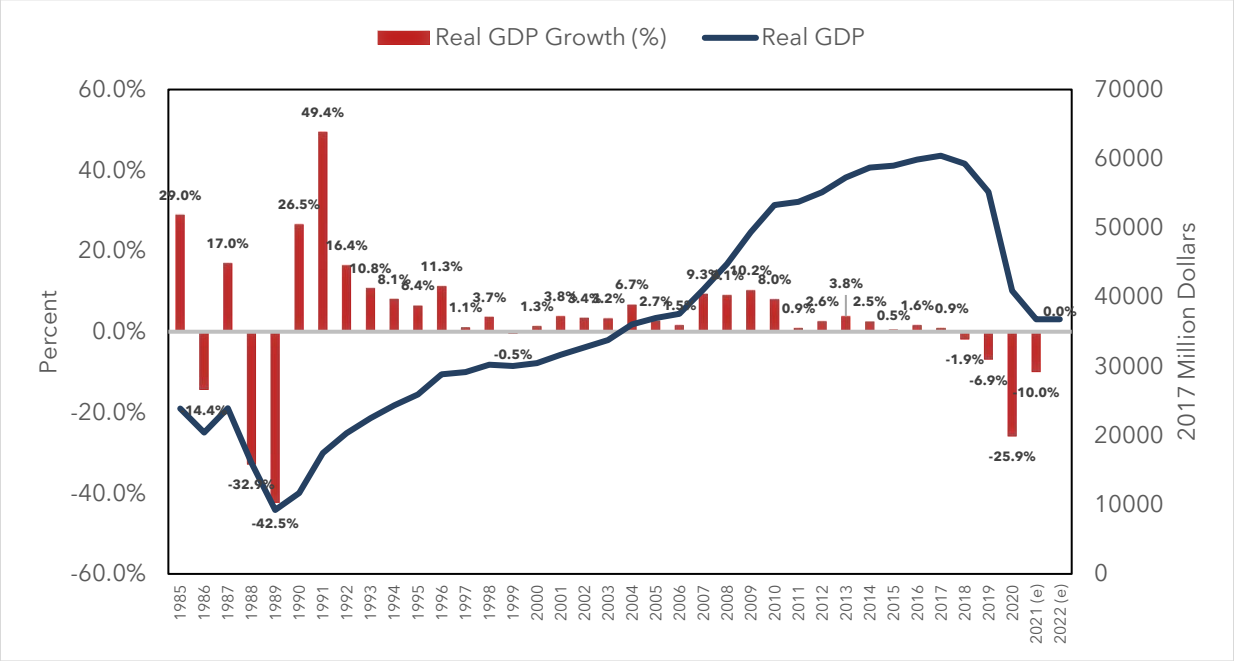
Figure 12. Decomposition of Public Debt Dynamics



Source: Own elaboration based on World Economic Outlook, World Development Indicators and World Bank (2022), Ponzi Finance?

While some regional shocks happened during 2011-2018, the main explanation for the slowdown was the absence of sustainable engines of growth. Exports of goods peaked in 2011 and declined by over 18% by 2018. Tourism, which peaked at USD 7.9 billion in 2010, declined to around USD 6.9 billion in the period 2011-2015, impacted by the war in Syria and other security concerns. Remittances that had grown in the decade to 2009, stagnated in absolute terms in the period to 2018 and declined as a share of GDP from 24% to under 15%, in part because of the decline in oil prices that impacted labor demand in the Gulf countries. Previous periods of high growth were also buoyed by foreign-assisted reconstruction - after the civil war and the 2006 July conflict - which created large temporary construction booms. With stagnant exports, tourism, and remittances, the economy had nothing to propel it forward.

Figure 13. Evolution of Real GDP



Source: Own elaboration based on World Economic Outlook and World Bank

2.3 Additional Weaknesses in the Fiscal Balance

Given the large adverse movement in the interest-growth differential after 2011 and the very high level of debt, stabilizing the debt-to-GDP ratio would have required massive primary surpluses. With an interest-growth differential of -4.5% of GDP, as was the average between 2007 and 2011, a debt of 150% of GDP could have been made stable with a primary deficit of 6.75% of GDP. Instead, the country ran a primary surplus of 2.3%. This gap explained why the debt-to-GDP ratio fell by over 40% of GDP between 2007 and 2011. By contrast, even with the under-estimated interest-growth differential of 4.3% of the 2013-2018 period, stabilizing a debt-to-GDP ratio of 150% would have required a primary surplus of 6.45% of GDP or 33% of fiscal revenues. Instead, the primary balance deteriorated from 2.3% of GDP to 0.1%, explaining the rise in the debt-to-GDP ratio and the eventual crisis in 2019. To avoid the rise in the debt-to-GDP ratio, the primary balance would have needed to be adjusted by 6.55% of GDP.[16]

While the fiscal adjustment needed to compensate for the positive interest-growth differential was likely not feasible, three factors created additional structural weaknesses in the primary balance: public wages and benefits, energy subsidies, and tax collection issues. Regarding

[16] This calculation of the necessary adjustment ignores the potential recessionary effects of the fiscal contraction, which would have made the needed adjustment even larger.

public wages, Lebanon displayed an unusually high level of personnel costs for employees of the civil service and the military, averaging roughly twice what would be expected for countries with Lebanon's tax revenue to GDP ratio. Electricity subsidies constituted one of the largest expenditure items in Lebanon's budget, accounting for approximately 4.5% of GDP during periods of high oil prices. Tax collection declined through a combination of increased exemptions and weak compliance[17].

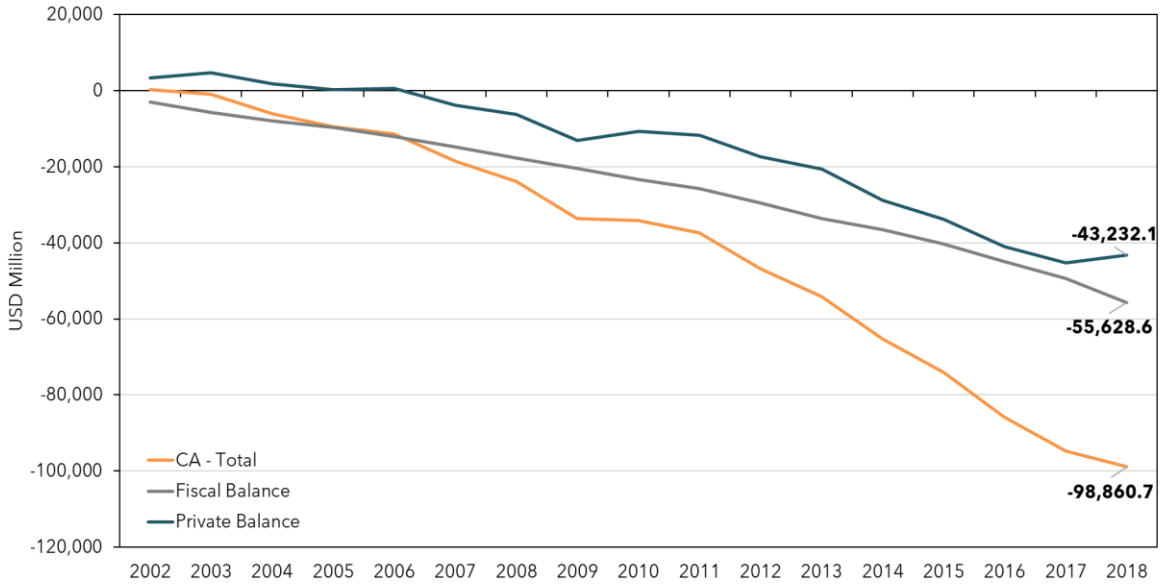
2.4 How the Current Account and Fiscal Deficits were Funded

The century started with a high stock of debt and the subsequent two decades exhibited significant external and fiscal deficits that needed to be financed. However, the government did not borrow directly from abroad in this period in net terms. Using detailed data from the balance of payments statistics, it is possible to disentangle how Lebanon funded itself from 2002 to the start of the crisis in 2019. Figure 14 shows the cumulative current account[18] and fiscal deficit since that date. The cumulative fiscal deficit in the 2002-2018 period was USD 55.6 billion. This is consistent with debt statistics which show an increase in gross debt of USD 56.8 billion during this period, of which USD 23.9 billion was denominated in foreign currency and USD 32.9 billion in local currency. The cumulative current account deficit was USD 98.9 billion, meaning that the consolidated private sector ran a deficit of USD 43.2 billion. Figure 15 decomposes the financing of the fiscal balance between its domestic and external components. It shows that the public sector did not borrow abroad in net terms in the 2002-2018 period, but instead amortized USD 1.9 billion of foreign debt. As a consequence, the increase in the domestic public debt funded the cumulative deficit plus this amount.

The private sector borrowed abroad massively, way beyond its needs to fund its own deficit. Figure 16 shows the cumulative private sector deficit and its sources of finance. While the private sector deficit amounted to USD 43.2 billion, the increase in total private liabilities amounted to USD 136.2 billion, which is USD 93 billion more than was necessary to cover its deficit. This increase in external liabilities was composed of USD 34.6 billion in foreign direct investment (FDI), USD 35.9 billion borrowed by non-banks, and USD 65.7 billion borrowed by banks. When looking at the commercial banks' balance sheet, these inflows were driven by increases in nonresident deposits (USD 39.6 billion) and foreign liabilities (USD 23.0 billion). Furthermore, resident deposits increased by USD 102.6 billion during the same period.

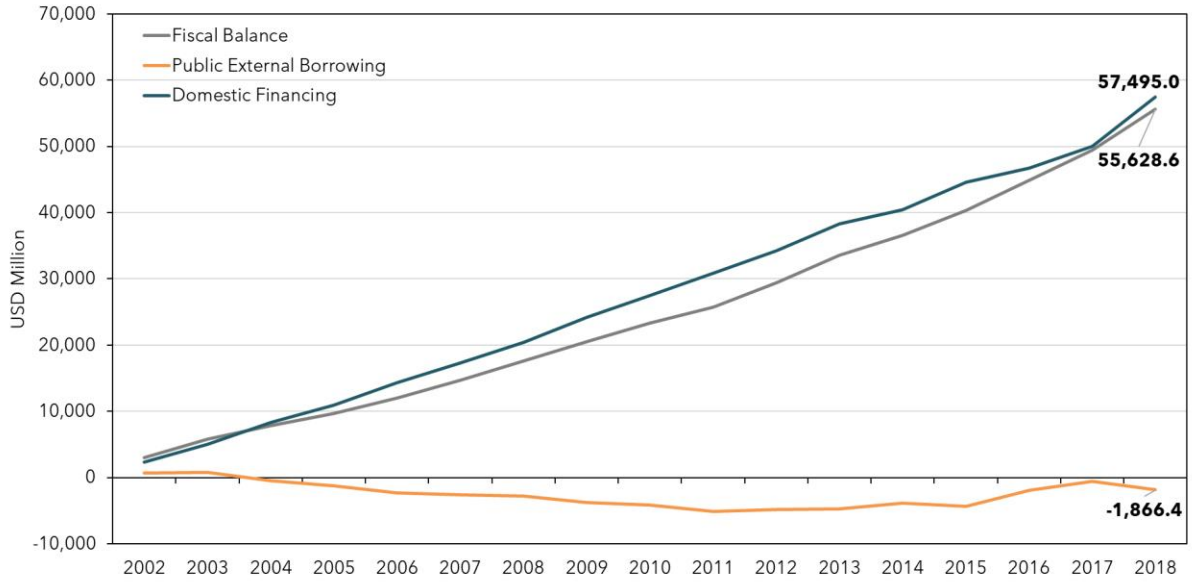
[17] More on this in section 3.5 below.
[18] For these graphs, we include errors and omissions and the capital account to the definition of the current account.

Figure 14. Cumulative Current Account



Note: Current Account figures exclude Capital Account and Net Errors and Omissions.
Source: Own elaboration based on IMF-Balance of Payments Dataset.

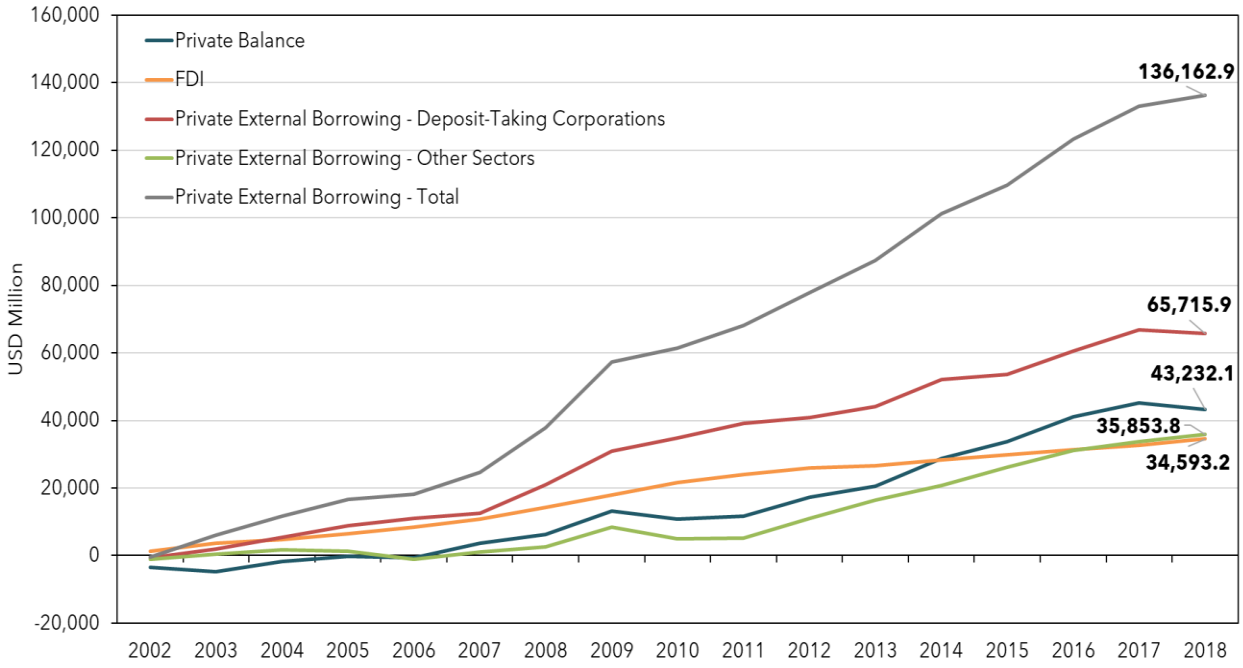
Figure 15. Cumulative Public Financing (inverted axis)



Note: A positive (negative) Fiscal Balance here refers to a fiscal deficit (surplus). Similarly, a positive (negative) Public External Borrowing refers to a financial inflow (outflow). Domestic Financing is the difference between the Fiscal Balance and the Public External Borrowing.
Source: Own elaboration based on IMF-Balance of Payments Dataset.

Public debt was thus indirectly funded from abroad through domestic banks and non-bank intermediaries. As shown in Figure 17, between 2002 and 2018, government financing needs were covered by commercial banks (USD 13.0 billion), BdL (USD 29.0 billion), and the non-banking sector (USD 14.6 billion).[19] BdL financing channeled resources from commercial banks, as we discuss below. The direct funding of the banks to the government was concentrated in the period 2002-2013. Afterwards, Lebanese banks started reducing their exposure to the government and increased their exposure to the BdL. BdL financed the fiscal deficit by funding itself through the issue of dollar liabilities to banks. These dollar liabilities took the form of commercial banks' deposits at the BdL (net of loans to the financial sector), which increased by USD 85.5 billion during 2002-2018. This allowed BdL to not only finance the fiscal deficit but to also accumulate international reserves by USD 37.4 billion and other domestic assets by USD 12.5 billion (Figure 18). Lastly, the non-banking sector financed the rest of the government financing needs (USD 14.6 billion).

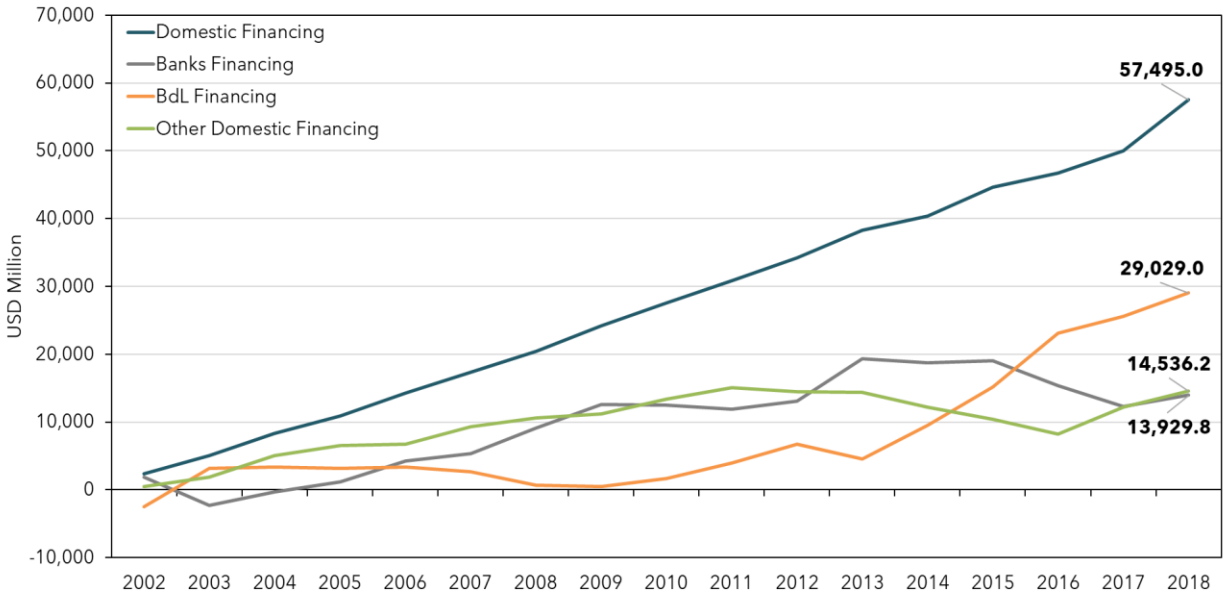
Figure 16. Cumulative Private Financing (inverted axis)



Note: A positive (negative) value refers to a financial inflow (outflow).
Source: Own elaboration based on IMF-Balance of Payments Dataset.

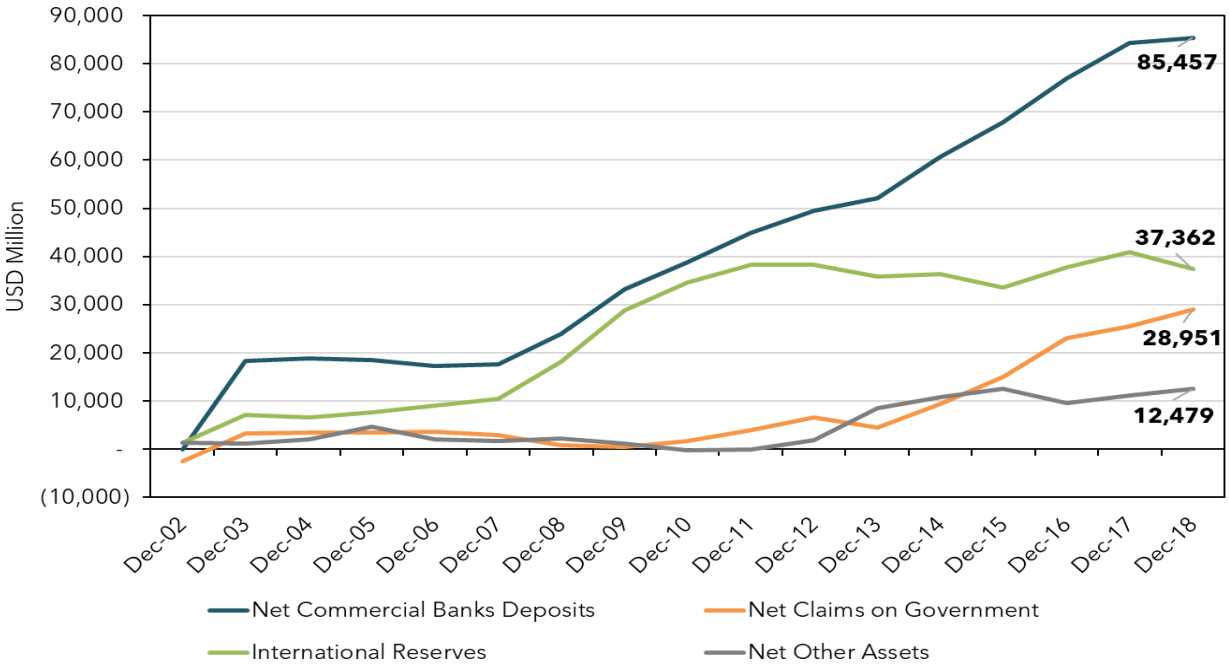
[19] Using balance sheet data from BdL, commercial banks financing and BdL financing are estimated by claims to the public sector (net of public sector deposits) and securities portfolio (net of public sector deposits), respectively.

Figure 17. Cumulative Domestic Financing Sources



Source: Own elaboration based on IMF-Balance of Payments Dataset and Banque du Liban.

Figure 18. Cumulative BdL's Balance Sheet



Source: Own elaboration based on Banque du Liban.

While commercial banks did not have a significant currency mismatch, the BdL had a huge currency mismatch with dollar liabilities being more than twice as large as its dollar assets. Table 2 shows the main component of the balance sheet of BdL for August 2019 – right before the onset of the crisis – and January 2023. For the latter, it reports figures pre- and post-devaluation. The main liability of BdL is the dollar-denominated financial sector deposits (USD 107.9 billion in August 2019). On the assets side, it only had USD 44.7 billion denominated in foreign currency. This implied a currency mismatch of USD 65.1 billion or 165% of 2019 GDP. This mismatch is the fundamental cause of the inability of BdL to honor its liabilities.[20]

Since the beginning of the crisis, there have been large changes in the balance sheets of BdL. The currency mismatch worsened, reaching USD 79.1 billion or 465% of GDP as of January 2023.[21] This deterioration is due to a USD 16.9 billion decline in international reserves and a collapse in the dollar value of GDP. In this period, BdL massively funded "Other Assets" to the tune of USD 73.8 billion, which was financed mostly by money printing: currency in circulation increased by the equivalent of USD 45.6 billion between August 2019 and January 2023, calculated at the official exchange rate of 1,507 LBP/USD. Since this additional money supply was not demanded by the public, the currency massively depreciated in the parallel market.

Table 2. Balance Sheet of BdL – August 2019 vs January 2023

Balance Sheet of Banque du Liban (USD Billion)		*Pre-devaluation*			*Post-devaluation*	
	Component	**Aug-19**	**Jan-23**	**Change - Aug19 vs Jan23**	**Jan-23**	**Change - Jan23 Pre- vs Post-devaluation**
Assets	***International Reserves***	***44.7***	***27.8***	***-16.9***	***27.8***	***0.0***
	Claims on Public Sector (mostly in LBP)	***41.5***	***44.8***	***3.3***	***4.5***	***-40.3***
	Securities Portfolio	41.5	44.8	3.3	4.5	-40.3
	Claims on Financial Sector (mostly in LBP)	***15.1***	***11.8***	***-3.3***	***1.2***	***-10.6***
	Other Assets (mostly in LBP)	***33.0***	***106.7***	***73.8***	***10.7***	***-96.0***
Liabilities	***Currency in Circulation***	***4.2***	***49.8***	***45.6***	***5.0***	***-44.8***
	Financial Sector Deposits (mostly in USD)	***107.9***	***105.1***	***-2.8***	***105.1***	***0.0***
	Public Sector Deposits (mostly in LBP)	***3.9***	***14.1***	***10.2***	***1.4***	***-12.6***
	Other Liabilities (mostly in LBP)	***18.3***	***21.0***	***2.7***	***3.7***	***-17.3***
	Total Balance Sheet	**134.2**	**191.0**	**56.8**		

Note: Pre-devaluation figures are valued at 1507.5 LBP/USD. Post-devaluation figures at 15,000 LBP/USD.
Source: Own elaboration based on Banque du Liban.

[20] The currency mismatch figure includes foreign liabilities in addition to financial sector deposits.
[21] The currency mismatch as share of GDP for 2023 was calculated using an estimated GDP of USD 17 billion.

The balance sheet of banks shrunk by almost USD 94 billion between August 2019 and the January 2023 devaluation (Table 3). On the liability side, the decline was related to a USD 47.7 billion decline in deposits (60% in USD) and a USD 33 billion decline in other liabilities, mostly in LBP. On the asset side, claims on BdL declined by USD 41.7 billion (82% in USD), while customers paid back USD 35.4 billion in loans (81% in USD) and the government paid back 21.8 billion, mostly in LBP.[22] In addition, direct claims from commercial banks on the public sector decreased by USD 20.8 billion.

The official depreciation of the lira during the crisis massively redistributed wealth across different agents of the economy. When the official exchange rate was adjusted from 1,507 to 15,000 LBP/USD, both assets and liabilities in Lebanese pounds were wiped out. Local currency-denominated assets and liabilities at BdL as of January 2023 decreased from USD 163.3 billion and USD 83.1 billion to USD 16.4 billion and USD 8.4 billion, respectively. Similarly, assets in Lebanese pounds of commercial banks plummeted from USD 57.0 billion to USD 5.7 billion and liabilities from 68.2 billion to USD 6.9 billion. At an exchange rate that reflects market realities, assets in LBP have become minuscule. This has implied a massive redistribution of wealth from depositors and creditors to debtors in Lebanese pounds.

In short, Lebanon underwent a triple crisis. First, it had a banking crisis, as banks could not unwind their position at the BdL when faced with deposit withdrawals. Second, it suffered a currency crisis, with the value of the lira declining by 98%. Third, early in 2020, the government opted to default on its public debt. While triple financial crises are not unprecedented, the growth collapse witnessed in Lebanon since 2019, with GDP falling by some 38%, amply surpasses that of comparable crises.

Table 3. Balance Sheet of Commercial Banks – August 2019 vs January 2023

Balance Sheet of Commercial Banks (USD Billion)		*Pre-devaluation*			*Post-devaluation*	
Type	**Component**	**Aug-19**	**Jan-23**	**Change**	**Jan-23**	**Change**
Assets	***Claims on BdL***	***151.9***	***110.1***	***-41.7***	***92.3***	***-17.8***
	Currency and Deposits with BdL in LBP	27.3	19.8	-7.5	2.0	-17.8
	Currency and Deposits with BdL in USD	124.5	90.3	-34.2	90.3	0.0
	Claims on Customers	***54.8***	***19.4***	***-35.4***	***10.6***	***-8.8***
	Claims on Customers in LBP	16.4	9.7	-6.7	1.0	-8.8
	Claims on Customers in USD	38.3	9.6	-28.7	9.6	0.0
	Claims on Public Sector (mostly in LBP)	***32.8***	***12.0***	***-20.8***	***4.3***	***-7.7***
	Claims on Financial Sector (mostly in USD)	***9.5***	***4.4***	***-5.2***	***4.3***	***-0.1***
	Other Assets (mostly in LBP)	***13.0***	***22.1***	***9.1***	***5.2***	***-16.9***
Liabilities + Equity	***Customers Deposits***	***171.1***	***123.4***	***-47.7***	***97.3***	***-26.1***
	Customers Deposits in LBP	47.8	29.1	-18.7	2.9	-26.1
	Customers Deposits in USD	123.3	94.3	-29.0	94.3	0.0
	Financial Sector Deposits (mostly in USD)	***11.1***	***6.7***	***-4.4***	***5.6***	***-1.2***
	Public Sector Deposits (in LBP)	***4.7***	***5.0***	***0.2***	***0.5***	***-4.5***
	Other Liabilities (mostly in LBP)	***54.3***	***21.3***	***-33.0***	***2.1***	***-19.2***
	Equity (in LBP)	***20.7***	***11.6***	***-9.1***	***1.2***	***-10.4***
	Total Balance Sheet	**261.9**	**168.0**	**-93.9**		

Note: Pre-devaluation figures are valued at 1507.5 LBP/USD. Post-devaluation figures at 15,000 LBP/USD.
Source: Own elaboration based on Banque du Liban.

[22] It is worth noting that this decrease in currency and deposits with BdL significantly differs from the change shown in the balance sheet of BdL. This difference is due to a large discrepancy in the figures reported for BdL and banks in August 2019.

3. The Recovery Plan

3.1 Plan Overview

To overcome the crisis, attention must be paid to its four dimensions and their inter-relationships. The country needs to address the insolvencies of the government, the BdL, and the banking system. It needs to adopt an alternative currency regime and it needs to get the economy back on a growth path.

Our plan has four basic pillars that are internally consistent but that must be appropriately sequenced (Table 4). In particular, we propose:

- An alternative monetary and exchange regime,
- A strategy to resolve all insolvencies including the banking system, the BdL, and the government,
- A fiscal policy to create a capable government that is financially sustainable,
- A growth strategy to get the economy moving sustainably as soon as possible.

Table 4. Sequencing of Policy Measures

Policy Measure	Start
Imposing Temporary Capital Controls & Withdrawal Restrictions	Immediately
Implementing Full Dollarization	As soon as practical
Issuing and Distributing Banking Restructuring Certificates	As soon as practical
Lifting Most Capital Controls and Withdrawal Restrictions for Individuals	After Certificates Issuance
External Debt Restructuring	Contingent on the negotiation process

For the monetary regime, we propose full dollarization to be adopted quickly, as soon as it is practical. Our rationale is based on the comparison of the costs and benefits of adopting full dollarization relative to what we think is the most feasible alternative: a managed float. We conclude that in the context of low monetary policy credibility and a highly dollarized economy and banking system, the benefits of full dollarization outweigh its costs.

For the resolution of the insolvencies in the banking system, the BdL, and the government, we propose a step-by-step process that starts by converting as soon as practical ~USD 76 billion in BdL deposits into claims on the government, by exchanging them for interim restructuring certificates. 90% of these certificates will be given to bank clients for their deposits above a specific threshold. The exact threshold will be determined to be made consistent with the USD 76 billion figure, given the size distribution of deposits at the time of implementation. Given the

available information, we tentatively estimate a realistic threshold at ~USD 100,000-150,000. The rest of the certificates will remain in banks. Through this mechanism, both the banks and the BdL will be de facto capitalized. The deposits that will not be converted into certificates will be more than fully backstopped by the international reserves at the BdL. Most banks will be left with positive equity but may need some extra capital, especially given that we propose that the required capital-asset ratio for a dollarized banking system should be increased to 15%. The BdL will provide equity in the form of a subordinated debt that banks will have to pay back in two years. This will allow the banking system to fully reopen.

In order for this restructuring to be successfully conducted, capital controls will need to be introduced until the banking restructuring is finalized (*i.e.,* at least until the restructuring certificates have been distributed and allocated to banks and depositors). Capital controls have been introduced by many countries experiencing banking crises, including a temporary restriction on currency outflows as well as on the movement of capital and foreign exchange transactions that are not linked to trade in goods and services. Such controls are needed to avoid speculative transactions that could jeopardize an orderly and fair restructuring. It is worth noting that such restrictions are already de facto in place as most citizens do not have access to their dollar assets, capital control legislation will formalize this de facto situation and introduce more fairness to the current system. Once the restructuring is done, capital controls on most transactions conducted by individuals should be lifted, while restrictions on business transactions may be eased more gradually.

Once bank balance sheets have been cleaned, the government will restructure the certificates issued to depositors and the rest of the public debt, including the Eurobonds. This restructuring will be done in a manner consistent with an IMF-supported program that will assure that the restructured debt plus the new debt that the country will require for recovery and reconstruction will be sustainable. We expect a haircut rate of the order of ~82-90%.

We also propose a gradual fiscal adjustment that can provide the government with the resources needed for the recovery of basic public services and critical infrastructure in order to hasten the recovery of the economy. We envisage a primary deficit of 3% of GDP in 2024, rising to a primary surplus of 3% by 2030, sufficient to service a public debt of 75% of GDP. The period to 2030 will require an additional ~USD 8 billion in new money, which should be provided by the IMF. Additional funding can come from other multilateral organizations, such as the World Bank. On the revenue side, the fiscal adjustment will require an increase in the VAT rate and a reduction of exemptions as well as an increase in the collection of income tax. Revenues will also grow because of the recovery of nominal GDP in dollars and because tariffs and the VAT on imports will now be calculated in dollars.

To recover the funds that were transferred abroad illegally during the crisis, we support the creation of an asset recovery institution. This initiative is important to increase fairness and political

support for the painful adjustments needed for recovery. However, it is unlikely to change the economics of the recovery plan. As explained by Brun et al. (2011), the complexity of the implementation of an asset recovery fund should not be understated. The World Bank Group and the United Nations Office on Drugs and Crime provide a framework that establishes the process, requirements, and mechanisms to return wrongfully appropriated funds. The international experience suggests that these processes tend to be long.

Finally, we point to potential sectoral drivers of future growth to combine economic recovery with the necessary rebalancing of a previously unsustainable growth model. Activities with production and export potential may include high-quality agro-processed products, increased tourism activities, the expansion of knowledge services, and the exploitation of natural gas resources. In all these endeavors, ambitious diaspora engagement will prove crucial.

3.2 The Monetary Regime: Full Dollarization

Our proposal entails full dollarization of the Lebanese economy. We find that the typical advantages associated with dollarization are especially significant in the Lebanese context, while conventionally cited drawbacks of dollarization are less important, given today's economic reality in Lebanon (Table 5). Thus, dollarization is a better option, when compared with the most viable alternative: a managed floating exchange rate within a heavily dollarized banking system, coupled with limited policy credibility.

In the specific Lebanese case, the benefits of dollarization surpass its drawbacks. First and foremost, full dollarization would put an end to Lebanon's hyperinflation. Though there exist alternative strategies that could gradually lower inflation, dollarization is by far the most effective and rapid one. Consider the case of Ecuador where, following the economy's full dollarization, inflation declined from 96.1% in 2000 to 2.7% in 2004. Since then, Ecuador has seen single-digit inflation even in the presence of a relatively expansionary fiscal policy. Moreover, dollarization could play a role in facilitating foreign direct investment and economic exchanges, especially with counterparties in the Gulf, where most currencies are pegged to the dollar.

Lebanon's economy is already de facto dollarized. Ever since the end of the Lebanese Civil War in 1989, Lebanon has had a highly dollarized banking sector. Prior to 2019, most prices were fixed and transactions were made using the Lebanese lira. However, since 2019, hyperinflation, the exchange rate collapse, and the freeze on bank deposits, the economy has been de facto dollarized. Prices, even for small daily transactions, and private sector wages are all denominated in US dollars. This means that the lira lost not only its role as a store of value but also its role as a means of exchange and unit of account. Under these conditions, the ability to extract seigniorage from issuing the local currency is much reduced while the high elasticity of substitution between domestic currency and the dollar creates a volatile demand for lira which complicates monetary policy (in the current situation fiscal

dominance makes monetary policy completely ineffective in managing inflation). Given the massive currency depreciation and the low demand for the lira, exchanging the circulating local currency for US dollars can be financed and is unlikely to cause the kind of deflationary dynamics discussed by (Caravello, Martinez-Bruera, & Werning, 2023).

Table 5. Dollarization: Costs and Benefits

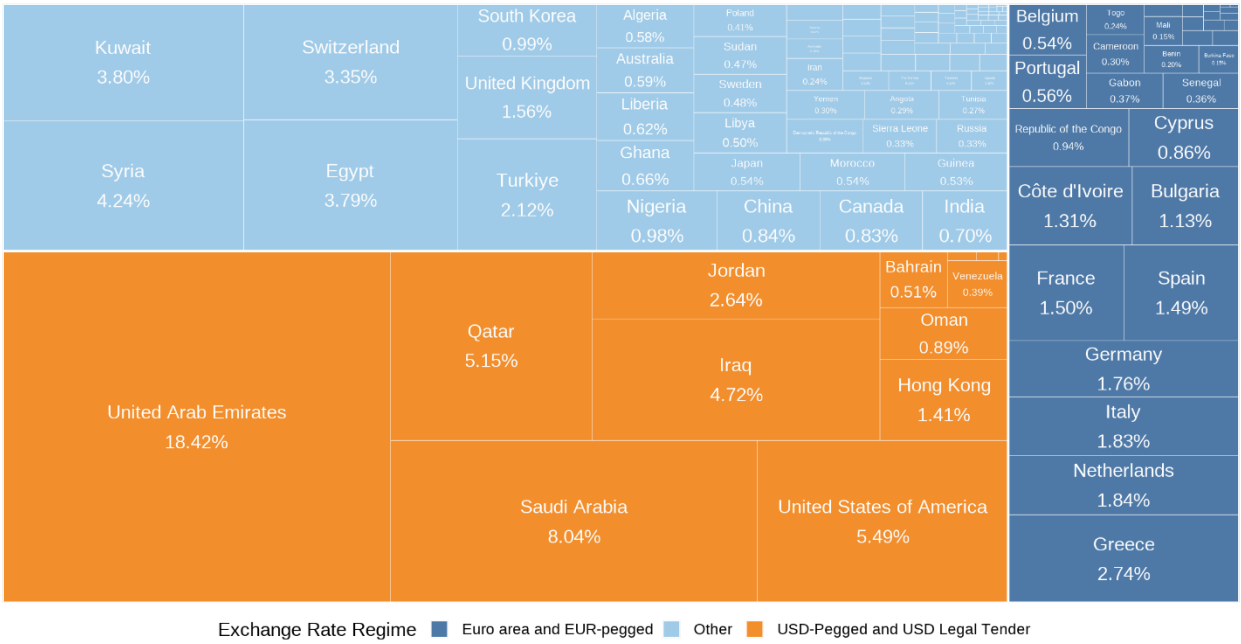
Benefits	Costs
- Dollarization enables importing a credible nominal monetary anchor	- Dollarization means giving up monetary autonomy, and thus the ability to respond to idiosyncratic shocks, risking costly deflationary adjustments to economic downturns occurring out of sync with the business cycle in the dollar area.
- Dollarization promotes financial and trade integration, by eliminating exchange rate risks and transaction costs (Rose, Lockwood, & Quah, 2000).	- A dollarized economy does not generate seigniorage revenues. However, fiscal resources can be generated by requiring banks to hold reserves at the BdL at lower than market interest rates.
- In the medium/long run, governments and firms from dollarized economies borrow from international capital markets at significantly lower interest rates (Swiston, 2011).	- In the absence of sufficient dollars in the system, dollarization can cause a transitory recession (Caravello, Martinez-Bruera, & Werning, 2023)

Source: Authors' elaboration.

Lack of credibility limits the Central Bank's ability to respond to idiosyncratic shocks with accommodative monetary policy. Monetary policy is only effective in the presence of a credible central bank and well-anchored expectations. BdL was already not credible before the crisis. That is why it adopted a fixed exchange rate and tolerated a high level of dollarization of bank deposits. Moreover, even in tranquil years, the peg was not fully credible, as indicated by the fact that interest rates in lira significantly exceeded those in dollars. This problem is likely to be even more significant under a managed floating regime where the central bank will fear the balance-sheet effects that exchange rate movements will have on the banks, the government, and the private sector. So, a floating system will imply very high interest rates, complicating debt dynamics, while being ineffective in stabilizing the economy. In this context, monetary policy becomes highly pro-cyclical, raising interest rates to prevent depreciation in bad times. The Central Bank would probably have to go back to a de facto fixed exchange rate which does not allow for an independent monetary policy while also not delivering the credibility effect of full dollarization.

The Lebanese economy is very open and closely connected with economies that are pegged to the dollar. The cost of dollarization hinges on the degree of integration with the business cycle of the dollar area. In the Lebanese context, downturns out of sync with the dollar area business cycle are less likely given that the country's main trading partners and remittance-sending countries have currencies that are pegged to the dollar (Figure 19). Moreover, the labor market of Lebanon is very open, with many citizens exercising the option of working abroad in numbers that change with macro fluctuations. This also provides a sort of automatic stabilizer.

Figure 19. Lebanon's Trading Partners in 2020



Source: Atlas of Economic Complexity. Note: These figures exclude exports of gold.

A managed float could create financial fragility because it would be vulnerable to self-fulfilling negative expectations. A managed float is likely to lead to very short maturities on debt. Pessimism regarding the future of the economy would lead to high interest rates and, given short debt maturities, to rising debt service and deficits, justifying the initial pessimism. Similarly, dollarization provides a more credible monetary anchor than a fixed exchange rate.

Dollarization will need changes in the Code of Money and Credit of 1963 and other BdL-related laws to allow the institutional framework to be compatible with the measure. First, the new governing law must reflect the more limited functions and tools that a central bank has in a fully dollarized economy: the central bank will not be allowed to issue national currency[23] or intervene in

[23] In the case of Panama, the National Bank is allowed to issue local currency - balboas - to make sure that there are small denomination instruments - the equivalent of quarters, dimes, nickels, and pennies - so that citizens can make change.

the foreign exchange market. Second, the areas of action for BdL will be reduced to open market operations with its portfolio of foreign currency-denominated securities and the provision of relatively limited emergency liquidity, using its excess foreign currency reserves[24]. Finally, there will be an enhanced monitoring and supervisory function for the BdL, as dollarization will require stricter regulation of banks.

The banking system will need changes in its prudential regulations to ensure stability under a BdL with a limited lender of last-resort role. Even though the risks related to the exchange rate will be removed, other significant laws and regulations must be modified to accommodate a fully dollarized economy. Banks will need higher reserve requirements to ensure the liquidity of their deposits and other short-term obligations. These requirements can be met through deposits at the BdL or in high-quality international correspondent banks. Additionally, banks will need an increase in their Capital Adequacy Ratio to make sure that they remain solvent under adverse conditions. We propose to raise the ratio to 15%.

Given the Lebanese circumstances, the upside benefits from a de jure dollarization outweigh the potential costs. In Appendix A, we further discuss how the dollarization would be formally implemented, what potential risks exist, and how they can best be mitigated.

3.3 Overcoming Insolvencies in the Banking System and the BdL

We propose a comprehensive macro-financial restructuring strategy. Its immediate priority is to recover the commercial banking system so that the economy regains access to more efficient payment systems and credit. Given the large economic collapse and the role of the banking crisis in it, we propose a strategy that quickly creates a working banking system. This requires significant financial restructuring because the BdL is insolvent and USD deposits at the BdL are by far the main asset of commercial banks.

We propose that USD 76 billion of commercial bank deposits at the BdL be converted into interim restructuring certificates, a new instrument that will be a liability of the government. In so doing, BdL would be *de facto* capitalized by the government, which would inherit the lion's share of the central bank's largest debt, improving BdL's equity position from approximately negative USD 61 billion to positive USD 14 billion.

Second, commercial banks would receive these restructuring certificates in exchange for an equivalent reduction of their deposits at the BdL. The banks in turn will exchange about 90% of the certificates for bank deposits. Banks will keep the remaining 10% in their books. This 90-10 split is in line with the proportion of bank equity to deposits that originally funded the position at the BdL.

[24] Most dollarized economies hold high reserve coverage of banks' deposits for self-insurance purposes, ranging from 100 to 200% (Erraez & Reynaud, 2022). In the numbers we propose below, we abide by this criterion.

Certificates will be given in exchange for bank deposits above a threshold. It is hard to estimate the threshold consistent with the USD 76 billion in certificates because we lack up-to-date information on deposits by size. However, we estimate at ~USD 100,000-150,000. Small bank depositors will be made whole, but a large share of large bank deposits will become claims on the government, not the banks, reducing the size of the aggregate banking system by about two-thirds.

On average, banks will emerge from this operation with a capital-to-asset ratio of about 5%. In line with the prudent management of a banking system in a dollarized economy, we propose to raise the capital adequacy ratio to 15%. We propose that initially, the BdL put up the remaining capital in the form of a subordinated loan so that banks are fully capitalized from day one. Strong regulation will be needed to ensure that this capital injection remains in the Lebanese financial system. Bank shareholders will then have to buy out BdL's loan at book value within two years if they want to retain control of their institutions. No dividends will be allowed to be distributed until the BdL loan is fully repaid. Banks that do not pay back the BdL loan will be resolved on a case-by-case basis. Box 1 explains the mechanics of this restructuring and Figure 20 shows how the balance sheet of commercial banks will look after its implementation.

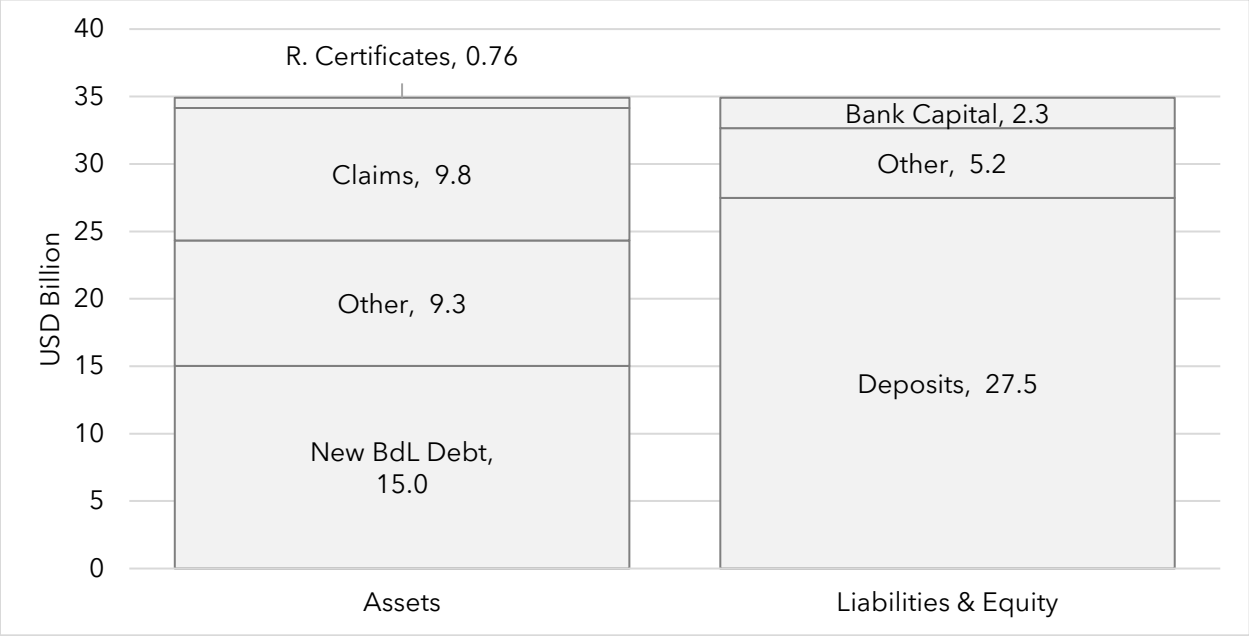
BdL would then capitalize banks to raise them to the regulatory capital requirements, resulting in a functioning, investible banking system. This would also set the stage for an orderly consolidation of the banking system in the medium term. After the restructuring, the aggregate banking system will be left with USD 2.3 billion in capital, not enough to meet regulatory capital requirements, which we believe should be set at 15% of assets. As a result, BdL would step in and capitalize on banks (Figure 21) by providing them with subordinated debt of roughly USD 3.5 billion, fully backed by its international reserves. Bank shareholders would then have two years to buy out BdL's capital (at par). Bank shareholders that do not buy out BdL would lose control of their banks, which would be nationalized and resolved on a case-by-case basis, leading to a much-needed consolidation of the financial system. Under this arrangement, banks would resume operations as normal from day one and meet regulatory capital requirements all throughout.

The restructuring certificates would be denominated in USD and would be governed by local Lebanese law. The government and commercial banks would communicate that these restructuring certificates *cannot and will not* be paid in full and would instead be restructured alongside all other outstanding government obligations. To achieve this, these certificates must feature a broad and carefully drafted acceleration clause, which would make them due in the event of a default and would allow them to be restructured with other government obligations. These claims would trade in a secondary market that would give liquidity to any holder that needs it, but they would trade at a price that reflects the large, expected haircut. We believe that the instrument would trade in the range of the recent lollar – dollar exchange rate, at roughly ten cents on the dollar, reflecting the country's insolvency.

The proposal protects a large majority of depositors. Under our plan, there would be a maximum protection threshold compatible with the USD 76 billion in certificates, that would apply to all depositors of Lebanese banks, regardless of the relative solvency of their institution. As suggested by the IMF, some institutions such as pension funds or insurance companies may require special treatment. The exact threshold will depend on precise calculations for which we do not have the required data, but we estimate it at ~USD 100,000-150,000.

A key advantage of this plan is that it does not hinge on the sovereign debt resolution. The commercial banking system can be resolved even if there is slow progress on debt restructuring negotiations, allowing Lebanon to have a functioning financial system quickly, potentially before the Eurobond debt is restructured. Restructuring the new and legacy public debt will require reducing outstanding Eurobond debt and past due interest by a large haircut, significantly larger than the median 39% haircut of previous restructurings between 1815 and 2016 documented by Meyer, Reinhart and Trebesch (2019). As we show below, it is likely to be closer to ~82-90%.

Figure 20. Commercial Banks Balance Sheet After Restructuring[25]



Source: Banque du Liban, own calculations. Note: Numbers are slightly different due to rounding errors. Category groupings differ.

[25] Local currency is converted into USD at the parallel-market exchange rate. Presumed Lebanese Eurobond holdings with face value USD 2.9 billion are included with a 75% face value reduction.

Box 1: Mechanics of the restructuring

Equation (1) shows the balance sheet of the central bank, with assets on the left-hand side and liabilities plus equity on the right-hand side. On the left-hand side, BdL has gold, foreign assets (FA) and domestic assets (DA). On the right-hand side, BdL owes base money (M0), has the large liability with commercial banks and its equity:

$$BDL_{Gold} + BDL_{FA} + BDL_{DA} = BDL_{M0} + BDL_{Debt2Banks} + BDL_{Equity} \quad (1)$$

We can rearrange equation (1) as in equation (2) and plug in its values (Equation 3) to see that BdL has deeply negative equity:

$$BDL_{Equity} = BDL_{Gold} + BDL_{FA} + BDL_{DA} - BDL_{M0} - BDL_{Debt2Banks} \quad (2)$$

$$BDL_{Equity} = 17 + 9 + 2 - 1.5 - 88.5 \ = -62 \quad (3)$$

For BdL to have equity of positive USD 14 billion, its debt to the banks must adjust. It must decrease by approximately USD 76 billion, the difference between 14 and -62. To do this, the government exchanges USD 76 billion of commercial bank deposits at the BdL into the newly issued restructuring certificates. On the asset side of the banks, one asset is exchanged for another with the same par value. On the liabilities and equity side, bank deposits fall by 90% of USD 76 billion and equity falls by 10% of USD 76 billion minus the market value of the certificates.

Before this operation, the commercial bank balance sheet is as in Equation (4), with assets on the left-hand side and liabilities plus equity on the right-hand side:

$$B_{BdLDebt} + B_{OtherA} + B_{R.\ Certificates} = B_{Deposits} + B_{OtherLiab} + B_{Equity} \quad (4)$$

$$91 + 20 \ + 0 = 96 + 5 + 9 \quad (5)$$

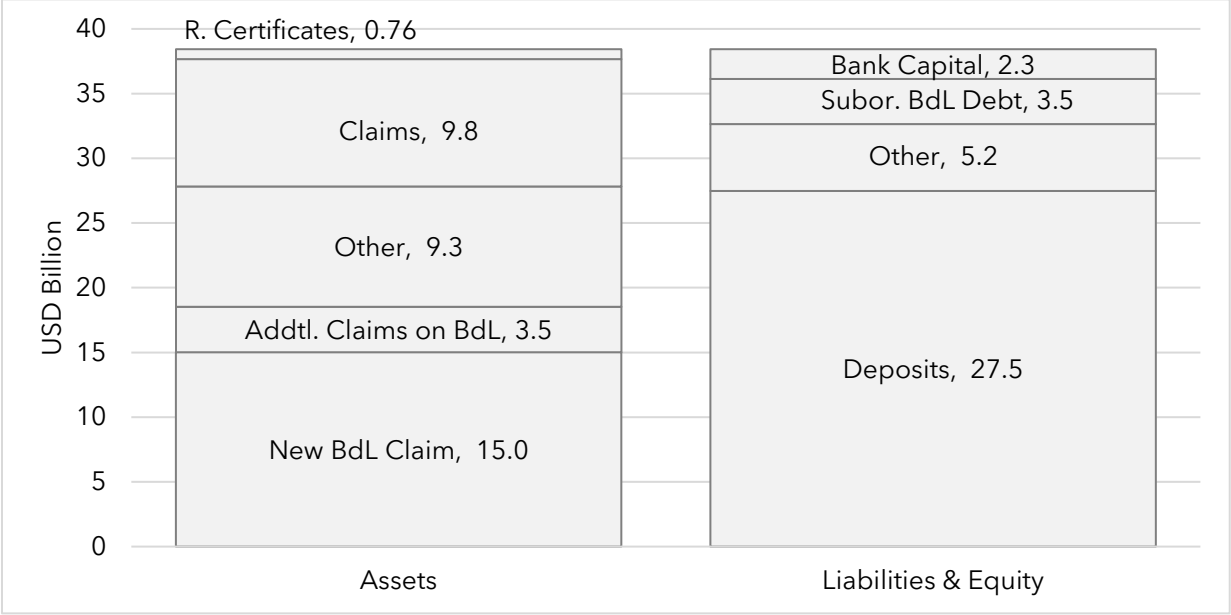
After reducing claims on the BdL by USD 76 billion, bank equity is reduced by USD 7.6 billion (10% of the certificates) from USD 9.1 billion to USD 1.5 billion (this is 10% of USD 76 billion). However, it is then increased by the market value of the USD 7.6 billion in national restructuring certificates assigned to the banks. We assume these will be valued at ten cents on the dollar, putting their market value at USD 760 million. After both operations are complete, bank equity will be USD 2.25 billion.

Similarly, deposits are reduced by USD 68.4 billion from USD 95.9 billion to USD 27.5 billion (this reduction in bank deposits, which is 90% of $76 billion, is achieved by exchanging client deposits for restructuring certificates). In total, the size of the banking system contracts from about USD 110.2 billion in notional value to USD 35 billion. After all the changes, the commercial bank balance sheet looks as follows:

$$B_{BdLDebt} + B_{OtherA} + B_{R.\ Certificates} = B_{Deposits} + B_{OtherLiab} + B_{Equity} \quad (6)$$

$$15 + 19 \ + 0.76 \ = 27.5 + 4.8 + 2.26 \quad (7)$$

Figure 21. Commercial Banks Balance Sheet After BdL's Recapitalization



Source: Banque du Liban, own calculations. Note: Numbers are slightly different due to rounding errors. Category groupings differ.

BdL would emerge from the bank restructuring with a solvent balance sheet. After Lebanon's banks are restructured, a large share of the debt from BdL to the banks (which in turn is owed to depositors) would effectively become debt from the government to depositors, greatly reducing BdL's liabilities, as depicted in Figure 22. BdL would emerge able to weather shocks and serve as a financial backstop for the newly dollarized banking system. BdL would be positioned to credibly anchor the dollarized system: the total deposits in the banking system of USD 27.5 billion would be fully backed by the USD 28 billion of BdL's assets.

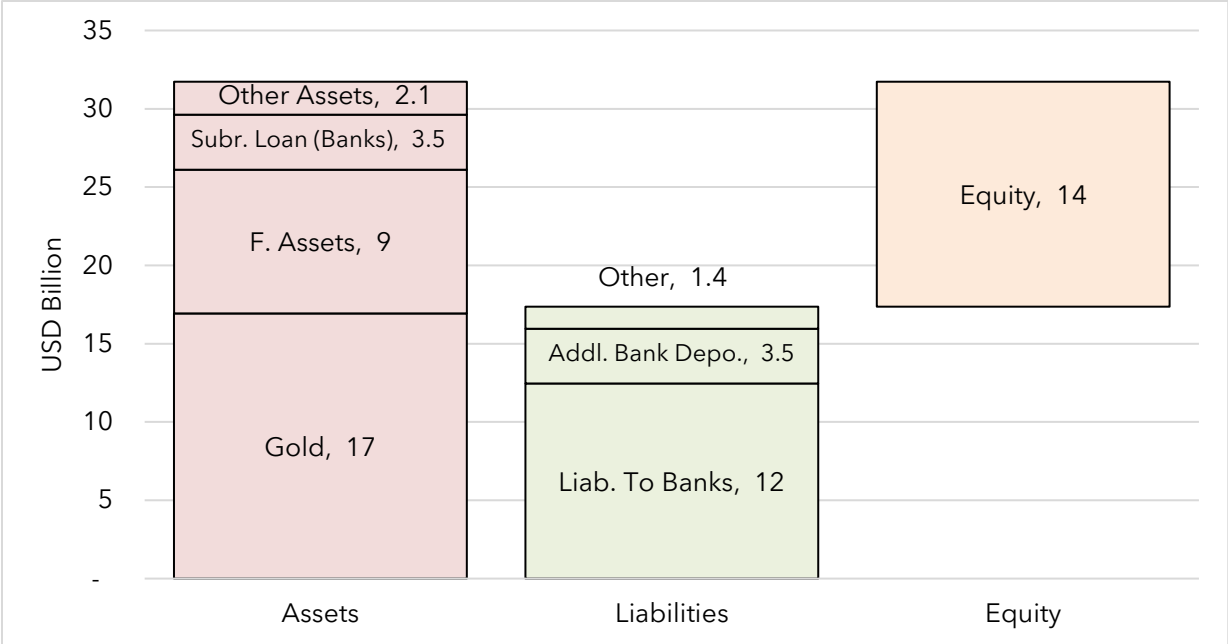
The exchange of bank deposit liabilities for restructuring certificates would work in steps. These steps are:

Step 1: Banks will submit required audited information and records about key items on their balance sheets including all assets: mortgages and other loans, holdings of government securities and foreign assets, etc. These assets would be valued on a mark-to-market basis, not on their purchase price or notional value. There would be very conservative provisions for losses on non-performing loans. Banks would also submit account-level microdata on deposit liabilities including type (business or personal), currency (lira, lollar, or "fresh" dollar), and amount. Banks would also report and provide documentation of their other liabilities, including non-resident financial sector liabilities. Importantly, if possible, it would be useful to attempt to reverse book-entry FX transactions to foreign banks after the start of the crisis in September 2019, as suggested by the IMF. So, information regarding these transactions would also have to be reported because, at present, there is

no public data on these transactions, but purportedly, reversing them would reduce bank deposit liabilities by USD 10-15 billion[26].

After banks submit all information and relevant audits and checks are performed, book-entry FX transactions after the start of the crisis from lira to USD would be reverted and accounts funded with "fresh" USD after the start of the crisis would be ring-fenced and excluded from all balance sheets and adjustments (as would the assets backing those ring-fenced deposits). Special accounts would also be ring-fenced and excluded from the restructuring (along with sufficient assets to back those liabilities). Special accounts would include pension funds, insurance companies, and other socially important institutions, like hospitals.

Figure 22. BdL Balance Sheet Post-Restructuring[27]



Source: Banque du Liban, own calculations.

Step 2: The Government would issue $76 billion in restructuring certificates and transfer them to BdL, which would use them to pay down $76 billion in debt to commercial banks. BdL would pro-rate the restructuring certificates to each bank according to their USD deposits at BdL so that banks with more exposure to BdL receive more restructuring certificates. Ninety percent of the

[26] See note by Reuters detailing IMF discussions.
[27] Local currency is converted into USD at the parallel-market exchange rate. Presumed Lebanese Eurobond holdings with face value USD 7.5 billion are not counted in foreign assets.

certificates would be reserved for restructuring eligible deposits and the remainder would be unrestricted assets for the banks.

Step 3: Commercial banks restructure deposits worth 90% of their allocation of restructuring certificates. Banks select which eligible accounts to restructure with the following algorithm. Each bank has a (different) threshold balance *X* above which eligible deposit balances are restructured into certificates. Each bank's *X* is solved such that all deposit balances above *X* equal 90% of their allocation of restructuring certificates. As a result, each bank will have a different cutoff above which deposits will be restructured. After banks move a large share of deposits off their balance sheets by exchanging them for restructuring certificates, their equity would be recalculated.

Step 4: Deposits below a certain threshold will be fully recognized at par. Deposits above the threshold with be converted into certificates. A maximum protection threshold provisionally set at $100,000 would be applied. We estimate the threshold, compatible with the USD 76 billion certificates at between ~USD 100,000-150,000.

Step 5. After the certificate operation and deposit reduction, banks will have to show a 15% capital-to-asset ratio. Banks that are short on capital will have to be recapitalized immediately. They can do so with their own resources and be free to operate. If unable to raise capital immediately, they will be capitalized through the injection of a sufficient amount of subordinated debt by the BdL. Banks that choose this route will have to return the loan within two years, will not be able to distribute dividends, and will have to undergo enhanced supervision.

A large majority of deposit accounts would incur zero losses. Data on bank deposits from 2021 suggests that most of the USD value of bank deposits is in large accounts with balances of USD 150,000 and above. As Figure 23 shows, just 16% of the dollar value of deposits from 2021 is with accounts holding USD 150,000 or less, implying that 84% of the claims on the banking system are from large accounts holding USD 150,000 or more.[28] This distribution is consistent with Box 3 of the IMF's Article IV from 2016, although things might have changed since then, given that the overall size of the banking system has shrunk significantly since the crisis. If the current distribution of deposits is similar, it should be possible to protect the great majority of depositors.

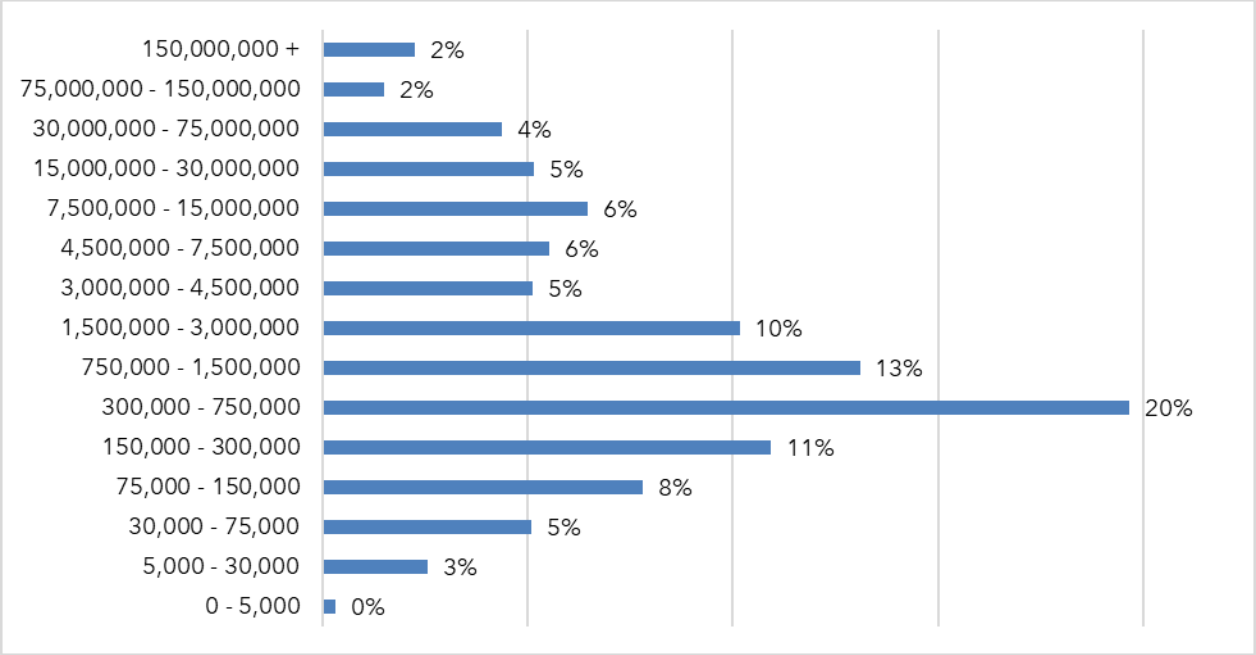
There are significant technical barriers to making this restructuring fairer. Ideally, the restructuring would take account of the total exposure of individuals and legal persons vis-`a-vis the banking system, not on individual accounts. However, matching individual accounts to their beneficial owners across banks is not only technically challenging without consistent unique identifiers, but also

[28] The IMF-Article IV released in June, 2023 provides an estimated distribution of deposits as of December 2022. Data shows that deposits with less than USD 100,000 represent 88% of the accounts and 18% of total deposits; deposits between USD 100,000 and UDS 1 million, 11% of the accounts and 44% of total deposits; deposits between USD 1 million and USD 10 million, 1% of accounts and 26% of total deposits; and, deposits greater than USD 10 million, 0.03% of accounts and 11% of deposits. This data does not significantly differ from the distribution shown in Figure 23.

legally challenging We prioritize a rapid resolution with low technical and operational risk, rather than a more drawn-out process that could be delayed by technical and legal difficulties.

Measures should be taken to avoid gaming the system prior to restructuring. In particular, actions should be taken to thwart the attempts to receive fewer certificates by splitting accounts. Ideally, the restructuring should be done considering the situation at some specific pre-announced date. The introduction of formal capital controls in the transition period is necessary for this purpose.

Figure 23. Distribution of USD Deposits by Account Size (2021)



Source: Deposits Insurance Corporation.

3.4 Public Debt Restructuring

After the exchange of USD deposits at banks for certificates, Lebanon would have over USD 107 billion or 620% of GDP in government debt, which it would then need to restructure. Lebanon's Eurobonds would be restructured alongside the newly issued certificates with significant assistance from the IMF and the international community. Together with the IMF, the government would agree on a reasonable macro-fiscal framework including Lebanon's growth path, fiscal balances, additional borrowing requirements, and a sustainable level of total debt, to anchor restructuring negotiations on a shared outlook.

The IMF and other multilaterals will condition a program and disbursements on a debt restructuring program with a large haircut. Multilateral organizations, or any other public or

private organization for that matter, will only lend new money to Lebanon to finance the needs of the reconstruction and recovery if they can be assured that, at the end of the program, when all new money will have been disbursed, the sum of this new debt plus the old legacy debt will be sustainable. This can only happen if the legacy debt is sustainable. To get a sense of the magnitude of the needed haircut, it is useful to note that the sustainable level of debt as a share of GDP is ultimately dependent on the ratio of the primary fiscal surplus that the country will eventually need to generate and the long-term interest growth differential. Table 6 shows the debt ratios that result from different assumptions regarding the primary surplus and the interest-growth differential.

Table 6. Level of Debt with Primary and Interest-growth differential assumptions

Interest-growth differential	Primary surplus		
	1%	2%	3%
2%	50%	100%	150%
3%	33%	67%	100%
4%	25%	50%	75%

Source: Authors' elaboration.

The sustainable level of debt at the end of the program D will be the expected GDP level at that moment times the sustainable debt to GDP ratio d. This level of debt will have two components: the new debt (ND) incurred through the program - that will need to be paid in full - and the value of the restructured debt RD after it is paired down.

$$Final\ value\ of\ debt\ =\ D\ =\ d\ GDP$$

$$Final\ value\ of\ restructured\ debt\ =\ RD\ =\ D - New\ Debt$$

$$Haircut\ =\ Old\ Debt\ -\ \text{RD}$$

$$Haircut\ Rate\ =\ \frac{Haircut}{Old\ Debt}$$

To illustrate these calculations, we assume that the old debt is USD 107 billion (31 billion in Eurobonds and arrears plus 76 billion in certificates. We assume that the recovery program will require USD 8 billion in new debt (more on this below). Table 7 shows the required haircut rate that emerges from different assumptions of the level of GDP and the debt ratio.

For example, a surplus of 3% of GDP - which the country has never managed to achieve - and an interest growth differential of 4%, below that observed in 2000-2005 and in 2013-2018, would lead to a sustainable debt of 75% of GDP. If we assume optimistically that the recovery will imply

that GDP rises from its current level of 16 billion to 35 billion, this means that total debt will need to be about USD 26 billion at the end of the program. Since the new lending (about USD 8 billion) will have to be serviced in full, the restructured debt will have to be paired down to a level of USD 18 billion (26 total debt minus 8 new debt). The haircut needed to bring the legacy rate down to this level would be USD 89 billion, giving a haircut rate of 83% (89/107).

Table 7. Haircut rate with different assumptions of the debt ratio and GDP

	Debt ratio			
GDP in USD billions	70%	80%	90%	100%
30	88%	85%	82%	79%
35	85%	81%	78%	75%
40	81%	78%	74%	70%
45	78%	74%	70%	65%

Note: We assume a legacy debt of USD 107 billion and a new debt of USD 8 billion.
Source: Authors' elaboration.

To get a sense of what this may imply in terms of the parameters of a recovery program, we run the following simulation (Table 8). We assume that the program will start with a significant primary deficit of 3% of GDP in 2024 (this is to make room for the needed reconstruction and recovery expenditures). The primary balance will then be adjusted by 1% of GDP a year until it reaches the target level of 3% in 2030. We assume an interest rate on the debt of 6%. We assume a rapid recovery of nominal GDP, which will be driven by a combination of real growth, global inflation, and real appreciation. By 2030 we assume the economy will have reached its new GDP level of USD 35 billion. To fund this program, the country would need to borrow USD 8.3 billion in the 2024-2028 period.

The IMF could provide a significant share of new money that Lebanon will need to recover. Lebanon's quota at the IMF is SDR 634 million, which is equivalent to USD 855 million at the current USD to SDR exchange rate of 1.35. Under a standard access EFF program with a size of 4.35x quota, Lebanon could borrow USD 3.7 billion from the IMF.[29] However, in previous crises, such as in Europe during the Global Financial Crisis of 2008-2010, the IMF has approved extraordinary access programs for over 10 times the quota (Figure 24). This means that there is a precedent for the IMF to contribute all the money that the program will require. Moreover, the World Bank and other bilateral and multilateral lenders could contribute some of the needed resources even though, these other organizations can seldom match the financial capacity of the IMF.

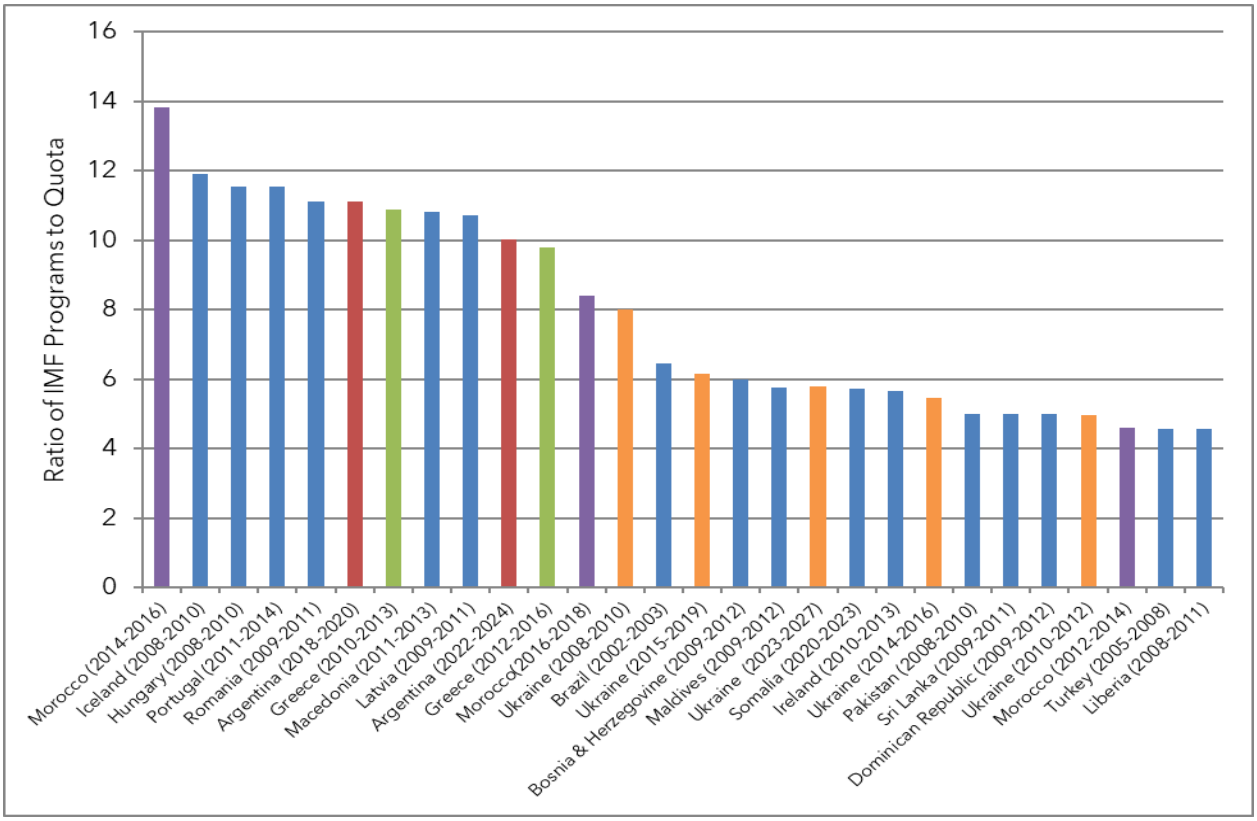
[29] Under exceptional access with Argentina's multiple from 2018 of 11x, the country could raise USD 9.4 billion. This is extremely unlikely, but we mention it for reference.

Table 8. Primary Balance, Debt Service and Debt Trajectory

	2023	2024	2025	2026	2027	2028	2029	2030
GDP	17	20	23	27	29	31	33	35
Primary Balance (% of GDP)		-3.0%	-2.0%	-1.0%	0.0%	1.0%	2.0%	3.0%
Debt Service		1.1	1.2	1.3	1.4	1.5	1.5	1.6
Fiscal Balance		-1.7	-1.6	-1.5	-1.4	-1.1	-0.9	-0.5
as % of GDP		-8.4%	-7.1%	-5.7%	-4.7%	-3.7%	-2.6%	-1.5%
Total debt	18	19.7	21.3	22.9	24.2	25.4	26.2	26.8
as % of GDP	***105.9%***	***98.4%***	***92.7%***	***84.7%***	***83.6%***	***81.9%***	***79.5%***	***76.5%***

Note: Everything is expressed in USD billion, unless stated otherwise.
Source: Authors' elaboration.

Figure 24. Ratio IMF Programs to Quota (2000-2023)



Source: International Monetary Fund, own calculations. Note: Graph does not include programs that were approved after July 2017 and that expired before June 2023

3.5 A Stronger Fiscal Framework

A path to solvency also needs a major fiscal adjustment. As shown in Table 8, the primary fiscal deficit would need to be adjusted by 6 percentage points of GDP over 6 years to deliver sustainability while also supporting recovery and reconstruction. To achieve this, the government will need to address previous fiscal weaknesses and adopt other fiscal reforms.

Lebanon's fiscal framework was problematic in the run-up to the 2019 crisis but has been completely wrecked by the crisis and the economic collapse. Tax revenues have declined due to inflation, a distorted exchange rate system, and the move to a cash-based economy. As a consequence, the government's capacity to deliver services has been devastated.

Pre-crisis fiscal weaknesses were related to limited tax capacity, high personnel costs, and large energy subsidies. Tax revenues were eroded through rising exemptions and declining compliance (International Monetary Fund (IMF), 2017). This is illustrated in the VAT-C efficiency ratio, the ratio of VAT collections to the statutory tax rate.[30] As shown in Figure 25, this ratio declined from 50% in 2011 to 31% in 2019. Had the efficiency in 2019 been 60% instead, VAT revenue would have been 3.5% of GDP higher. This decline is explained mainly by the special treatment given to certain items and actors. The IMF calculated that the income loss stemming from the VAT tax gap was 7.4% of GDP in 2013. A partial reduction of this gap would have helped tighten the primary balance.

After the start of the crisis in 2019, revenues collapsed to a third of their pre-crisis level, falling from 19.5 to 6.4 percent of GDP. This outcome was caused by the Tanzi effect, the use of an overvalued exchange rate in the calculation of VAT on imports, tariffs, and excises, and the weakening of state capacity. The stabilization plan we propose, with its dollarization of the economy and restructuring of the banking system, should reverse much of this decline, although the banking sector, which was an important source of tax revenue, will not recover its previous size and fiscal contribution. Moreover, the reconstruction and recovery needs of the country and the higher long-term primary surplus will require higher tax efforts. Therefore, we propose an increase in the VAT from 11 to 15%, a reduction in tax exemptions, and a stronger tax enforcement effort.

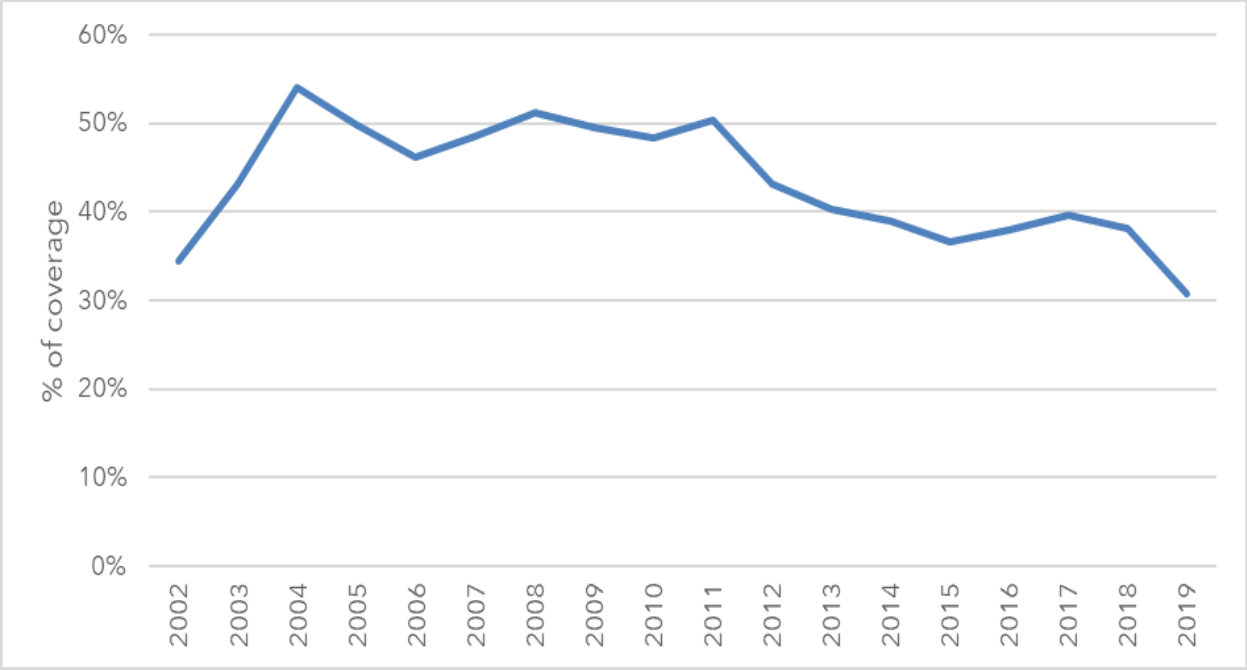
To increase revenues while keeping progressivity, the income brackets for the income tax should be indexed to the inflation rate. It is not enough to increase tax compliance for wages, but it is also paramount to increase the taxable income items, such as rental income and capital gains income (International Monetary Fund (IMF), 2023c). Updating the tax brackets will increase the fairness of the tax system, as USD earners will be taxed more fairly. Additionally, there is merit in

[30] This indicator captures both the extent of the compliance and the coverage of the VAT. This ratio would be 100% if compliance is perfect and all consumption was taxed at the same rate.

reviewing the tax rates for each bracket as the recovery starts to allow the State to achieve its primary balance objectives as needed over time.

Increasing tax revenues will require efforts to broaden the tax base, in particular by clamping down on informality that has grown significantly since the beginning of the crisis. The development and provision of low-cost electronic payments by the banking sector in Lebanon would facilitate formalization as the economy would become less reliant on its predominantly cash-economy, while this digitalization would also improve access to financial services for the poorest households in the economy and decrease transaction costs in general, especially relative to a cash-based economy.

Figure 25. VAT-C Efficiency (2002-2019)



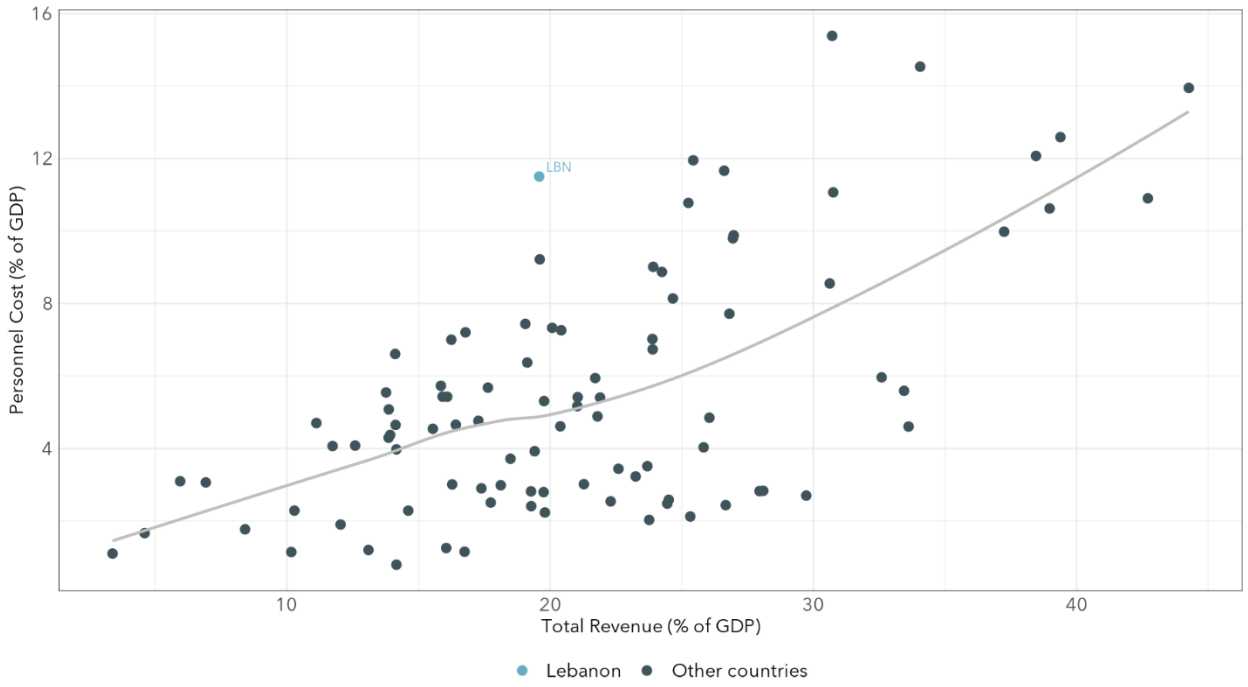
Source: Own elaboration based on WDI and IMF Government Finance Statistics

Personnel costs were unusually high before the crisis for a country at Lebanon's tax capacity. Figure 26 shows the relationship between tax collection and personnel costs for a sample of countries in 2018. Countries with tax revenues of around 20% of GDP, as was the case in Lebanon, have an average wage bill of less than 6% of GDP, but reached 11.5% for Lebanon, about twice as much. This is due mainly to the unusually high level of employment-related social services[31] (Figure 27), In fact, the public sector wage premium, i.e. the excess remuneration of public employees vis a vis private employees with similar gender, age, education, geography, and industry, was 12% in 2018-2019, which was concentrated in the higher-skilled workers where the premium was 25.3%.

[31] These expenditures are social benefits for employees of the civil and military service beyond wages. (Institut des Finances Basil Fuleihan, 2021).

After the 2019 crisis, the public sector wage bill collapsed by some 70% in real terms. Consequently, essential services provided by the state have been severely affected. The recovery plan should provide a level of wages that allows the public sector to attract and retain the human capital it needs to operate without returning to the excesses of the pre-crisis period.

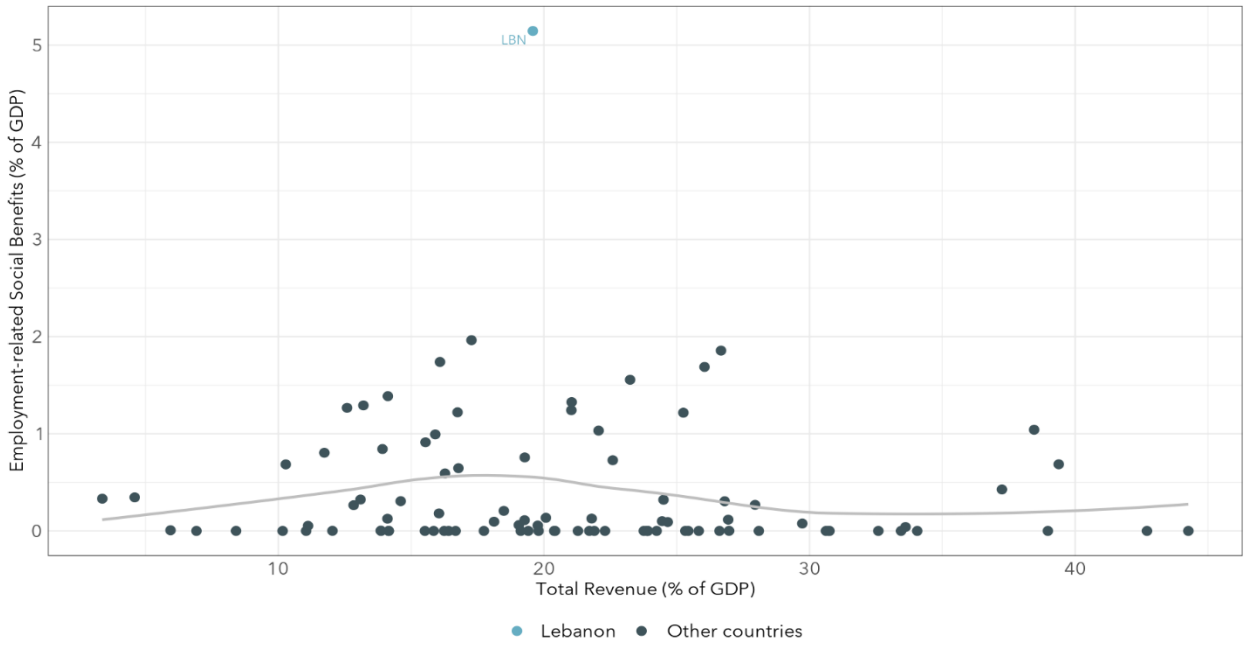
Figure 26. Total Revenues vs. Personnel Cost (2018)



Source: Own elaboration based on World Development Indicators, Government Finance Statistics - IMF and IMF (2019)

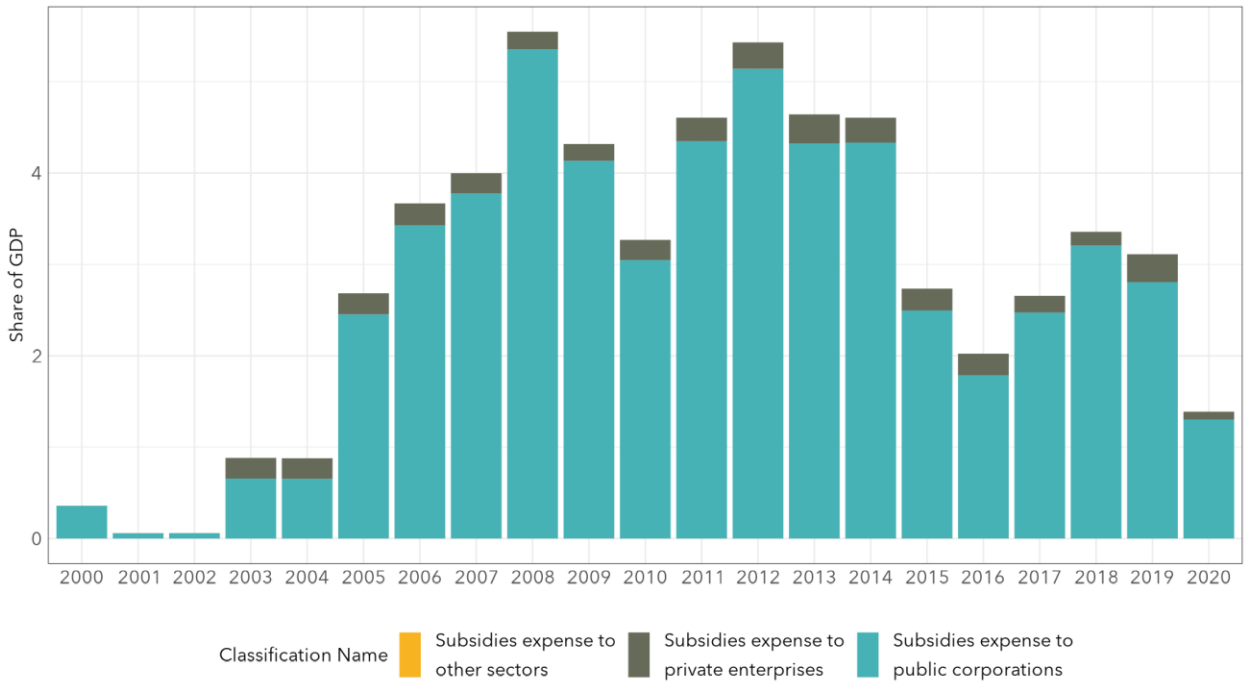
The pre-crisis budget was also weakened by large energy subsidies, mainly to Electricité du Liban (EdL). While many countries tax energy, electricity subsidies constitute one of the largest expenditure items in Lebanon's budget, accounting for approximately 4.5% of GDP during periods of high oil prices. The implicit subsidy was created by the decision to fix electricity tariffs in nominal terms at their 1990s levels, coupled with a weak collection of much of the energy provided. With inflation eroding the real price of electricity and with generation highly dependent on imported liquid fuels, these factors left the national electricity company, EdL, heavily dependent on fiscal transfers for its operations (Figure 28).

Figure 27. Employment-related Social Benefits (% of GDP)



Source: Own elaboration based on World Development Indicators, Government Finance Statistics - IMF and IMF (2019)

Figure 28. Subsidies to Public and Private Enterprises



Source: Own elaboration based on World Development Indicators (WDI) and Government Finance Statistics – IMF

During the crisis, the dollar shortage led to a decline in fuel imports greater than the decline in electricity demand, leading to generalized blackouts, while inflation made it hard to maintain the real price of electricity. Energy subsidies have declined mainly because of a collapse in energy production, but a recovering economy will demand more energy. In fact, the electricity sector is one of the causes of the unusually large collapse in GDP, through its overall impact on the economy.

The energy sector can contribute to both the economic recovery and fiscal consolidation. First, energy should be priced at market value, not only for fiscal reasons but also to be able to attract the investment necessary to expand generation. Second, the social impact of this measure should be mitigated by moving from regressive indirect subsidies on energy to direct targeted subsidies to households. Third, regulations should be adjusted to facilitate the incorporation of renewable sources of energy and the use of the expected boom in natural gas production.

Lebanon has dire needs in terms of infrastructure investment that will require a significant increase in its capital expenditures. While capital expenditures collapsed as other expenditures after the crisis, the country used to spend one of the lowest shares of GDP in the world before 2019. It is important that Lebanon significantly improves its infrastructure to be able to facilitate and enable growth engines that are inclusive and sustainable. For this purpose, the levels of capital expenditures need to significantly increase, recognizing that the country's need for investment in key infrastructure projects has increased since that year. For this purpose, multilateral sources, such as the World Bank, would provide a much-needed additional source of financing.

Lebanon's deep crisis has placed a big burden on the country's poorest households which require social assistance. As part of bringing the relief needed by the poorest households in the country, the government should keep its cash transfer program working, at least as part of its medium-term recovery plan.

With a broad fiscal consolidation program that encompasses these measures, Lebanon could achieve a 3% primary balance by 2030. This fiscal target cannot be achieved in the short run because the economy is too depressed, limiting revenue generation, and needs resources for reconstruction and recovery. Therefore, in the first five years of the program, Lebanon will have to cover the fiscal deficits that will emerge. However, the fiscal reforms we outlined should be enough to secure an IMF-led program with the needed financial resources to cover these needs.

3.6 New Sources of Growth

Lebanon needs to get closer to its economic potential. The country is now operating well below it, although potential GDP has also declined because of the scars left by the crisis. However, growth will be difficult to achieve without an economic stabilization plan. The plan needs to address the triple financial crisis (currency, banking, and fiscal) as well as the growth collapse. Previous sections have

addressed our view regarding the first three. While not enough, these three elements of the recovery plan will help regain a part of the economic potential that Lebanon has been losing since 2019 through endogenous and export-led sources of growth. These will help Lebanon get close to its GDP potential. In this section, we propose ideas for the recovery and growth of Lebanon's potential GDP.

Even with all the reforms in the monetary, financial, and fiscal areas, Lebanon will not return to its pre-crisis potential GDP. A collapse like the one experienced in Lebanon leaves significant scars on the economy, as factors of production and connecting economic tissue are wrecked. On the one hand, many of the sectors that were driving growth before the crisis will not contribute as much as before. For example, the financial system will be smaller given the restructuring expected in the banking system. On the other hand, the country has decumulated factors of production. The explosion of the Port of Beirut is one example of capital that was destroyed and needs investment just to go back to previous capacity levels. Also, the country has seen significant outmigration of talent, limiting the supply of human capital and entrepreneurship. In terms of the dollar value of GDP, numbers will be lower due to real depreciation.

The recovery of growth will need a reform and expansion of the electricity sector. Despite the large fall in GDP, the country is unable to produce enough electricity for its current depressed needs. A strong recovery will not be possible without more electricity supply. However, this cannot be done at a cost to the budget because the fiscal accounts will have other priorities and the investments should be financeable by the market. The country also needs to lower the real cost of its electricity by moving away from expensive imported liquid fuels to renewable energy[32] and gas-fired thermal plants that use its expected natural production boom. This reform is critical because electricity shortages endanger the economic recovery and the viability of the financial plan.

Beyond recovery, the long-run growth of Lebanon will require tapping into new sources of dynamism. Some of these industries already exist in Lebanon but could benefit from improvements in technology, market access, and overall efficiency. Others are new interesting areas for diversification. For example, agriculture is an area that has responded through rising exports to the real depreciation during the crisis. Yet, indicators of productivity are very low, especially when compared to other countries in the region. It could do even better with investments in infrastructure and technology to unlock its potential. Tourism has great potential to add to the recovery and expand beyond its previous market niches. Knowledge services can leverage the skills available in Lebanese society to tap into new export markets in the region. This promise is now enhanced by new business models that leverage remote work. Finally, the natural gas discoveries in the Eastern Mediterranean can add to the country's growth potential by creating a new industry, changing the country's comparative advantage in energy, and facilitating the move into new industries.

[32] The collapse of Lebanon's electricity sector has allowed for rapid growth in solar power electricity generation that it is still not properly incorporated into its national grid to sell its solar energy surplus (Delacloche, 2023).

3.6.1 Agricultural Value Chains

Exploiting opportunities within agricultural value chains can significantly increase exports in Lebanon. Agricultural exports declined from a peak of USD 1.1 billion in 2014 to an average of USD 900 million in the 2015-2020 period, due to the real appreciation of the currency and lower demand from Gulf countries. World Bank (2018) estimations suggest that the untapped agricultural export potential amounted to about USD 600 million in 2016 (1.2% of GDP), a third of which was coming from fruit and vegetable production. Moreover, the country lags behind its peers. Productivity, measured by agricultural value added per square kilometer of agricultural land, increases more slowly than in comparable countries like Jordan, Tunisia, Israel, Egypt, and Turkey. In addition, product yields have been both stagnant and lagging those of competitors. Yet, agricultural exports grew back to 1.1 billion in 2021.

Lebanon needs to increase agricultural productivity and quality. The sector currently faces high costs due to scarce water resources, limited domestic market, inefficient irrigation practices, excessive use of fertilizers and pesticides, weak infrastructure and logistics, and inadequate food quality and safety standards (World Bank, 2003; Lampietti et al, 2010). These can be addressed through investments in infrastructure, the adoption of modern technology and agricultural methods, and the certification and quality control techniques.

The move to higher-quality products can help Lebanon enter new higher-priced markets, including outside the Middle East. Around 50% of Lebanon's agriculture exports are concentrated in six Middle Eastern countries, whose demand for agriculture products tends to be volatile. Reducing this dependence by gaining access to higher-priced markets such as organic olive oil in European countries may improve earnings and lower risks. However, this will require higher food quality and safety standards as well as better logistics, tracking, tracing and (Lampietti, Michael, & Mansour, 2010).

3.6.2 Tourism

Tourism has been a key source of foreign exchange and economic growth in Lebanon. Export cash flows coming from tourism accounted for over 14% and 9.5% of GDP during the periods 2005-2011 and 2012-2019, with the decline explained by security concerns since the Syrian Civil War. The number of international arrivals - a measure of tourist influx – reached almost 2 million in 2018-2019 and has strongly recovered since the COVID-19 pandemic, reaching 1.7 million visitors in 2022 and an expected 2.2 million in 2023 (Kamel, 2023). The depreciation of the Lebanese lira has played a significant role in driving this recovery.

Despite its essential role, Lebanon's share in the regional tourism market remains comparatively low, attracting only around 2% of tourists. This puts Lebanon far behind almost all countries in the Middle East and North Africa (MENA) region. While several countries, such as Saudi Arabia, Kuwait, Iran, Qatar, and Iraq, have increased their regional share, Lebanon's share has

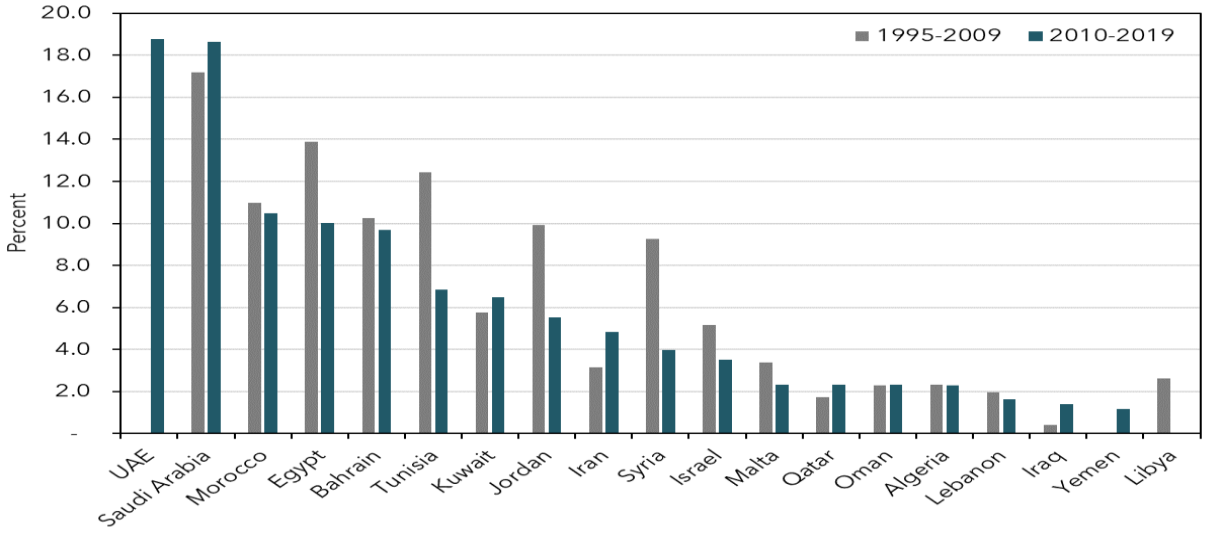
declined (Figure 29).[33] Among its regional peers, Lebanon has one the lowest occupancy rates both in terms of available rooms, and bed-places (Figure 30). Furthermore, even before the COVID-19 pandemic, the country ranked 100th out of 140 countries in the 2019 WEF Travel and Tourism Competitiveness Index, surpassing only Algeria and Yemen in the MENA region. This low competitiveness ranking is explained by a challenging business environment, safety, and security concerns as well as poor infrastructure, including air transport, ground, and port infrastructure, and tourism services (Uppink Calderwood & Soshkin, 2019). For instance, the Beirut-Rafic Hariri International Airport (BEY) has a capacity of only 6 million passengers, while the pre-pandemic passenger flow was approximately 8 million.

While there is a promising potential for tourism in Lebanon, the country may need to significantly invest in its infrastructure as well as a branding strategy. To enhance its attractiveness, the country needs to prioritize investments in infrastructure, safety, and security. Capacity would need to expand significantly by crowding in private investment. By improving ground infrastructure and implementing effective promotion strategies, tourism can be diversified to other regions of the country. This includes expanding the capacity of BEY and improving road networks. The branding strategy will guide the kind of investments that will interest the private sector. Lebanon could implement a differentiation strategy that emphasizes quality and niche segments, including existing ones, expand to areas such as gastronomic tourism, rural or eco-tourism, and leverage the country's renowned healthcare system for medical tourism.[34] The involvement of the private sector in investment decision-making and management is crucial for the prosperity and further development of the tourism sector in Lebanon (Elhajjar, 2019).

[33] Despite the lack of data prior to 2015 in UAE, we can also expect an increase in its regional share - given the high economic growth the country has witnessed during last decades.

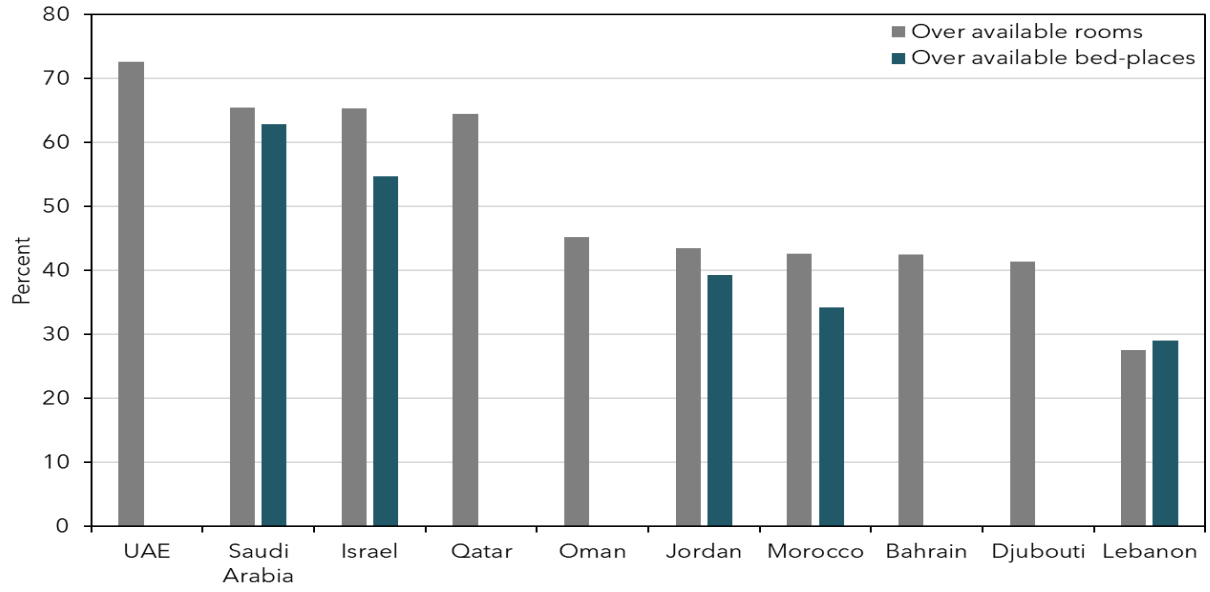
[34] The competitiveness potential for medical and MICE tourism is highly limited given the head start of regional countries such as Turkey and the UAE (Elhajjar, 2019).

Figure 29. Average International Arrivals (% of total MENA tourists)



Source: Own elaboration based on World Development Indicators.

Figure 30. Occupancy Rates (2010-2019 Average)



Source: Own elaboration based on UNWTO Tourism Statistics Database.

3.6.3 Knowledge Services

Knowledge services exports are small in Lebanon in part because the country has been exporting talent rather than tasks and services.[35] Knowledge-intensive business services have been a growing part of the global economy and have been increasingly tradable, making them a dynamic part of global exports. However, in Lebanon, these services have been stagnant. This contrasts with some of Lebanon's neighbors such as UAE and Israel, where these services have been booming (Figure 31). Consequently, the country's share in the global business service market has been falling rapidly. Figure 32 shows that Lebanon's global market share of knowledge services declined from 0.15% in 2008 to around 0.07% in 2018, driven mainly by Other Business Services and ICT.

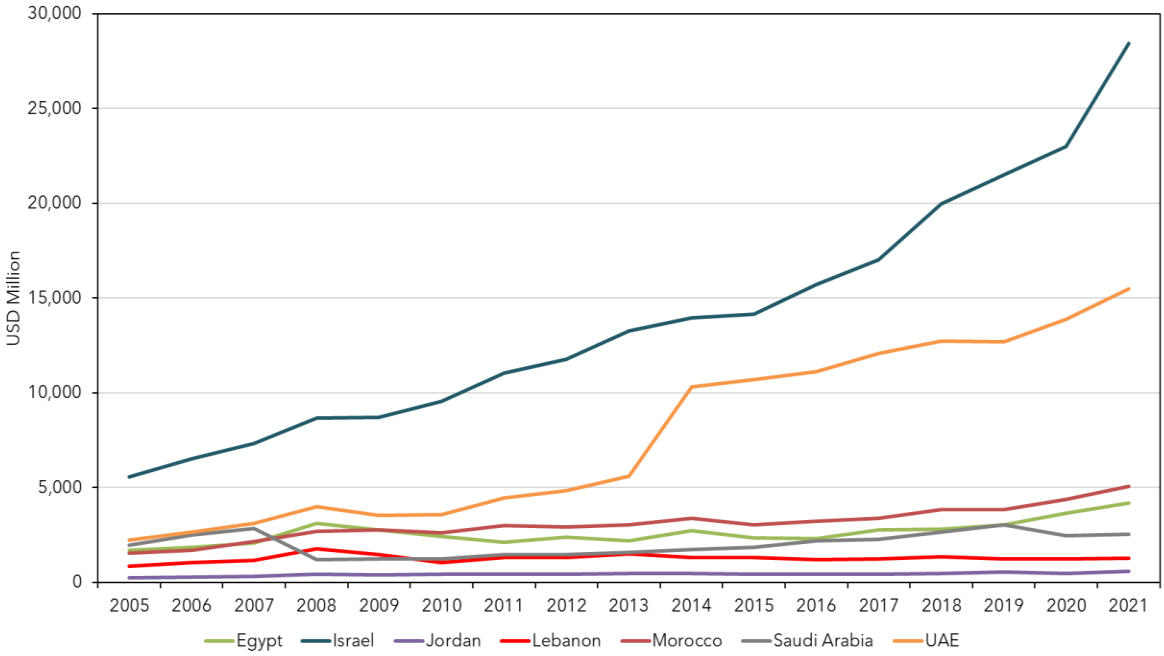
Lebanon's limited and decreasing participation in global markets should be seen as an opportunity. One of the silver linings of the COVID-19 pandemic has been the global adoption of technologies that facilitate remote work. New business models are emerging where tasks that used to be performed locally are contracted abroad. This presents an opportunity for Lebanon. Using occupational data from the US, Hausmann and Bustos (2021) find that 37 percent of U.S. jobs can plausibly be performed remotely and that many of the industries that are intensive in teleworkable jobs are currently traded across borders. Figure 33 plots the revealed tradability of services against an estimate of teleworkable labor cost. The figure suggests that in many industries in developed countries, there is plenty of room to reduce costs by importing tasks produced in developing countries. For instance, consulting services have high tradability and labor costs are significant meaning that they would benefit from sourcing work in countries with lower wages.

Lebanon should leverage its comparative advantages to capitalize on the benefits of remote work. Figure 34 illustrates the large monthly wage differential between Lebanon and developed countries as well as with other Middle East countries, such as Qatar and Saudi Arabia. This wage advantage is larger in Professional, Scientific, and Technical activities as well as for Information and Communication activities. While we lack comparable data across countries after 2020, it is reasonable to assume this advantage has improved due to the collapse in dollar wages during the crisis. Additionally, Lebanon's multilingual proficiency and renowned higher educational system contribute to its competitive edge. The country's workforce is fluent in Arabic, French, and English, and Lebanon ranks highly in the Global Competitiveness Index for the quality of math and science education, primary education, and the overall education system. In fact, out of 137 countries, Lebanon ranked 4th, 15th, and 18th in these categories, respectively. Finally, its proximity to Europe as well as to new service hubs in the Middle East can further help exploit all these advantages. However, in order to

[35] Based on EBOPS services classification, knowledge services include Information, Computer and Telecommunications, Other Business Services, and Personal, Cultural, and Recreational Services. Throughout the text, ICT and PCR stand for Information, Computer and Telecommunications, and Personal, Cultural, and Recreational, respectively.

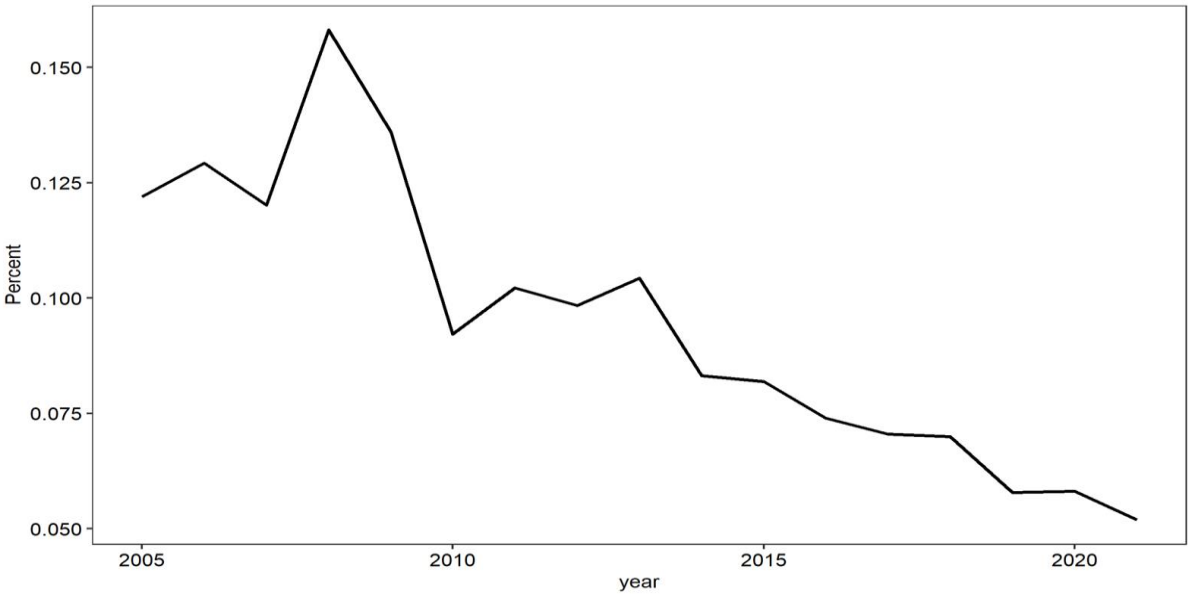
significantly expand the production of knowledge services, the country will require to improve infrastructure through investment in electricity and telecommunications networks.

Figure 31. Evolution of the Knowledge Services Exports - Lebanon vs Selected Regional Peers



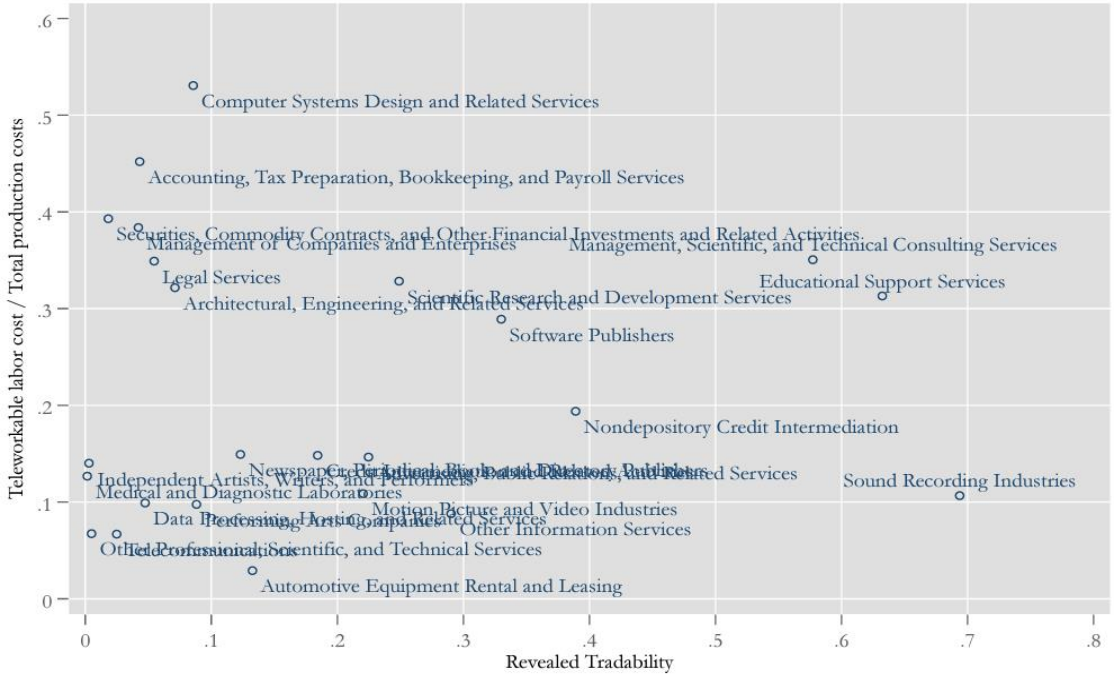
Source: Own elaboration based on OECD-WTO BaTiS

Figure 32. Evolution of Lebanon's Global Market Share of Knowledge Services Exports



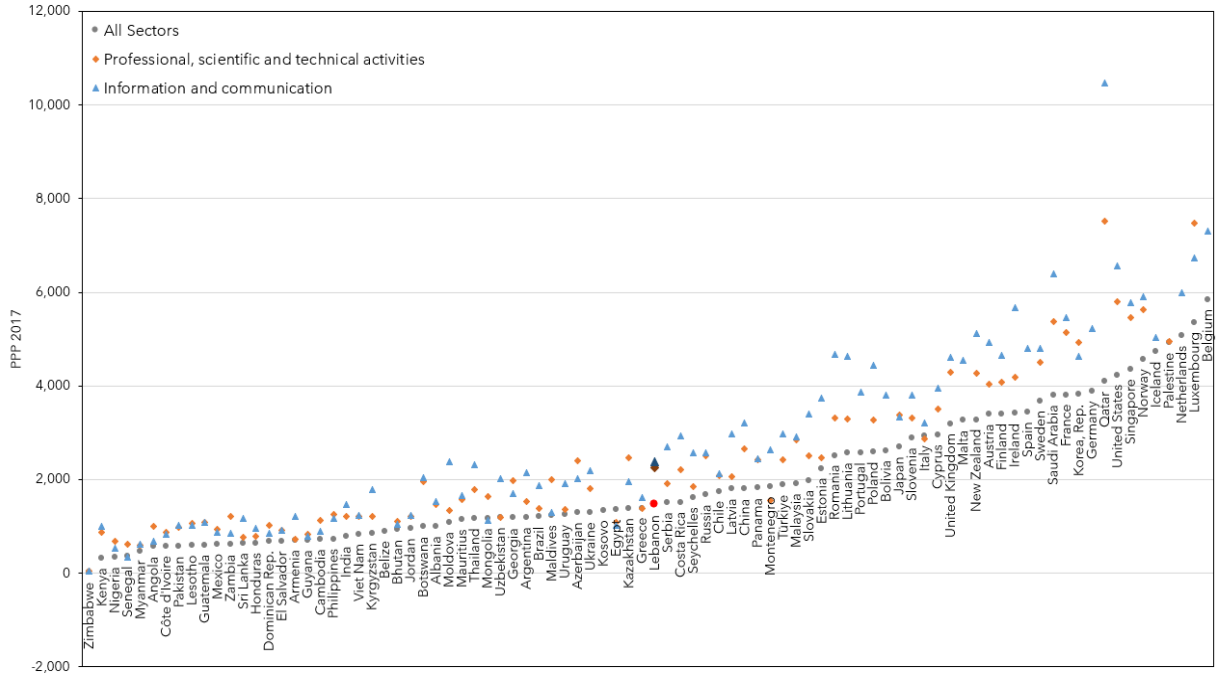
Source: Own elaboration based on OECD-WTO BaTiS

Figure 33. Tradability of Industries and Teleworkability



Source: Hausmann & Bustos (2021)

Figure 34. Monthly Earning per Country, 2019.



Source: Own elaboration based on ILOSTAT

3.6.4 Diaspora Engagement

While remittances have played a significant role in sustaining consumption and social needs, the Lebanese diaspora possesses substantial knowhow that can be better leveraged for growth. With one of the largest diasporas in the world, remittances into the country have been one of the largest globally, averaging USD 1,200 per capita between 2005 and 2018 and reaching 38% of GDP in 2022. These inflows are important in assuring the satisfaction of consumption and social needs.[36]

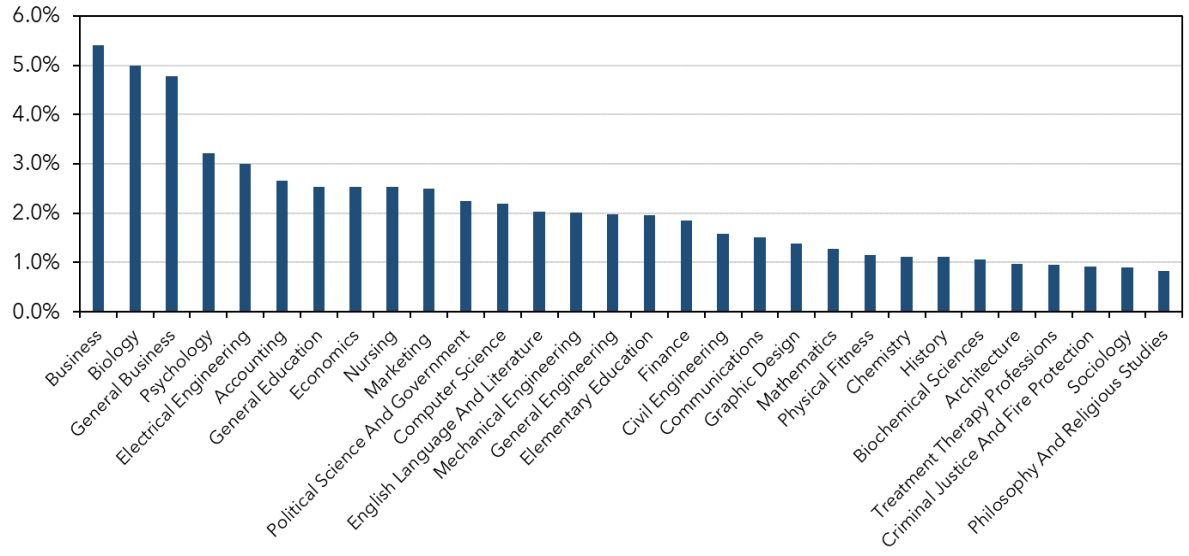
Beyond remittances, there is much more that the diaspora can do for the country to break Lebanon's development deadlock. Diaspora communities gain knowledge, experiences, and connections through their work abroad that can constitute an important asset for the country. Many have acquired advanced technological, managerial, and entrepreneurial skills in foreign firms, pursued cutting-edge education in foreign universities, immersed themselves in new languages and cultures, and contributed to groundbreaking innovations through collaborations with international research hubs (Hausmann & Bustos, 2021).

This wealth is geographically distributed across various countries where Lebanese have settled, with the Middle East and North America accounting for more than 50% of the 2020 migrant stock. While further research is needed to map the Lebanese diaspora around the world, as an example of these capabilities, we tracked the Lebanese diaspora in the US. This diaspora is highly educated and spans many fields. Using the 2021 American Community Survey, we found that 150,050 migrants were born in Lebanon and 417,823 were of Lebanese ancestry. Of those aged 25 or older, 54.2% had at least a bachelor's degree, significantly higher than Americans who average just 34.7%. Figure 35 shows the share of selected fields of degree and Figure 36 shows the share of industries of all Lebanese employed in the US.

Highly skilled diasporas can be important in many ways. They can identify business opportunities, technological gaps, professional connections, and investment ideas that can enhance the set of activities that can happen in the home country. These effects have been documented for business development, trade, investment, patenting, and scientific publications.

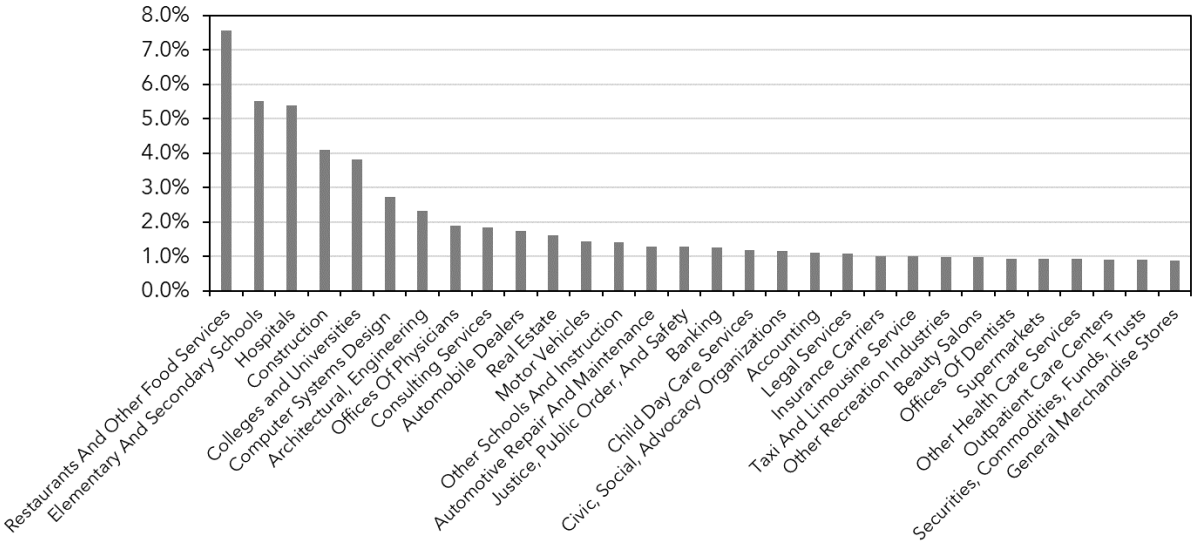
[36] While more recent data is not available, data from 2007 shows that the majority of households reported directing remittances mostly to food consumption (61%) and housing costs (59%). Moreover, remittances contributed to spending on healthcare for 46% of families, and to tuition fees for 18% of them (Atallah, 2023).

Figure 35. Fields among Lebanese in the US with at least a bachelor's degree (2021)



Source: Own elaboration based on the 2021 American Community Survey. Note: Selected fields of degree account for more than 60% of the total sample of Lebanese.

Figure 36. Economic Sectors among all Lebanese Employed in the US (2021)



Source: Own elaboration based on the 2021 American Community Survey. Note: Selected fields of degree account for more than 60% of the total sample of Lebanese.

While there are some initiatives to engage the Lebanon diaspora, the government can further facilitate knowledge sharing and collaboration. The Ministry of Foreign Affairs and Emigrants has in place some initiatives such as Lebanon Connect, Live Lebanon, Lebanon Investors, and

Diaspora ID. However, these programs are only initial steps toward achieving a holistic and impactful diaspora engagement strategy. Lebanon can use the diaspora to inspire local entrepreneurial and professional growth through internship programs abroad. However, the government should improve its business environment domestically through the streamlining of business registration and closure processes and the reduction of bureaucratic red tape. Simultaneously, the state could create an environment conducive to the growth and success of startups by facilitating access to venture capital or considering state guarantees for promising enterprises in the service sector. By improving the business environment, trade and investment opportunities identified by the diaspora and local businesses can be better maximized.

3.6.5 Natural Gas

Off-shore natural gas deposits in the Mediterranean could have a significant impact on Lebanon's future growth. As an economy that has been significantly reliant on fuel imports and has depended on services to grow, a commercially viable natural gas deposit could spark a transformation of the Lebanese economy, depending on the size of the commercially viable reserves, the velocity in which they can be exploited and the regulatory framework that is put in place to attract investments and extract royalties from the revenue. These reserves could ascend to up to 500 billion cubic meters (Semon, 2022), which would earn the country the 29th place in the ranking of more proven natural gas reserves (Energy Institute, 2023).

However, there is a high degree of uncertainty about the size of the proven reserves and the time it will take to export those reserves. Some estimates place the first natural gas extractions from the offshore blocks coming as early as 2025 (Semon, 2022), while some projections estimate that it will take at least 5 to 6 years to begin commercializing the natural gas coming from the offshore fields in Lebanon (AFP, 2022). Similarly, as the exploration and drilling are scheduled to begin in September 2023, there is an important degree of uncertainty about the size of the viable reserves that could be exploited in this block. Semon (2022) provides four reserve and production scenarios that vary from 30 to 500 billion cubic meters.

Exporting natural gas still needs significant capital investments to increase its export potential to markets beyond the MENA region. To export its natural gas, Lebanon would mainly rely on the Arab Gas Pipeline that originates in Egypt and goes through Jordan, Syria, Lebanon, and Israel. However, to fully take advantage of the potential that natural gas exports represent for Lebanon, the country will need time and resources to develop sufficient infrastructure to either connect to the Trans-Adriatic Pipeline or to build LNG terminals that will allow for exports to European markets and beyond. The development of the necessary infrastructure will not only need significant investments but could potentially require agreements with other neighboring countries.

Lebanon's choice of a fiscal regime should account for risks regarding an energy transition in the world. Even though reserves could be exhausted relatively quickly, Lebanon would be competing with other natural gas producing countries and renewable energy investments. As the effective tax rate of the production significantly affects the gas price required for the hurdle rate, maximizing the returns for the Lebanese economy. However, it is important to note that demand for natural gas is unlikely to dwindle down soon, as countries that utilize coal as fuel would potentially utilize natural gas as a lower emission alternative in the short and medium term (IEA, 2019).

While natural gas reserves could represent an important source of dynamism for the Lebanese economy, it is unlikely that they will provide a solution for its insolvency situation. Even under the most optimistic scenarios for reserves and production in Lebanon, the recovery value of its reserves and the net present value of its future fiscal revenues will not be sufficient to significantly reduce the necessary haircut for Lebanon's obligations. Natural gas reserves in Lebanon should not be relied upon in any solution for its insolvency, as there is significant uncertainty over the size of the reserves and the time it will take for Lebanon to exploit the resource and export it to markets outside of their more immediate neighbors. However, the availability of it for the local electricity grid will probably transform its domestic structure as the more expensive imported liquid fuels will be replaced by cheaper natural gas.

Conclusion

The failure to rapidly resolve the financial insolvencies at the origin of the Lebanese crisis has proven extremely costly to the Lebanese society, as evidenced by the large losses in terms of foregone output and diminished economic potential in the years since 2019. As a consequence, our proposed economic recovery strategy places a strong emphasis on promptly resolving the financial crisis, prioritizing speed of execution over technical perfection, and efficiency over absolute equity. Our proposal centers around the adoption of a fully dollarized monetary system, a restructured banking system, a restructured balance sheet of the BdL, and the government, as well as the development of new sources of economic dynamism.

We believe a fully dollarized monetary regime, considering the de facto dollarization of the economy and low policy credibility, is a superior alternative to a dirty float. Dollarization will create the basis for a stable macroeconomic environment that will end hyperinflation but also facilitate foreign trade and investment links with wealthy regional economies whose currencies, in most cases, are pegged to the dollar.

To resolve the insolvency of the commercial banking system caused by BdL's insolvency, we propose the conversion of approximately USD 76 billion in dollar deposits into interim restructuring certificates. That will ensure the rapid recovery of a smaller yet solvent banking system, which will be further reinforced by a capital injection in the form of subordinated debt from the BdL. This banking system will be in a position to resume credit to the domestic economy and support the recovery of the real sector.

The government will then have to restructure both the existing stock of debt and the new stock of certificates. In addition to the implementation of an IMF program, the debt restructuring needed to achieve a sustainable fiscal framework requires a substantial haircut on both existing and new debt. Moreover, better efficiency both in the spending and revenue collection is necessary to ensure sustainable primary surpluses.

Finally, new sources of growth will need to be found. While the proposed measures aim for a quick economic recovery and the narrowing of the gap with Lebanon's economic potential, a more sustainable path to recovery will necessitate new and export-oriented sources of growth based on the country's current comparative advantage.

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Appendix A: Transitioning into Full Dollarization While Maintaining Stability

To buy its monetary base that is denominated in LBP into USD at the parallel-market rate, the country would need around US$ 1.2 billion. The required foreign assets to transform all circulating LBP balances into USD will come from the Reserves being held by BdL before its assets and liabilities are restructured. This would add to the cash economy estimated to be around 9 billion USD currently in circulation.

With limited possibilities for being a conventional lender of last resort (LLR), BdL will have to resort to other tools such as higher reserve requirements, provide liquidity through open market operations or access to international credit lines. Dollarized countries with a Central Bank tend to adopt higher reserve requirements to cover their bank deposits and prevent a run. This high reserve requirement will be especially important in the case of Lebanon, as the public trust in the BdL has been eroded since the onset of the current crisis. Additionally, BdL would act in a limited role in open market operations by buying or selling foreign currency-denominated securities depending on the liquidity needs of the financial sector and the availability of international credit lines to assist them.

A higher reserve requirement from banks to deposit in BdL can also function as seigniorage income for the State. Depending on the need for financing through seigniorage, the BdL will be allowed to pay lower interest rates on those deposits than what it is earning through the acquisition of other assets in its portfolio, effectively turning it into income. This tool should be used with caution because it may lead to distortions and increase borrowing costs.

The Central Bank will assume functions as a regulator and coordinator of the monetary system. While it can be argued that its role as a lender-of-last-resort will be limited as it does not have access to unlimited foreign, BdL can still act as a regulator and facilitator of the banking sector, providing inter-banking clearing systems to facilitate payments, while also enacting policies that control risks in the financial system and serve the purpose of a LLR in the medium-term and long-term, given the liquidity limitations that BdL would have when it is restructured.

BdL's role will not be limited to a LLR as the financial system will require a payment clearing system and a monitoring entity. As is the case with Central Banks in other dollarized economies, its role in the economy will not be limited to LLR but will also manage the interbank payment systems and will provide clearing services for payment between local financial institutions and the rest of the world. As a monitoring entity, the BdL will oversee the enforcement of higher Capital Adequacy Ratios, the access to high-quality international liquidity lines with correspondent banks, and any additional measure that allows banks to cover their deposits and other short-term liability on their balance sheet.