Lebanon Opportunities' New 2024 GDP Estimate: A Critical Review; Plus the Publisher's Official Reply

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(CAS) **(LO)**

GDP at market prices

	2018	2024
	54.9	**40.3**
1. Total final consumption expenditure	**57.2**	**43.3**
1.1 by households	48.8	39.3
1.2 by government	8.4	4.1
2. Gross capital formation	**12.3**	**9**
2.1 Gross fixed capital formation	12	8.6
2.1.1 private	11	8.1
2.1.2 public	1	0.5
2.2 Changes in inventories	0	0
2.3 Acquisition less disposal of valuables	0.4	0.4
3 Net export	**-14.7**	**-12**
3.1 Export of goods and services	**11.4**	**6.7**
3.1.1 Export of goods (fob)	3.7	2.8
3.1.2 Export of Services	7.7	3.9
3.2 less Import of goods and services	**26.1**	**18.7**
3.2.1 Import of goods (fob)	19.8	15.1
3.2.2 Import of Services	6.3	3.6

In an interesting and unconventional note, *Estimating GDP: $40 + Billion in 2024*, published in mid-August 2025, *Lebanon Opportunities (LO)* provides a new estimate for Lebanon's GDP in 2024 at **$40.3 billion**. The aim of the estimate is to put the record straight after the differing and conflicting estimates from notable financial institutions: WB at **$26 billion**, IMF at **28.3 billion**, and IIF at **$32.8 billion**. Though, it is interesting to note, all these three estimates were upward revisions of earlier estimates by the said institutions.

That upward revisions were warranted is actually supported by hard-to-ignore facts. For instance, in 2018, goods imports reached 19.8 billion and GDP stood at $54.9 billion; whereas in 2024, goods imports were $16.9 billion but GDP stood at no more than $28.3 according to the WB and IMF. So something is amiss, and in this respect LO should be commented for undertaking needed revisions. And in undertaking these revisions, LO's methodology focused on the expenditures approach and relied on the following: estimating consumption directly – unlike the Central Administration of Statistics (CAS) where it is a measured as a residual – based on changes in major consumption categories using CAS's 2018 households' budget shares as a benchmark; estimating investment based on the weighted changes in capital goods imports and cement deliveries; and estimating net exports based on a reconciliation between Com-trade and customs data in the case of goods and on a reconciliation between CAS and BDL data in the case of services[1]. The estimates are shown in the table above under LO for 2024 against the actual CAS figures for 2018 as the base-line year.

That is not to say, however, that the new LO estimate is error-proof. We agree *apriori* that GDP in 2024 should be higher than $28.3 billion; but we are not sure that it should be close to $40.3 billion ala LO. In what follows, we present a few critical observations on LO's methodology, notwithstanding the fact that the new estimate is a highly worthy and courageous exercise in rectifying the estimate of a most important indicator.

[1] Interesting in this context that service imports and exports of BDL are always reported higher than those of CAS by almost 50%.

First, in terms of aggregate GDP, the LO estimate lacks exchange rate adjustments. It is now granted that the exchange rate in 2018 was overvalued, meaning that the LBP was worth more in USD that it actually deserved. Accordingly, calculating GDP for 2024 in USD based on changes form the GDP of 2018 will *overvalue the GDP 2024 estimate, especially given that the exchange rate in 2024 of 89,500 LBP per USD was less overvalued (even undervalued according to the Big Mac index)*[2] *than the exchange rate of 1,507.5 in 2018.*

Additionally, it is not clear why LO didn't provide estimates of GDP for the intervening years from 2019 to 2023. If that was done, *then the percentage decline in GDP in each of these years will end up with a GDP estimate in 2024 that is less than the GDP obtained from the percentage decline from the year 2018 to 2024 only*[3].

Second, in terms of personal consumption, the consumption weights need adjustments (if feasible), notwithstanding the fact that household budget surveys are hard to come by often. To elaborate, consumption was estimated based on CAS's 2018 constant budget shares as weights for changes in each major consumption category. *But surely these weights must have changed given the severity of the Lebanese crisis and the steep drop in income and GDP. For instance, one would expect the budget share, or weight of household expenditure, on food to increase not to stay constant with falling income.*

[2] If the exchange rate was actually undervalued in 2024, *then nominal GDP will be lower than otherwise, but GDP based on purchasing power parity will be higher.*

[3] Assume that GDP in years 1,2, and 3 is 30, 25, and 20 respectively. Then the percentage decline from year 1 to 3 will be 33.3%, whereas the sum of the percentage declines from year 1 to 2 and year 2 to 3 will be a higher 36.5%.

In a related vein, the magnitude of some of the consumption changes is questionable. For example, the estimate assumes that spending on education fell by 5% only, based on the fact that the student distribution across private and public schools stayed largely the same. But what about tertiary education, did the distribution across private and public universities stay the same as well? Perhaps unlikely, especially given the very high cost of attending private universities. Moreover, there is additionally an important supporting fact. We have alluded earlier that goods imports fell by much less than private consumption, as also attested by the new LO estimates. In fact, CAS figures show that the ratio of private consumption (both *tradeables and non-tradeables*) to goods imports *(tradeables*) had declined from 2.47 in 2018 to 1.68 in 2021 (the last year for which data are available!). This means *that* ***non-tradeables (services) private consumption had declined the most[4].*** *And what are the main service sectors?. These are real estate, banking, hospitality, and education.*

As to public consumption, the estimate didn't exclude public transfers. It assumed that public consumption was $4.1 billion *equal* to current government expenditures. But public consumption in the *national accounts is equal to current expenditures minus transfers, because transfers are not earned income.* In 2018, for instance, current expenditures were $15.1 billion, but public consumption recorded was $8.4 billion, the difference being public transfers (EDL, social security, subsides, etc..).

Third, in terms of private fixed capital formation, or private investment, the estimate of $8.1 billion lacks clarity. Specifically, it assumes that the share of capital goods in imports is a high 15%, and assumes also that the investment index assigns a weight of 0.32 for capital goods and 0.68 for cement deliveries. But the 15% share is based on the 2022 figure when capital goods were higher than usual because traders wanted to accumulate stock before the planned customs increase in 2023; whereas the average figure for the 2019-2021 period was only 10.5%. In addition, it is not clear why the weights in the investment index were distributed as cited above, and as such are made to look rather arbitrary. Perhaps more important, it is hard to fathom that investment fell by only 26.3% to $8.1 billion *given the absence of any lending by a dis-intermediating, illiquid banking sector*.

[4] The decline in non-tradeables consumption also explains why GDP had declined significantly as private consumption is almost 120% of GDP.

That said, the aim of these few critical notes is not to undermine the LO GDP estimate – far from it!. They are presented as suggestions to help make the excellent job of the LO estimate perhaps even better. And this is important not only because an accurate GDP is a crucial, if not perfect, measure of welfare and productivity. But also because, in a country like Lebanon, it is vital for matters like foreign debt restructuring; for if GDP happens to be mistakenly upwardly estimated, then the net debt-to-GDP ratio will be lower, and foreign debt restructuring will erroneously involve a lower haircut that is needed to maintain debt sustainability post-restructuring, which can only make debt sustainability that much harder.

Lastly, that we are excited about the LO estimate and discussing it in some details is of course good. But the flip side of this is rather unfortunate, as it points to the paucity of good, reliable, timely, and comprehensive economic data in Lebanon, for which the new estimate fills a small, tiny gap[5]. In this respect, this occasion of the LO estimate should be a stark reminder of the urgent need to develop the country's data capability, without which the process of economic and financial reforms – in fact, policy making in general – could be seriously misguided if not even flawed.

[5] Note that CAS's national accounts start in 2004 and end up in 2021 only, and with no data whatsoever on national income. Also, though its inflation data is timely, the weights that it uses for the various consumption categories to calculate CPI are based on its 2011-2012 households' survey.

LO, through its Publisher and Editor in Chief, Mr. Ramzi Hafez, responded to our critique. The complete reply is presented below.

Here are our clarifications on some of the points you raised in your analysis. We hope it will shed a better light on our exercise.

First, in terms of aggregate GDP, the LO estimate lacks exchange rate adjustments. It is now granted that the exchange rate in 2018 was overvalued, meaning that the LBP was worth more in USD that it actually deserved. Accordingly, calculating GDP for 2024 in USD based on changes form the GDP of 2018 will *overvalue the GDP 2024 estimate, especially given that the exchange rate in 2024 of 89,500 LBP per USD was less overvalued (even undervalued according to the Big Mac index)2 than the exchange rate of 1,507.5 in 2018.*

GDP is calculated using nominal values. It is taking 2018 as a benchmark and therefore could not question its assumptions. If 2024 exchange is possibly undervalued as you indicate, then GDP would be actually higher than stated.

Additionally, it is not clear why LO didn't provide estimates of GDP for the intervening years from 2019 to 2023. If that was done, *then the percentage decline in GDP in each of these years will end up with a GDP estimate in 2024 that is less than the GDP obtained from the percentage decline from the year 2018 to 2024 only3.*

This is a one-time exercise to prove that WB, IMF and IIF figures are way below reality as stated in the introduction. It also states: "The aim is not to replace a more rigorous and much-needed official calculation, typically conducted by the State, but rather to demonstrate that current GDP estimates by international organizations need another look – based on a more rigorous methodology." Also the report's title starts with Mission Impossible – which applies even more so for the years 2019-2023. If the World Bank and others with large resources erred so much – what can we expect to get from Lebanon Opportunities whose resources is no match to the international organizations. Please note that this exercise is Lebanon Opportunities' own initiative – without any external funding.

Second, in terms of personal consumption, the consumption weights need adjustments (if feasible), notwithstanding the fact that household budget surveys are hard to come by often. To elaborate, consumption was estimated based on CAS's 2018 constant budget shares as weights for changes in each major consumption category. *But surely these weights must have changed given the severity of the Lebanese crisis and the steep drop in income and GDP. For instance, one would expect the budget share, or weight of household expenditure, on food to increase not to stay constant with falling income.*

The weighting used by CAS is outdated and should be updated – by CAS! However, a new weighting across actual spending would not have a significant impact on the total GDP figure.

2 If the exchange rate was actually undervalued in 2024, *then nominal GDP will be lower than otherwise, but GDP based on purchasing power parity will be higher.* **← Exactly!**

3 Assume that GDP in years 1,2, and 3 is 30, 25, and 20 respectively. Then the percentage decline from year 1 to 3 will be 33.3%, whereas the sum of the percentage declines from year 1 to 2 and year 2 to 3 will be a higher 36.5%. **← We cannot make these assumptions. We compared 2018 with 2024 for each item, so no need to do it year by year. For example, we compared imports 2018 with those of 2024**

In a related vein, the magnitude of some of the consumption changes is questionable. For example, the estimate assumes that spending on education fell by 5% only, based on the fact that the student distribution across private and public schools stayed largely the same. But what about tertiary education, did the distribution across private and public universities stay the same as well? Perhaps unlikely, especially given the very high cost of attending private universities. Moreover, there is additionally an important supporting fact.

The situation in private and public schools was extrapolated to universities due to lack of data. CAS doesn't give separate weights for schools and universities. The impact of university education on GDP, though involving higher tuition, is mitigated by the fact that school students far outnumber university students. Moreover, most universities lowered the value of their tuition (part of the tuition was paid in lira at a favorable rate) and they also offered financial aid supported by some foreign organizations.

We have alluded earlier that goods imports fell by much less than private consumption, as also attested by the new LO estimates. In fact, CAS figures show that the ratio of private consumption (both *tradeables and non-tradeables*) to goods imports *(tradeables*) had declined from 2.47 in 2018 to 1.68 in 2021 (the last year for which data are available!). This means *that* ***non-tradeables (services) private consumption had declined the most4.*** *And what are the main service sectors?. These are real estate, banking, hospitality, and education.*

The latest CAS figure for the ratio of private consumption (both tradeables and non-tradeables) to imports of goods (tradeables) was for 2021 when the country had yet not fully recovered from the fallout of the pandemic and when the crisis was still severe. To assume that this ratio remained near 1.68 in 2024 is not realistic in light of the significant improvement realized last year at the economic and health levels compared to 2021.

As to public consumption, the estimate didn't exclude public transfers. It assumed that public consumption was $4.1 billion *equal* to current government expenditures. But public consumption in the *national accounts is equal to current expenditures minus*

transfers, because transfers are not earned income. In 2018, for instance, current expenditures were $15.1 billion, but public consumption recorded was $8.4 billion, the difference being public transfers (EDL, social security, subsides, etc..).

The figures used exclude transfers as you suggested – but these were negligible in 2024 compared to 2018. The disclosure of the Ministry of Finance about the 2024 actual budget was concise and didn't show Treasury transfers. According to our querying experts involved in economic research and public finance, the $4.1 billion figure represents current expenditure. But if we assume that this amount includes Treasury transfers, they would total only around $360 million based on their size in the 2018 budget, which would have a negligible impact on the total GDP figure.

Third, in terms of private fixed capital formation, or private investment, the estimate of $8.1 billion lacks clarity. Specifically, it assumes that the share of capital goods in imports is a high 15%, and assumes also that the investment index assigns a weight of 0.32 for capital goods and 0.68 for cement deliveries. But the 15% share is based on the 2022 figure when capital goods were higher than usual because traders wanted to accumulate stock before the planned customs increase in 2023; whereas the average figure for the 2019-2021 period was only 10.5%. In addition, it is not clear why the weights in the investment index were distributed as cited above, and as such are made to look rather arbitrary. Perhaps more important, it is hard to fathom that investment fell by only 26.3% to $8.1 billion *given the absence of any lending by a dis-intermediating, illiquid banking sector*.

Most capital goods are exempt or pay low Customs duties as an incentive to support local production especially the industrial sector. Therefore, it is reasonable to assume that importers of capital goods didn't feel the urge, like other importers, to increase their imports in 2022 before the government adopts the new exchange rate. Moreover, manufacturers had the incentives to boost their capital investment as they were encouraged by an increase in consumption of locally-made goods when imports became more expensive. They also anticipated more exports in light of the decrease of their labor cost. The share of capital goods in imports dropped to its lowest level in 2020 which was the year of the Port Explosion and of the peak of the Covid pandemic and of the economic and financial crises, and this has led to a severe decline in investor confidence which recovered gradually in subsequent years. The absence of bank credit was offset by the lack of indebtedness as most businesses had repaid their debts at favorable conditions and this had a positive impact of their cash flow and liquidity situation which allowed them to allocate funds for investment. Moreover, exporters had access to fresh dollar liquidity that could be used in investment.

The weights given to cement deliveries (0.68) and capital goods (0.32) are not arbitrary. They are based on the average share of each category in total capital formation based on available data for the period 1997-2010.

Detailed calculation on year to year increases

In absolute terms, the decline between "Year 1" and "Year 3" (in the given example) is equal to the sum of the annual decreases recorded in each year:

GDP3-GDP1= (GDP2-GDP1) + (GDP3-GDP2)

= GDP2- GDP2 - GDP1 + GDP3

= GDP3 – GDP1

In numerical terms: 20-30 = (25-30) + (20-25)

-10 = 25 - 25 – 30 + 20

-10 = -30 + 10

- 10 = -10

For this reason, the percentage change between Year 1 and Year 2 reflects the real change.

Conversely, adding the percentage changes of each of the years is a mathematical error because they are not percentages of the same number but percentages of different numbers. You cannot add (16.7% of 30) to (20% of 25) and say the total decrease is 36.7% (or 36.5% as per the example). 16.7% and 20% could be added only when they are percentages of the same number.

	Year 1	Year 3
GDP	30	20
Change (Absolute)		-10

	Year 1	Year 3
GDP	30	20
Change (%)		-33.3%

	Year 1	Year 2	Year 3	
GDP	30	25	20	Sum of Changes (Absolute)
Change (Absolute)		-5	-5	-10

	Year 1	Year 2	Year 3	
GDP	30	25	20	Sum of Changes (%)
Change (%)		-16.7%	-20%	-37%

In addition, regarding the question of the relation between GDP and exchange rate misvaluation, Mr. Hafez wrote the following:

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1) **Comparison**
   We are comparing with the World Bank and the IMF, both of which do not adjust for exchange rate overvaluation or undervaluation. They rely on the published figures by the Central Bank.

As an intellectual exercise, and following your assumptions, let us look more closely at the data:

2) **Dollarization**

The dollarization of the economy has risen from around 60 to 70 percent in 2018 to upwards of 90 percent in 2024.

External trade has always been conducted exclusively in foreign currency.

Accessible monetary mass (M2 in 2018 and M0 in 2024) has contracted sharply. M2 in 2018 was around $51 billion, whereas M0 in 2024 had fallen to about $650 million, which means that the weight of the lira in the economy have become infinitesimal, from close to 100 percent of GDP in 2018 to 1.6 percent.

Therefore, the incidence of the exchange rate is minimal in 2024, and non-negotiable for 2018 since we are accepting it as a baseline (before considering the over/under valuation).

3) **Fair exchange rate**

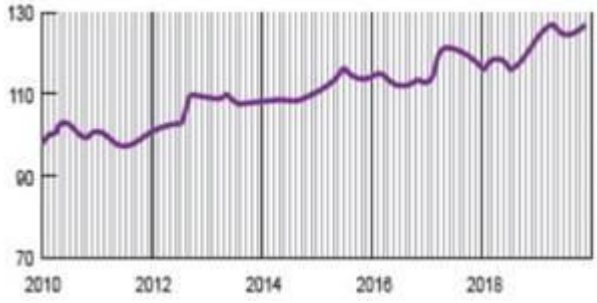
In 2019, the IMF, in its Article IV report, suggested that the lira in 2018 was overvalued by a little less than 20 percent. To recalculate GDP given a 70 percent dollarization, means that GDP should have been six percent lower – or $3 billion (quick calculation. In reality one needs to go through every line item). Given how most other items were calculated roughly by CAS, we would say this is well within the margin of error.

By contrast, the assumption that the lira is now undervalued is speculative, since no one has calculated its fair valuation for 2024. This may appear in an upcoming Article IV report.

If we accept the following assumptions:
* GDP in 2018 was overvalued because of the exchange rate, by 20 percent according to the Information Notice System and IMF staff calculations.
* GDP in 2024 is undervalued, though by how much is uncertain, whether more or less than 20 percent.

The overvaluation in 2018 and the possible undervaluation in 2024 may roughly cancel each other out if they were of equal weight. But they are not… as explained above.

Real Effective Exchange Rate



Source: Information Notice System; and IMF staff calculations

4) Other factors

Our report points to other factors such as the size of the cash economy and discrepancies in exports of jewelry and other items. While these could not be substantiated, we made an informed estimate of around $5 billion. This amount would more than compensate for any residual effect of the exchange rate on GDP.

Finally, our report stresses that GDP is much higher than what has been published by the World Bank and IMF, rather than claim to replace a resource-heavy exercise that only the State can perform. Our hope is that it serves as a catalyst for the State, through the Central Administration of Statistics (CAS), to reclaim its responsibility for calculating national accounts. The IMF itself, in every Article IV report between 2011 and 2019, stated that Lebanon's national statistics are poor and need to be improved.

As for PPP, we have not gone through that exercise.

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