



WHO WILL FOOT THE BILL?

WORKING PAPER SERIES

EXTEND AND PRETEND

NOV 2019

LEBANON'S FINANCIAL HOUSE OF CARDS

SAMI HALABI
JACOB BOSWALL

HOW LEBANON'S POLITICIANS AND BANKS CONSTRUCTED A REGULATED PONZI SCHEME THAT RAN THE COUNTRY'S ECONOMY INTO THE GROUND



TRIANGLE
POLICY | RESEARCH | MEDIA



EXECUTIVE SUMMARY

Since the end of its civil war in 1990, Lebanon has relied on banking, tourism, and real estate to attract foreign currency to the country, mostly in US dollars. For decades, those dollars have been recycled by Lebanon's financial architects—the state, local commercial banks and Lebanon's central bank, the Banque du Liban (BDL)—to create a regulated Ponzi scheme, which has benefited the banking sector and left the Lebanese people to foot the bill. Like any Ponzi scheme, Lebanon's financial hustle relied on regular injections of US dollars to create a veneer of financial stability. This veneer masked a decrepit and untenable financial system designed to defend an outdated currency peg and increase banking sector profits. That is until now.

The monetary house of cards built and maintained by three financial protagonists—the state, commercial banks, and BDL—has come crashing down, precipitating a popular uprising alongside banking, currency, and debt crises. Without fresh foreign currency to fuel the Ponzi scheme, the BDL and the state are now unable to offer commercial banks extravagant incentives to park their dollars at the central bank.

The BDL can no longer produce the estimated \$4 billion annual interest it owes to the commercial banks on their \$60 billion of deposits. As for the state, public coffers are unable to service the mushrooming public debt of some \$86 billion, now third worst in the world relative to GDP. Economic growth is unlikely to solve the problem, given that Lebanon's economy—worth a relatively meagre \$55 billion in GDP—was

expected to contract by 0.2% in 2019. Alarming, that prediction was made well before the October 2019 uprising. Most analysts expect the coming recession in Lebanon to be severe; economies which experience debt, currency, and banking crises simultaneously contract by about 8% before they recover.

To stave off some of the pain, Lebanon will need to make some tough choices to regain the confidence of its people and the markets. For one, a progressive haircut is required. This mechanism, explained in greater depth in Box 3, would force those who benefited from Lebanon's regulated Ponzi scheme to foot some of the bill. A partial and managed float of the Lira will also help reduce local currency debt obligations and bring back some logic to the exchange rate.

Longer term, a political transition away from narrow sectarian politics towards a civil state is the only solution which can viably produce the confidence, financial stimulus, international support, and political will to rebuild Lebanon's decrepit infrastructure and capitalise on its few resources. These resources include human capital—one of the country's few added-value exports—its geographic position as a transport and logistics hub, as well as a destination for green and sustainable tourism. Lebanon's fledgling oil and gas sector will not yield dividends for several years. If and when it does, the state must be prepared to handle related contracts with transparency to avoid corruption.

After the October 2019 uprising, Lebanon's economy will not be the same. Much will hinge on whether Lebanon's ruling class is prepared to build



a more rational economic model to ensure a just and productive future for the country. That future will need to focus on creating real value-added jobs through sustainable growth models. The alternative, which must be avoided at all costs, is a return to the artificial wealth creation that has already brought the country to the brink of financial, economic, and social collapse.

INTRODUCTION

In 1990, Lebanon laid in shambles. Fifteen years of civil war had decimated the country and its economy. A lack of confidence in the Lebanese Lira had created a dual currency system; to this day, both US dollars and Lebanese Lira are considered legal tender. But in the early to mid-1990s, the price of Lira to dollars was not pegged. The exchange rate fluctuated from around 500 Lira to 2500 Lira to the US dollar, wreaking havoc on the economy. In 1997, the BDL managed to stabilise the exchange rate at 1507.5-1515 Lira to the dollar, creating a peg between the two currencies which has been defended ever since.¹ To do so, then (and now) BDL governor Riad Salameh and successive governments embarked on a mission to attract foreign currency to the country. Eventually, the USD became the dominant currency in bank deposits, while the government tended to use Lira for meeting public spending needs, including the payment of taxes and of salaries of civil servants (**See infographic: line H**).² Attracting enough foreign currency—from its diaspora or any other willing investor—became Lebanon’s *modus operandi*.

In order to maintain this system, a constant inflow of dollars was needed to cover interest payments on the

public debt (issued by the state and the BDL), maintain the peg, and cover the need for imports vital goods such as fuel, medication, and wheat, which must be purchased in foreign currency. Aiming to secure this dollar inflow, the BDL and the state (through the Ministry of Finance) have historically offered interest rates well above international market rates to local banks in return for the banks’ investment in government debt. At the same time, the BDL also offers above-market interest rates to commercial banks and issues them with Certificates of Deposit (CDs).³

BOX 1: The BDL has denied that its interest rates on commercial bank deposits are “generous,” stating that rates “simply toe the country’s risk profile.” In other words, BDL argues that “money markets in Lebanon cannot trade at rates existing in AAA rated countries such as Germany or the US.”⁴ However, in 2016 the International Monetary Fund (IMF) noted that the non-existence of secondary market trading, among other factors, means that “the LBP yield curve is determined by BDL,” warning that “the continuation of this policy will be adverse to the development of private fixed income securities.”⁵

Under this system, interest rates on dollars and Lira are passed between these financial players to keep the system going; that is, until the supply of fresh dollars began to falter from around 2011. In 2016, the BDL started indirectly offering higher interest rates on dollars, a process which has become known as “financial engineering” (see chapter: Commercial Banks: The Risk Takers, Money Makers). While extending the lifespan of the dollar peg, these manoeuvres have been disastrous for Lebanon, causing inflation, a greater concentration of wealth, and decreasing Lebanon’s rating among international



ratings agencies.⁶ Dollars started to be informally rationed in early September 2019 and by the time the popular uprising began on October 17, Lebanon's economy was facing collapse.

To understand how Lebanon reached this point, this policy brief examines how the BDL, commercial banks and the state have been running a financial system that resembles a regulated Ponzi scheme which has run Lebanon's economy into the ground. The accompanying infographic maps out the flawed system and can be followed according to letters marked **A-J**.

THE BDL: A FISTFUL OF DOLLARS

The BDL is by far the most important player in Lebanon's financial system. Its mission, enshrined in the Code of Money and Credit, is to safeguard a sound Lebanese currency, economic stability, and the basic structure of the banking system, alongside developing the monetary, and financial market.⁷ Although the BDL is a public institution, it does not fall under the jurisdiction of any state body, except in so far as the finance ministry can look into the BDL's accounting.⁸ The BDL can also issue debt in local currency, buy debt in both foreign and local currency, and issue CDs to creditors (mostly local commercial banks) to hold their money. As of March 2019, the BDL held over half of Lebanon's local currency debt—\$28.68 billion of the total \$53.75 billion—and \$3.4 billion in foreign currency debt, or Eurobonds **[A]**.⁹

Yet the BDL does not publish key financial data which would allow the Lebanese public to understand the

country's financial position. This information includes BDL's profits and losses, commercial banks' USD deposits with the BDL, and, until recently, the interest which BDL pays commercial banks for deposits in dollars. Economists have estimated conservatively that between 2011 and 2016, BDL's overall average interest rate to commercial banks on USD deposits was at least 5.5%.¹⁰ Others estimate that the average is closer to the Eurobond rate—the rate that the state pays creditors for foreign currency debt—which fluctuates between 7% and 8%. On November 11, Salameh announced that the BDL pays between 6.25% and 6.89% on commercial bank's deposits with the BDL. Salameh alleged that this rate was well below the 15% global average. However, his claim should not be taken at face value since the global average interest rate on USD deposits is in fact considerably lower. The interest paid on dollars by the country that issues them, the United States, is between 1.5% and 2.4%.¹¹



"The BDL does not publish key financial data which would allow the Lebanese public to understand the country's financial position."



A copy of BDL's internal unpublished balance sheets seen by Triangle reveals that, as of July 2019, BDL held the equivalent of \$84.48 billion of commercial banks' funds. These holdings existed in a number of forms: Lira and USD deposits, CDs and required reserves.¹² Some of these funds bear no interest, while another part does bear interest. Since the BDL can print more Lira if it needs to, the most important liability for the central bank is the funds it holds in USD—or, in other words, USD-denominated CDs and required reserves in USD.

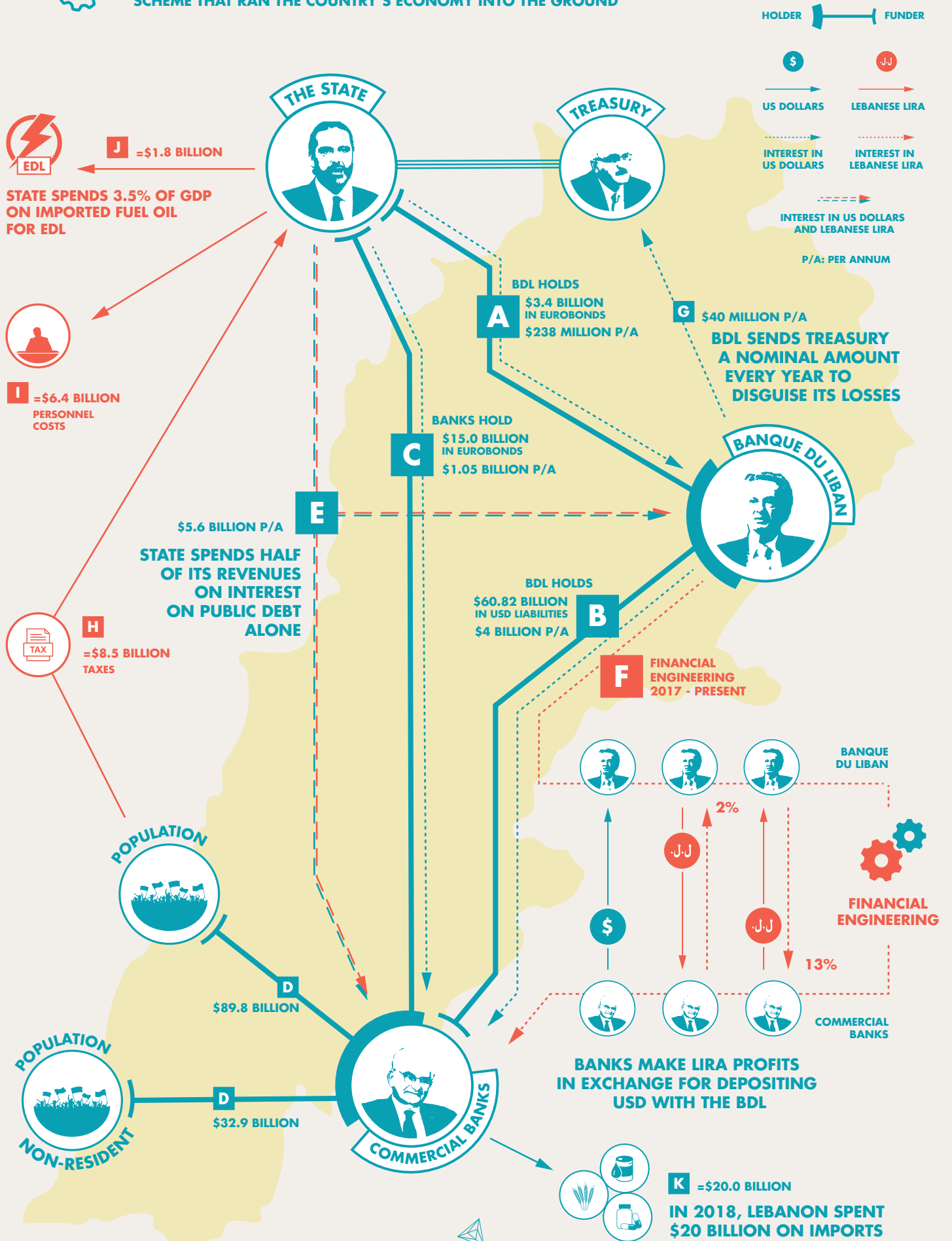


WHO WILL FOOT THE BILL?

LEBANON'S FINANCIAL HOUSE OF CARDS

WORKING PAPER SERIES

HOW LEBANON'S POLITICIANS AND BANKS CONSTRUCTED A REGULATED PONZI SCHEME THAT RAN THE COUNTRY'S ECONOMY INTO THE GROUND





The BDL does not publish the currency of its CDs, but most economists assume that the figure corresponds to the dollarization rate in the economy: 72% in July 2019. Using this calculation, commercial banks' foreign currency holdings of the BDL (inclusive of CDs and USD reserves) reached the equivalent of \$60.82 billion by July 2019 [B]. Another document from an international ratings agency with access to unpublished BDL data showed that foreign currency deposits had reached \$62.3 billion at the end of May 2019. This indicates that the dollarization assumption is relatively accurate.

Using the conservative simple average of Salameh's interest range rate on commercial banks CDs in BDL's coffers, the BDL must now pay some \$4 billion to commercial banks every year in interest alone [B]. Minus an estimated \$1.6 billion that the BDL makes from profits—including interest on public debt and from holdings in international banks—the BDL makes a considerable yearly loss from debt servicing to commercial banks alone. Based on BDL's unpublished balance sheets, the BDL made a loss of \$2.36 billion in 2017 and a loss of \$2.55 billion in 2018.

As a result of this yearly haemorrhaging of dollars, our best estimate is that BDL has accumulated some \$60.82 billion in USD-denominated CDs, which it must eventually pay back. Salameh consistently touts the fact that the central bank has enough reserves (around \$38 billion) to defend the peg and provide liquidity. But the BDL does not mention that this \$38 billion refers to its 'gross' reserves—the figure does include what the BDL owes to its creditors (see chapter: Commercial Banks: Risk Takers, Money Makers). When these liabilities are

taken into consideration, the BDL's reserves are severely in the red.

The BDL needs to find a way to stave off the banks, cover its losses, and pay the commercial banks interest on their dollar deposits.

Therefore, the BDL needs to find a way to stave off the banks, cover its losses, and pay the commercial banks interest on their dollar deposits. This situation creates a cycle of debt and encourages the BDL to take greater risks to draw in fresh USD.

COMMERCIAL BANKS: RISK TAKERS, MONEY MAKERS

For decades, commercial banks have been labelled the bulwark of the Lebanese economy, holding a reported \$15.04 billion of sovereign Eurobonds [C] and supplying dollars to the BDL [B]. These local banks are the focal point for money coming into the country (from foreign depositors, mainly in the diaspora) [D], money going out (to buy imports) [K], and funding the public debt [E]. For the past decade, commercial banks greatly benefited from a privileged position at the centre of the Lebanese Ponzi scheme; the yearly profits of Lebanon's four largest banks almost doubled within a decade, from \$678 million in 2008¹³ to \$1.39 billion in 2018.¹⁴

But their profits do not tell the whole story. From 2011, the growth in deposits stalled due to a lack of confidence in the Lebanese economy and



financial system, the cutting of foreign investment, and dwindling remittances and capital inflow from Lebanese expatriates abroad.



The Lebanese state—or more accurately, the people it purportedly serves—has paid a yearly price for all these financial manoeuvres.



In addition to interest rates on CDs, the BDL instituted a desperate move to prop up the failing system. In 2016, the BDL began offering commercial banks lavish returns on any fresh dollars that they could bring in from their clients. This has become known as “financial engineering,” and has been carried out through two mechanisms.

In simple terms, the first mechanism—which was implemented between May and August 2016—contained two swaps.¹⁵ Firstly, the Ministry of Finance swapped \$2 billion in Eurobonds, or foreign currency debt, for the equivalent amount of Lira-denominated debt with the BDL. The BDL then sold those \$2 billion worth of Eurobonds to commercial banks, at an undisclosed interest rate, in return for fresh dollars.¹⁶ While this shored up the BDL’s foreign currency reserves, the World Bank warned that the swap increased the Ministry of Finance exchange rate risk on its debts and increased the likelihood of liquidity management problem.¹⁷

From 2017 onwards, the BDL pursued financial engineering using a new mechanism. Under the new financial engineering scheme [F], a commercial bank which has deposited USD with the BDL is eligible to

take out a Lira loan from the BDL worth 125% of the original USD deposit. The interest rate on this loan is 2%. The commercial bank may then redeposit the same amount with the BDL in return for whopping interest rates of around 13%, paid in Lira. It is believed that the commercial banks could either transfer their profit from the transaction into USD or keep the amount in Lira.

The second mechanism is reflected in the BDL’s loans to commercial banks, which mushroomed from some \$5.6 billion in January 2017 to some \$35.4 billion in February 2019. The figure then dropped to LL 21 trillion (\$14 billion equivalent) in March 2019—many experts believe that this is thanks to some questionable accounting as shown in Figure 1 and explained in Box 2.¹⁸

BOX 2: In March 2019, new accounting procedures allowed BDL to “net” both its liabilities and assets thus removing some \$21 billion from its balance sheet. Between February and March 2019, BDL’s loans to commercial banks fell from \$35.4 billion (LL 53.44 trillion) to \$14 billion (LL 21.12 trillion). The accounting procedure’s main aim was to align the country’s financial disclosures with international requirements, Marwan Barakat, the head of economic research at Bank Audi told local media in March. But one source with knowledge of the matter suggested that the BDL had renamed the amount as an “off-balance sheet” item.

THE STATE & THE PEOPLE: THE BIG LOSERS

The Lebanese state—or more accurately, the people it purportedly serves—has paid a yearly price for all these financial manoeuvres. In 2018, the treasury



BDL LIABILITIES TO COMMERCIAL BANKS USD BILLION (EQUIVALENT)

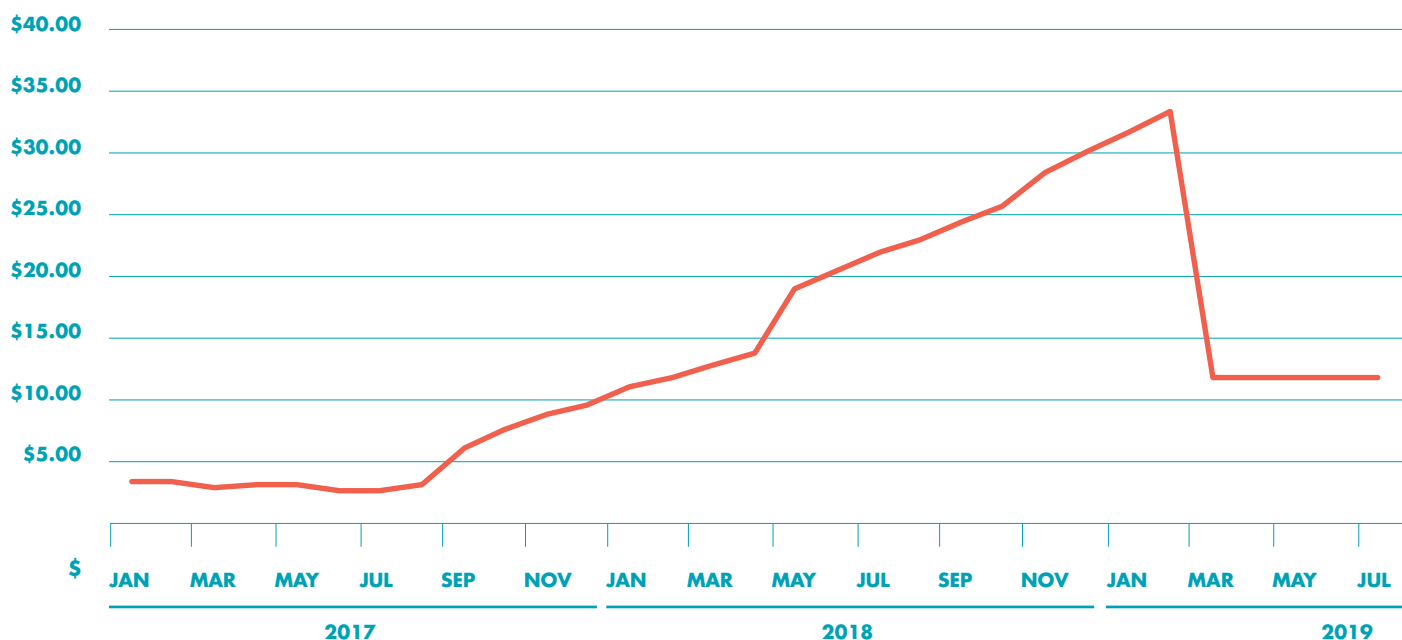


fig.1

Source: BDL Balance Sheets, Triangle.

handed over a total of \$5.59 billion in interest to service the debt [E].¹⁹ Of that amount, the BDL received around \$2.45 billion, which it uses to cover its losses, while the rest went to commercial banks [E] and foreign institutions.²⁰ According to a finance ministry document seen by Triangle, the BDL sends almost exactly \$40 million worth of Lira every year to the treasury as its “profits”—a nominal amount which disguises the enormous losses the BDL incurs to attract fresh dollars to the economy [G].

A cursory glance at Lebanon’s economy is enough to show that the state spends considerably more than it receives in revenues from taxes and other income [H]. In 2018, state revenue amounted to the Lira equivalent of \$11.5 billion—around two thirds of its total expenditures (\$17.73 billion equivalent). Apart from the debt, the state’s main expenditure includes

GOVERNMENT EXPENDITURE

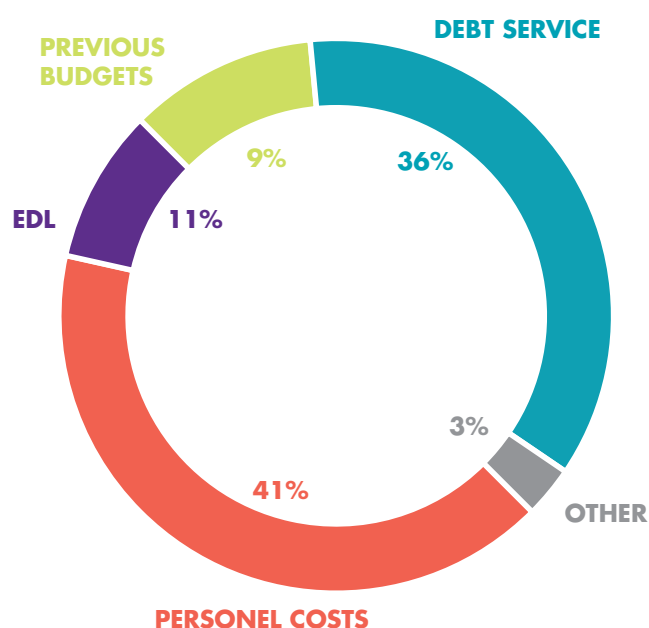


fig.2

Source: The Association of Banks in Lebanon, Triangle



WEALTH AND INCOME SHARES IN LEBANON

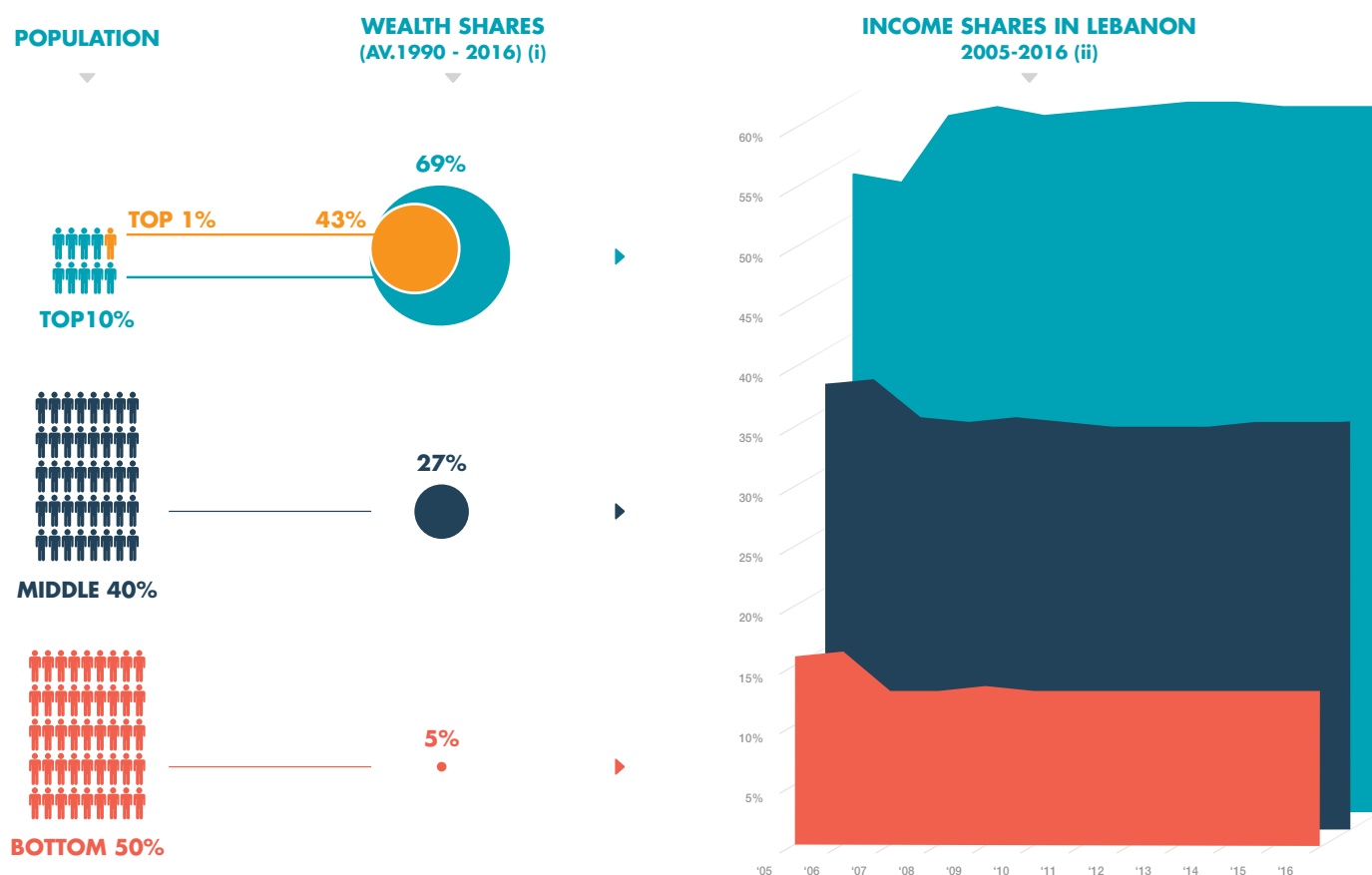


fig.3

(i) Assouad, Lydia, Rethinking the Lebanese Economic Miracle: The Extreme Concentration of Income and Wealth in Lebanon 2005-2014, 19 September 2018
(ii) Estimates obtained by combining billionaire data for Lebanon, generalized Pareto interpolation and normalized World Inequality Database distributions.

personnel costs of \$6.44 billion equivalent [I], and the state-run Electricite du Liban costs of \$1.76 billion equivalent [J] (see Figure 2).

In an effort to keep the inflow of dollars coming in, the state made another ambitious plea to the international community for \$11 billion in foreign funding, agreed at the CEDRE conference.²¹ In return for foreign currency pledges, then-Prime Minister Saad Hariri optimistically promised to reduce the budget deficit from 11% of GDP in 2018 to 0.06% by 2020.²²

One simple method to increase state revenue would be to raise income taxes, particularly on the richest 1% and 10% of Lebanese. At present these income brackets garner 23% and 56% of national income respectively, and even more of the nation's wealth (see Figure 3).

But Lebanon's current political class is loath to impose direct progressive taxes on income, lest it face a backlash from the wealthiest segments of society. Tax collection rates in Lebanon are significantly lower than in other middle-income countries; Lebanon's capacity



to collect taxes is estimated at 34% of GDP, and yet the country only collects 15% of its GDP in taxes on average every year.²³ This is not helped by strict banking secrecy laws which obscure the identity and content of the wealthiest accounts in Lebanon (see Triangle’s upcoming paper on lifting banking secrecy.)

Instead of progressive taxation, successive governments have imposed indirect regressive taxes on the population. These are broad-based tax measures such as VAT which consumers pay equally, irrespective of wealth or income. This strategy of regressive taxation came to a grinding halt with the proposition of the now-infamous ‘WhatsApp tax,’ which attempted to charge users of internet-based phone calls \$0.20 per day. The tax was a contributing factor in Lebanon’s October 2019 uprising —Lebanon’s Ponzi scheme had finally come apart.

“*A political transition away from narrow sectarian politics towards a civil state is the only solution which can viably produce the financial stimulus, international support and funding to rebuild Lebanon’s decrepit infrastructure*”

RECOMMENDATIONS

On November 11 2019, BDL Governor Riad Salameh stated in a press conference that the peg would remain, that there would be no haircut on the debt, and that the BDL would not impose towards capital controls.²⁴ He also announced that if commercial

banks needed USD liquidity, the BDL was more than happy to provide it—but with conditions. The interest rate would be 20% and banks would be prohibited from transferring the funds abroad. In a sense, the BDL governor proposed to reverse his financial engineering by reducing the BDL’s liabilities to the banking sector. In reaction to Salameh’s comments, the Union of the Syndicates of Bank Employees announced an open strike. It seems that now that payment time has come, no one is willing to foot the bill.

BOX 3: What is a haircut? Simply put, a haircut reduces the amount which a debtor must pay back to a creditor, whether in principal or in interest. Several mechanisms could be used to achieve this goal; Triangle recommends using the weighted average interest rate which investors, working through their banks’ investment arms, have received through financial engineering and investment of their money in the BDL’s CDs. To do so, banks and the BDL will need to calculate a lower overall interest rate or return on accumulated investments, and deduct that amount from the investor’s accounts which are now effectively frozen by the BDL. This type of haircut should be applied progressively to creditors who benefitted the most in absolute terms from the aforementioned investments.

Now that Lebanon’s central bank, banking sector, the state and the people have reached deadlock, only one thing is certain: the game is up. Economic growth is almost out of the question in the current environment, as the World Bank estimates that the economy will shrink by some 0.2% in 2019, even before the current uprising.²⁵ In any case, an economy of \$55 billion built on sectors which have all recently contracted could not grow its way out of \$86 billion in debt and some \$60



billion of liabilities held by the BDL to the banks. In fact, most analysts expect the looming recession to be devastating, given that the average contraction of countries which experience a debt, currency, and banking crisis all at once contract around 8% on average before recovering.²⁶ To stave off some of the pain, Lebanon will need to make some tough choices to rebuild both market and popular confidence.

After the October 2019 uprising, much will hinge on whether Lebanon's ruling class is prepared to move towards a more rational economic model and productive future.

In light of the government's resignation on October 29, early elections must occur to prove that the ruling elite are listening to the people's demands. On the economic front, there will need to be a progressive haircut of the amount debtors are expected to pay back to creditors (see Box 3). This haircut would pass the buck to those who profited from Lebanon's regulated Ponzi scheme. If such a policy is implemented, official capital controls would need to be in place to avoid capital flight, at least on large sums.²⁷

A partial and managed float of the Lira will also help reduce local currency debt obligations and bring back some logic to the exchange rate. This unpegging process would also make all the accumulated subsidised Lira housing offered by the BDL on some 125,000 units more affordable for home owners across the country.²⁸

The alternative, which must be avoided at all costs, is a return to the artificial wealth creation and concentration that has brought the country to the brink of financial, economic and social collapse.

Longer term, a political transition towards a civil state is the only solution which can viably produce the financial stimulus, international support and funding to rebuild Lebanon's decrepit infrastructure and capitalise on its few resources. These resources include human capital—one of the country's few real added value exports—and its geographic position as a transport and logistics hub, and a destination for green and sustainable tourism. After the October 2019 uprising, much will hinge on whether Lebanon's ruling class is prepared to move towards a more rational economic model and productive future. The alternative, which must be avoided at all costs, is a return to the artificial wealth creation and concentration that has brought the country to the brink of financial, economic and social collapse.

Both the BDL and the Ministry of Finance declined repeated requests for comment on this paper.

EDITOR'S NOTE:

Triangle would like to express its heartfelt thanks to all the economists, researchers, journalists, and academics who anonymously contributed to this policy paper.



REFERENCES AND ENDNOTES

- 1 Banque du Liban, USD – LBP exchange rate, <http://www.bdl.gov.lb/statistics/table.php?name=t5282usd>
- 2 Ghalayini, Latifé, The Impact of Dollarization on the Efficiency of Monetary in Lebanon: Interaction between Dollarization and Inflation, 2011, https://www.researchgate.net/publication/235939655_The_Impact_of_Dollarization_on_the_Efficiency_of_Monetary_in_Lebanon_Interaction_between_Dollarization_and_Inflation
- 3 International Monetary Fund (IMF) and World Bank (WB), Financial Sector Assessment: Lebanon, December 2016 [documents.worldbank.org › Lebanon-FSAP-Update-FSA-12222016](https://documents.worldbank.org/Lebanon-FSAP-Update-FSA-12222016)
- 4 BDL, Report by Banque du Liban in reply to Dr. Toufic Gaspard's Financial Crisis in Lebanon, 2017
- 5 International Monetary Fund (IMF) and World Bank (WB), Financial Sector Assessment: Lebanon, December 2016 [documents.worldbank.org › Lebanon-FSAP-Update-FSA-12222016](https://documents.worldbank.org/Lebanon-FSAP-Update-FSA-12222016)
- 6 Trading Economics, Lebanon – Credit Rating, <https://tradingeconomics.com/lebanon/rating>
- 7 Code of Money and Credit, <http://www.databank.com.lb/docs/Code%20of%20Money%20and%20Credit.pdf>
- 8 Ibid.
- 9 Ministry of Finance, Debt and Debt Markets, Q1, 2019
- 10 Gaspard, Toufic, Financial Crisis in Lebanon, Conrad Adenauer Stiftung, 2017 <https://www.globaltaxjustice.org/sites/default/files/39-policy-briefs-numero-12-en.pdf>
- 11 US Department of the Treasury, Daily Treasury Yield Curve Rates, November 13, 2019 <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/textview.aspx?data=yield>. As of.
- 12 This figure excludes reserves, on which BDL does not pay interest.
- 13 FFA Private Bank, The Lebanese Banking Sector 2008, July 2009 <https://www.ffaprivatebank.com/Library/Assets/FFA-Lebanese%20banking%20sector%20reviewd%202008.pdf>
- 14 BlomBank, Financial Results of the Four Largest Listed Lebanese Banks in 2018, February 2019, <https://www.blombank.com/english/news-and-publications/news/financial-results-four-largest-lebanese-banks-2018>
- 15 The World Bank, Lebanon Economic Monitor: The Big Swap: Dollars for Trust, 2016, p16 <http://documents.worldbank.org/curated/en/560211478178124830/pdf/109738-WP-PUBLIC-on-November-8-9-AM-The-World-Bank-LEM-Fall-2016.pdf>
- 16 Banque du Liban, Banque Du Liban's Financial Engineering: Background, Objectives, and Impact, 2016
- 17 Ibid.
- 18 Habib, Osama, In 'accounting move,' BDL lops \$21B off balance sheet, The Daily Star, 2019 <https://www.dailystar.com.lb/Business/Local/2019/Mar-27/479764-in-accounting-move-bdl-lops-21b-off-balance-sheet.ashx>
- 19 This amount represents around \$4.03 billion in local currency, and \$1.57 billion in foreign currency debt, assuming 72% dollarization.
- 20 Ministry of Finance, Debt and Debt Markets, Q1, 2019
- 21 Reuters, Lebanon wins pledges exceeding \$11 billion in Paris.
- 22 Reuters, Lebanon's Hariri agrees to reforms amid nationwide protests over economic crisis <https://www.reuters.com/article/us-lebanon-protests/lebanons-hariri-agrees-to-reforms-amid-nationwide-protests-over-economic-crisis-idUSKBN1WZ0AK>
- 23 Fenochietto, R. and C. Pessino, 2013, "Understanding Countries' Tax Effort," IMF Working Paper No. 13/244 (Washington: International Monetary Fund)
- 24 مقدمات نشرات الأخبار المسائية ليوم الأحد في <http://nna-leb.gov.lb/ar/show-news/446151/nna-leb.gov.lb/ar>
- 25 The World Bank in Lebanon: Overview <https://www.worldbank.org/en/country/lebanon/overview>
- 26 Capital Economics, MENA Economics Focus: Why Lebanon is heading for debt restructuring, October 2019
- 27 Azzi, Dan, Lebanon's richest need to take a haircut, Bloomberg, <https://www.bloomberg.com/opinion/articles/2019-11-07/lebanon-s-richest-need-to-take-a-haircut>
- 28 Kheir, Samir; Halabi, Sami, A New Financial Deal for Lebanon, Triangle, <http://www.thinktriangle.net/a-new-financial-deal-for-lebanon/>