International Labour Organization

Financial Assessment Report for the National Social Security Fund in Lebanon

Executive Summary

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Context & Objectives

1. Context and Objectives

About the NSSF

The National Social Security Fund ("NSSF") is the primary provider of social insurance coverage to private sector workers and their dependents in Lebanon.

The system covers different risk contingencies under three distinct branches:

- Sickness & Maternity (S&M);
- End-of-Service Indemnity (EOSI); and
- Family Allowance (FA).

Objectives

The main objectives of this study are the following:

1. Conduct an assessment of the Financial Position of the NSSF as of YE2020.
2. Identify (and where possible) quantify significant financial risks the NSSF may be exposed to.
3. Produce a high-level five-year cash-flow projection, for each of the three branches.

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Consolidated Financial Position 2020

2. Consolidated Financial Position 2020 (Estimate)

Important Remarks

1. The NSSF's YE2020 Consolidated Financial Position presented in this document is a high-level summary of an assessment that was conducted in a context of several limitations and inconsistent accounting.
2. The last closing of accounts available at the NSSF dates back to 2018, while the last audited financial statements date back to 2010.
3. 2019-20 Trial Balances, as well as limited additional relevant information, were made available for conducting an approximate projection of NSSF's Financial Position as of YE2020.
4. Similar to other public institutions in Lebanon, the NSSF uses double entry cash-basis accounting instead of accrual accounting for financial reporting. Therefore, appropriate high-level adjustments, reclassifications, and reassessments were applied per IPSAS and IFRS* in line with accrual accounting practices.
5. The content of this document cannot be interpreted without considering the "Limitations, Emphasis of Matter Notes", and other disclaimers. Included in the full report.
6. Nevertheless, the summary findings presented in this document enable the reader to get a general sense of the financial position and challenges NSSF faces.

* IFRS – International Financial Reporting Standards | IPSAS – International Public Sector Accounting Standards

Assets (in Billions of LBP)

Description	YE2020 Restated & Adjusted
Tangible fixed assets (property, plant & equipment)	145.7
Financial assets (discounted LT-bills maturing > 1 year)	4,178.1
Long term receivables (government subscription dues)	3,368.5
Non-Current Assets (maturing > 1 year)	**7,692.3**
Subscribers & other receivables (notes for collections)	1,350.8
Financial assets (discounted LT-bills maturing in 1 year)	1,147.8
Estimated employer settlements (est. for EOSI Branch)	1,469.0
Cash & cash equivalents (cash & bank accounts)	6,526.3
Advances & prepaid charges (to hospitals)	4.6
Current Assets (maturing < 1 year)	**10,498.5**
Total Assets	**18,190.7**

Equity & Liabilities (in Billions of LBP)

Liabilities	YE2020 Restated & Adjusted
Long-term liabilities (backlogged in-hospital S&M dues)	300.0
Long term liabilities (backlogged out-patient S&M dues)	1,158.5
Subscribers' appropriations (accrued EOSI rights)	9,218.0
Total non-current liabilities	**10,676.5**
Short-term liabilities (accounts & accrued payables)	**334.7**
Total Liabilities	**11,011.2**

Equity (or Net Assets)	
Reserves, Results, and Other Equity-like accounts	7,037.3
Revaluation Reserves	142.2
Total Equity (or Net Assets)	**7,179.5**

Restated Statement of Financial Position in line with standards

The restatement exercise was founded on the NSSF's last reported statements of 2018 that considered:

- IPSAS & IFRS reporting standards for presentation purposes.
- Elimination of the off-balance sheet items by reclassification.
- Restatement of accounts to align with the performed accrual accounting impairment tests.
- Classification of both assets and liabilities based on their maturity.
- Introduced new accounts for the above-stated reporting purposes.
- Attempted to generate a segmented report by fund.

Adjusted Statement of Financial Position – 2020

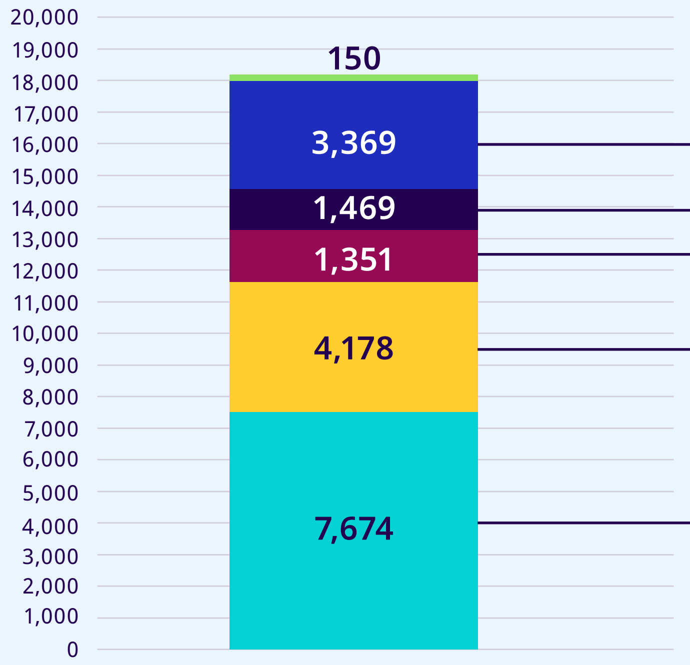
The adjusted financial statements were a result of delving deeper into the standards and (re-)applying:

- IPSAS & IFRS reporting standards for both presentation and determining the fair value.
- Impairment tests to determine the fair value, as much as possible, of the asset and liability items and the final adjustment figure.
- Classification of the restated assets and liabilities further, after impairment testing and adjustment, based on their maturity.

NSSF's Assets (in Billions of LBP)

Note: *amounts reported in red below represent the adjusted amount subjected to the asset account in attempting to determine its fair value*

YE2020 NSSF's Assets (restated/adjusted) in Billions of LBP



Government Dues

- Depleted Real Value
- Adjusted for NSSF calculated Gov't dues & interests + payments received ~ 100 B LBP
- Further Assumed Paid over 10 years and Discounted at 7% ~ (1,427 B LBP)

Estimated Employers Settlement Liabilities

- Will Increase Significantly in the Future
- Important Risk of Default for Employers

Subscribers Short-Term Receivables

- Depleted Real Value with need for Constitution of Provisions
- Some Employers may not pay => 10-50% provision ~ (285 B LBP)

Medium-Term T-Bills (discounted)

- Depleted Real Value as a Result of Discounting
- Limited Risk of Gov Default on LBP yet discounted ~ (767 B LBP)

Bank Deposits & Short-Term T-Bills

- Depleted Real Value due to Bankruptcy Risks
- Little Risk of Gov Default on LBP
- Potential Banking System Default Risk*

Bank deposits include 367M in foreign US$ currency ~ < 9% of total bank deposits **

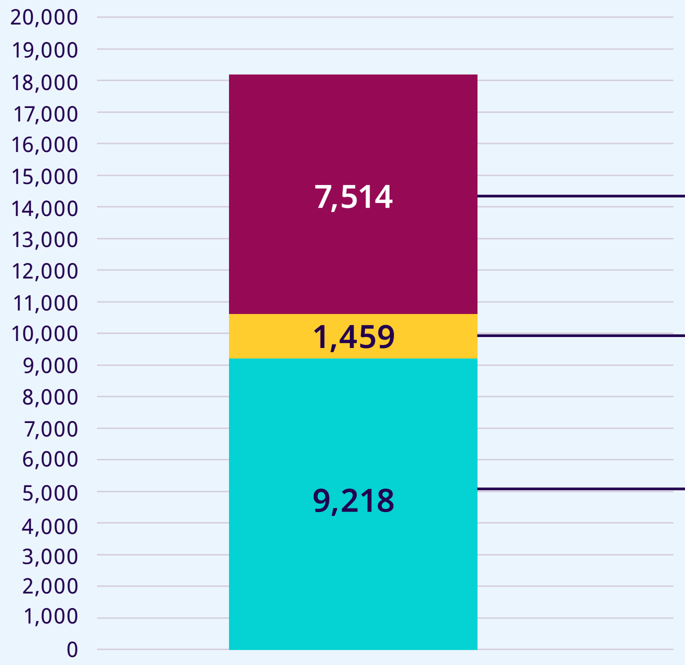
* Could consider a Prudent Alternative Scenario where 15% to 20% Bank Default Loss is applied. This would translate into impairment of (1,249 B LBP). However, this may not be relevant in light of a 2020 decision to rebalance asset composition to 80% in T-Bills.

** USD Gov. Bonds have been estimated at a rate of 1 USD = 1,500 LBP

NSSF's Liabilities (in Billions of LBP)

Note: *amounts reported in red below represent the adjusted amount subjected to the asset account in attempting to determine its fair value*

▶ **YE2020 NSSF's Liabilities (restated/adjusted) in Billions of LBP**



Equity (or Net of Assets) & Misc Items

- Represents the net assets (assets-liabilities) or financial position of the NSSF
- Needs to be interpreted with caution! Over 40% of NSSF's "Assets" are dues/receivables. Moreover, these results are based on NSSF's weak accounting processes that do not follow international standards. Finally, figures have not been audited for over 10 years.

Estimated Sickness & Maternity Backlog Liabilities

- Represents the estimated backlog for hospitalization & out-patient medical dues
- The estimated backlog on in-hospital claims is reported here at 300 B LBP *

Estimated EOSI Liabilities **

- Includes an Estimated Employers Settlement Liability of ~ 1,469 B LBP
- At high risk of exploding. This will increase further and exponentially with gradual earnings corrections **
- **High risk. Who will pay?**

* Unaccounted for in-hospital dues & claims were 600 B LBP as of YE2019 alone; an updated report for 2020 is still under process by the NSSF & therefore remains unreported here. The 300 B LBP figure was a result of estimates provided by NSSF Management

** Additional future reported salary increases (to catch-up with reality) is expected. The impact of the recent Decree increases this liability by 3.6 T LBP (of which around 3.5 are additional Employer Settlement Liabilities). This would significantly increase NSSF's EOSI Liability, as well as the Estimated Employers Liabilities

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Estimated Financial Position 2020 by Branch

3. Tentative Financial Segmentation by Branch

Exemplar Segmented Branch Statements of Financial Positions – 2020

These segmented branch financial positions were a result of:

- Identifying to the best of our knowledge the accounts associated to each branch from the trial balance.
- Allocating any unassociated accounts to a particular fund or branch to a **'Joint Account'** for joint reporting (i.e. bank accounts, other assets or local offices).
- Taking into account the interbranch loans from EOSI to both the S&M & FA branches.
- Creating a 'virtual' interbranch receivables account to balance out the positions of each for the sake of this reporting exercise.
- Additionally, regarding the cash accounts, those are reconsidered as belonging to the EOSI branch.

Important Notes & Disclaimer

- The segmented reports, do not necessarily - if added up - match the total reported assets on the consolidated statement due to the existence of inter-fund or branch loans to cover deficits (from EOSI to FA and S&M) that net off on the consolidation level.
- The splitting of the accounts & reports between the branches is an involving and complex exercise in itself. The financial positions presented here provide an illustrative overview and do not reflect the true financial positions of each branch as indicated by both the 'virtual' receivables account and the joint account. Yet they do indicate that the S&M fund has the highest exposure!

3. EOSI Financial Position 2020 (Estimate)

Assets (in Billions of LBP)

Description	YE2020 Restated & Adjusted
Tangible fixed assets (property, plant & equipment)	144.8
Financial assets (discounted LT-bills maturing > 1 year)	4,178.1
Long term receivables (government subscription dues)	163.4
Receivable on Loans from S&M and FA Branches †	2,409.5
Receivables from "Joint Account" ††	968.1
Non-Current Assets (maturing > 1 year)	**7,863.9**
Subscribers & other receivables (notes for collections)	453.2
Financial assets (discounted LT-bills maturing in 1 year)	1,147.8
Estimated employer settlements (est. for EOSI Branch)	1,469.0
Cash & cash equivalents (cash & bank accounts) *	6,526.3
Advances & prepaid charges (to hospitals)	4.6
Current Assets (maturing < 1 year)	**9,596.3**
Total Assets	**17.460.2**

* Assuming all Cash and Cash Equivalent belong to the EOSI Branch

Equity & Liabilities (in Billions of LBP)

Liabilities	YE2020 Restated & Adjusted
Long-term liabilities (backlogged in-hospital S&M dues)	N/A
Long term liabilities (backlogged out-patient S&M dues)	N/A
Subscribers' appropriations (accrued EOSI rights)	9,218.0
Total non-current liabilities	**9,218.0**
Short-term liabilities (accounts & accrued payables)	**157.0**
Total Liabilities	**9,375.0**

Equity (or Net Assets)	
Reserves, Results, and Other Equity-like accounts	7,943.0
Revaluation Reserves	142.2
Total Equity (or Net Assets)	**8,085.2**

† Interbranch receivables are netted off on the consolidated level

† † Any unassociated accounts to a particular branch are reported under the joint account

Important Note: *The above is a tentative segmented EOSI Branch statement of financial position. There are serious challenges to properly segmenting without a comprehensive accounting management exercise. It is important to note that there is a big question mark on those net assets! Indeed, over 40% of NSSF's "Assets" are dues/receivables. Moreover, these results are based on NSSF's accounting processes that, as is the case for other public institutions in Lebanon, do not follow international lfinancial reporting standards. Finally, figures have not been audited for over 10 years.*

3. S&M Financial Position 2020 (Estimate)

Assets (in Billions of LBP)

Description	YE2020 Restated & Adjusted
Tangible fixed assets (property, plant & equipment)	-
Financial assets (discounted LT-bills maturing > 1 year)	-
Long term receivables (government subscription dues)	2,935.0
Receivable on Loans from S&M and FA Branches	-
Receivables from "Joint Account" ††	2,214.1
Non-Current Assets (maturing > 1 year)	**5,149.1**
Subscribers & other receivables (notes for collections)	586.0
Financial assets (discounted LT-bills maturing in 1 year)	-
Estimated employer settlements (est. for EOSI Branch)	-
Cash & cash equivalents (cash & bank accounts)	-
Current Assets (maturing < 1 year)	**586.0**
Total Assets	**5.735.1**

Equity & Liabilities (in Billions of LBP)

Liabilities	YE2020 Restated & Adjusted
Long-term liabilities (backlogged in-hospital S&M dues)	300.0
Long term liabilities (backlogged out-patient S&M dues)	1,158.5
Loans from EOSI Branch †	2,303.5
Total non-current liabilities	**3,762.0**
Short-term liabilities (accounts & accrued payables)	**50.1**
Total Liabilities	**3,812.1**
Equity (or Net Assets)	
Reserves, Results, and Other Equity-like accounts	1,923.0
Revaluation Reserves	-
Total Equity (or Net Assets)	**1,923.0**

† Interbranch receivables are netted off on the consolidated level

† † Any unassociated accounts to a particular branch are reported under the joint account

Important Note: *The above is a tentative segmented S&M Branch statement of financial position. There are serious challenges to properly segmenting without a comprehensive accounting management exercise. It is important to note that there is a big question mark on those net assets! Indeed, over 40% of NSSF's "Assets" are dues/receivables. Moreover, these results are based on NSSF's accounting processes that, as is the case for other public institutions in Lebanon, do not follow international financial reporting standards. Finally, figures have not been audited for over 10 years.*

3. FA Financial Position 2020 (Estimate)

Assets (in Billions of LBP)

Description	YE2020 Restated & Adjusted
Tangible fixed assets (property, plant & equipment)	-
Financial assets (discounted LT-bills maturing > 1 year)	-
Long term receivables (government subscription dues)	270.0
Receivable on Loans from S&M and FA Branches	-
Receivables from “Joint Account” ††	287.2
Non-Current Assets (maturing > 1 year)	**557.2**
Subscribers & other receivables (notes for collections)	298.4
Financial assets (discounted LT-bills maturing in 1 year)	-
Estimated employer settlements (est. for EOSI Branch)	-
Cash & cash equivalents (cash & bank accounts)	-
Current Assets (maturing < 1 year)	**298.4**
Total Assets	**855.6**

Equity & Liabilities (in Billions of LBP)

Liabilities	YE2020 Restated & Adjusted
Long-term liabilities (backlogged in-hospital S&M dues)	N/A
Long term liabilities (backlogged out-patient S&M dues)	N/A
Loans from EOSI Branch †	106.0
Total non-current liabilities	**106.0**
Short-term liabilities (accounts & accrued payables)	**23.0**
Total Liabilities	**129.0**

Equity (or Net Assets)	
Reserves, Results, and Other Equity-like accounts	726.6
Revaluation Reserves	-
Total Equity (or Net Assets)	**726.6**

† Interbranch receivables are netted off on the consolidated level

† † Any unassociated accounts to a particular branch are reported under the joint account

Important Note: *The above is a tentative segmented S&M Branch statement of financial position. There are serious challenges to properly segmenting without a comprehensive accounting management exercise. It is important to note that there is a big question mark on those net assets! Indeed, over 40% of NSSF’s “Assets” are dues/receivables. Moreover, these results are based on NSSF’s accounting processes that, as is the case for other public institutions in Lebanon, do not follow international financial reporting standards. Finally, figures have not been audited for over 10 years.*

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S&M Cashflow Projections

4. Cashflow Projections - Sickness & Maternity

Methodology & Assumptions

All demographic and financial projections were generated using the ILO Health Model. Separate projections were made for the three categories of members: employees, retirees and special groups. Projection assumptions were set as follows:

- Actuarial & demographic assumptions (mortality, morbidity, retirement, population growth, etc) were based on historical data and ILO actuarial team experience.
- Salary growth and healthcare cost inflation were based on ILO's economic outlook (medium inflation scenario) for the next 5 years.
- Three different scenarios for the portion of salary actually declared to the NSSF were considered to project the contributory salary growth of employees.

- In estimating the contributory salary growth rates, we have taken into account the impact of the minimum salary increase implemented in May 2022 and the proposed increase in the contributory salary cap from LBP 2.5 mil. up to LBP 5 mil., as well as scenarios for future salary evolution. In addition, different scenarios for the portion of salary actually declared to the NSSF were considered.
- Given the current developments in the healthcare market where medical costs are becoming fully dollarized at prices ranging from 50% to 70% of their pre-crisis 2019 levels, the NSSF healthcare costs were projected based on 60% of their pre-crisis levels* at a foreign exchange rate of LBP 35,000 per US Dollar and assuming that the increase will be implemented by mid-2022 and that future currency devaluation will be reflected in the inflation forecasts.**

* Before the crisis the S&M scheme was aiming to cover 90% of hospitalization costs and up to 80% of medical consultations and medication.
Effective reimbursement rates were significantly lower due to NSSF hospitals' billing arrangements and tariffs structure.
* Equivalent to projecting in 2023 an exchange rate of approximately LBP 74,000 per US Dollar. See Annex for details

Contributory Salary Growth Scenarios

Scenarios *	Description
1. Realistic	Actual Salaries and S&M Contributory Salary Cap are assumed to move in line with the Salary Growth Assumption for each year (2023-2026) – see Annex. Implicitly, for 2023 onward, it is assumed under this scenario that employers declare the actual value of salaries (regardless of the mode salaries are paid to employees). Under this scenario, the ratio of “Earnings subject to contributions” (for the S&M Branch) to the “Declared Salaries” is assumed to remain constant over the projection period (2023-2026).
2. Pessimistic (stagnating declared earnings)	Declared Salaries do not evolve as per the Salary Growth Assumption (from 2023 onward). In other words, even if the actual value of salaries increases to compensate (in part or in full) for inflation, the value of declared earnings does not catch up with the actual salary growth from 2023 onward. The S&M Contributory Salary Cap is assumed to remain at LBP 5 Million. Consequently, under this scenario, the ratio of “Earnings subject to contributions” (for the S&M Branch) to the real value of salaries will gradually decrease over the projection period (2023-2026).
3. Optimistic (hypothetical – No Cap)	Actual Salaries are assumed to move in line with the Salary Growth Assumption for each year (2023-2026). Moreover, no S&M Contributory Salary Cap is applied from 2023 onward. Implicitly, for 2023 onward, it is assumed under this scenario that employers declare the actual value of salaries (regardless of the mode salaries are paid to employees) and that the S&M contributions are determined on the full declared earnings.

Note: *See annex for details*

* Under all scenarios the salary growth for the year 2022 is based only on the minimum salary increase applied as of May 2022.

Average Healthcare Expenditures Per Person Per Year for the Year 2019 – Regional Comparison

	Average Healthcare Expenditures PPPY in 2019 in USD
NSSF	**$436**
Lebanon	$663
Jordan	$334
Egypt	$150
Iraq	$253
Arab World	$382
Middle East & North Africa	$513
World	$1,122

Source: *World Bank Indicators*

The average healthcare spending per person at the NSSF is lower than the national level but higher compared to the average spending in Arab countries.

Expenses Projections (in LBP billions) – Expressed in 2022 prices

In a context where NSSF wants to continue providing the same coverage package

Year	Healthcare Expenditures	Funeral Expenses	Total Benefits Expenditures	Claims Backlog (1)	Admin. & Other Expenses (2)	Total Expenses
2017	886	5	892	-	175	1,066
2018	910	5	915	-	211	1,126
2019	820	6	825	-	270	1,095
2020	551	5	555	-	260	815
2021	521	-	521	-	147	668
2022	10,970	12	10,982	690	1,098	12,770
2023	20,916	18	20,934	326	2,093	23,353
2024	21,478	18	21,496	192	2,150	23,838
2025	21,951	18	21,970	140	2,197	24,307
2026	22,285	19	22,304	107	2,230	24,641

1. Claims backlog is assumed to be amortized over 5 years.
2. Administrative and other expenses are estimated to represent 10% of total benefits expenditures.
3. At LBP 35,000 per USD in 2022 and implicitly reflecting an exchange rate of approx. 74,000 per USD in 2023

Contributions Projections (in LBP billions) - Expressed in 2022 prices

Year	Member Contributions			Government Contribution*
	Scenario 1 (Realistic)	Scenario 2 (Pessimistic)	Scenario 3 (Optimistic)	
2017	896	896	896	-
2018	991	991	991	-
2019	860	860	860	-
2020	898	898	898	90
2021	983	983	983	300
2022	1,714	1,714	1,714	3,140
2023	2,630	2,459	6,167	5,420
2024	3,287	2,939	7,666	5,484
2025	3,957	3,364	9,168	5,573
2026	4,632	3,849	10,695	5,637

* Government contribution is calculated based on 25% of paid benefits in each year and assuming the balance of LBP 1,974 billion as of 31/12/2021 (which includes only the government share of paid benefits due to the sickness & maternity fund) will be amortized over 5 years without any interest.

Financial Results Projections (in LBP billions) – Expressed in 2022 prices

Year	Scenario 1 (Realistic)	Scenario 2 (Pessimistic)	Scenario 3 (Optimistic)
2017	(170)	(170)	(170)
2018	(135)	(135)	(135)
2019	(235)	(235)	(235)
2020	173	173	173
2021	615	615	615
2022	(7,916)	(7,916)	(7,916)
2023	(15,303)	(15,474)	(11,767)
2024	(15,066)	(15,415)	(10,688)
2025	(14,777)	(15,370)	(9,567)
2026	(14,372)	(15,155)	(8,308)

1. At LBP 35,000 per USD in 2022 and implicitly reflecting an exchange rate of approx. 74,000 per USD in 2023.

Required Contribution (as a % of declared earnings) to finance pre-crisis benefit package/level

Year	Scenario 1 (Realistic)	Scenario 2 (Pessimistic)	Scenario 3 (Optimistic)
2022	72.7%	72.7%	72.7%
2023	89.2%	95.0%	39.1%
2024	73.6%	81.8%	32.4%
2025	62.5%	72.9%	27.8%
2026	54.4%	64.9%	24.2%

Under the first two salary growth scenarios, healthcare and funeral benefits exceed 50% of total salaries in almost every year.

Under the optimistic salary scenario, it is expected that total benefits expenditures will reach around 24% of total salaries within five years.

Share of Pre-Crisis Benefit Package/Level that can be financed by Members' Contributions* (at current contribution rates)

Year	Scenario 1 (Realistic)	Scenario 2 (Pessimistic)	Scenario 3 (Optimistic)
2022	15.6%	15.6%	15.6%
2023	12.6%	11.7%	29.5%
2024	15.3%	13.7%	35.7%
2025	18.0%	15.3%	41.7%
2026	20.8%	17.3%	48.0%

Under the first two salary growth scenarios, current contribution rates cover a small portion of benefits over the next five years.

Under the optimistic salary scenario, total contributions cover less than half of total benefits expenditures over the next five years.

1. Contributions are projected based on current contribution rates for employees and the minimum wage adjustment approved in May 2022. The growth of the contributory fixed income of retirees, teachers, physicians and voluntary contributors will be in line with minimum wage adjustment in May 2022 and in line with expected salary growth for future years.
2. Projections based on an exchange rate of LBP 35,000 per USD in 2022 and implicitly reflecting an exchange rate of approx. 74,000 per USD in 2023.

Breakdown of Total Medical Expenditures by Type of Health Intervention

Year	Inpatient	Outpatient
2022	43.7%	56.3%
2023	43.6%	56.4%
2024	43.6%	56.4%
2025	43.5%	56.5%
2026	43.5%	56.5%

Inpatient expenditures under the current NSSF package represent less than half of total healthcare expenditures in all years.

Under the first two salary growth scenarios, current contribution rates adjusted for the COLA cover less than half of inpatient benefits expenditures.

Under the optimistic salary scenario, it would take around five years for contributions to cover total inpatient benefits, assuming no coverage of outpatient costs.

4. Recommendations - Sickness & Maternity Branch

In what follows we highlight a road map for the NSSF and the Government to consider to address the financial challenges of providing minimum healthcare coverage to the Lebanese population:

- **Strategies to improve NSSF Coverage & Operations:**
  - Shift from fee-for-service purchasing arrangements with medical providers to more efficient arrangements (e.g., capitation basis, case-based payment).
  - Implement a gatekeeping and referral system and increase focus on primary and preventive healthcare.
  - Index the contributory salary cap to general inflation or consider removing the salary cap altogether.
  - Reduce the scope of the healthcare package to concentrate on essential healthcare services (e.g. primary care, maternity & newborn care, in-hospital treatment of major ailments, emergency care, essential generic drugs).

- **Strategies to achieve Universal Health Coverage:**
  - Prevent gradual implicit shift to private-insurance based solutions that will have adverse effects on health equity and solidarity in health financing.
  - Harmonize/combine the NSSF and MoPH schemes in a streamlined/single risk pool - with common benefit package, tariff structure and contracting modalities - and foster solidarity and equity to cover the population with no or little contributory capacity.
  - Expand NSSF coverage through integration of smaller schemes and risk pools.
  - Provide access to medical care scheme to non-national workers who are contributing.

For more detail regarding the role of the NSSF in achieving Universal Health Coverage refer to ILO report “Extending Social Health Protection to the uncovered in Lebanon”, October 2020.

05

EOSI Liabilities Estimate as at YE2020 and five-year Cashflow Projections

5.1. EOSI Short-Term Cashflow Projections

Contributory Salary Growth Scenarios

Scenarios *	Description
1. Realistic	Actual Salaries are assumed to move in line with the Salary Growth Assumption for each year (2023-2026) – see Annex. Implicitly, for 2023 onward, it is assumed under this scenario that employers declare the actual value of salaries (regardless of the mode salaries are paid to employees).
2. Pessimistic (stagnating declared earnings)	Declared Salaries do not evolve as per the Salary Growth Assumption (from 2023 onward). In other words, even if the actual value of salaries increases to compensate (in part or in full) for inflation, the value of declared earnings does not catch up with the actual salary growth from 2023 onward. Declared earnings evolve at a rate of around 5% per year.**

Note: *See annex for details*

* Under all scenarios the salary growth for the year 2022 is based only on the Salary Adjustment applied as of May 2022.

** For the Pessimistic scenario, the evolution of the declared earnings under the S&M and FA branches is lower than 5% since declared earnings are also limited by an unchanged contributory cap of 5 Million and 2.825 Million respectively

Realistic Scenario

(future declared salaries will increase significantly from 2023 onward – based on ILO assumptions)

Year	Average Monthly Declared Earnings (LBP)	EOSI 8.0% Contributions (Billions LBP)	EOSI Payments (Billions LBP)	Employers Settlements (Billions LBP)	Net Cash (Billions LBP)
2022	3,165,000	1,174	(2,383)	729	(480)
2023	8,640,000	3,220	(4,245)	2,803	1,778
2024	17,972,000	6,717	(8,785)	6,866	4,799
2025	29,295,000	10,968	(7,518)	6,014	9,464
2026	43,942,000	16,462	(12,103)	9,774	14,134

Key Observations

- The above Annual Cash "Surplus" will only materialize if employers pay their settlement dues.
- Even in such a case, the five year cumulative cash "surplus" (around LBP 30,000 Billion) is expected to be offset by a massive increase in the EOSI Liabilities.
- EOSI Liabilities (most of which will be on employers) are expected to increase to around 100 Trillion LBP (see slide 35). It is unrealistic that employers will have the capacity to fully refinance the EOSI system.

Pessimistic Scenario - with Stable Declared Salaries

(future declared salaries will be stable from 2023 onward – i.e. no short-term adjustments in declared salaries)

Year	**Average Monthly Declared Earnings** (LBP)	**EOSI 8.0% Contributions** (Billions LBP)	**EOSI Payments** (Billions LBP)	**Employers Settlements** (Billions LBP)	**Net Cash** (Billions LBP)
2022	3,165,000	1,174	(2,383)	729	(480)
2023	3,323,250	1,238	(1,792)	537	(16)
2024	3,489,400	1,304	(1,918)	557	(57)
2025	3,663,900	1,372	(1,084)	298	586
2026	3,847,100	1,441	(1,213)	320	549

Key Observations

- The above Annual Cash “Surplus” is minimal and will only materialize if employers pay their settlement dues.
- Under this scenario, EOSI Branch will remain financially viable on the books.
- **However, it is the insured who will pay the price by receiving an end-of-service indemnity that lost most of its value.**

5.2. EOSI Branch's Obligations as at YE2020

Calculation basis for the EOSI Obligation's Main Elements

The result of this process allowed us to produce a best-estimate assessment of NSSF EOSI's accrued obligations as at YE2020 related to outstanding EOSI rights.

The estimated EOSI Accrued Obligations (YE2020) have been broken into the following 5 distinct components:

EOSI Accrued Obligations Components	Category of Insured to which it applies
1. EOSI Obligation related to contribution periods with LAST Employers	Employed Insured
2. EOSI Obligation related to contribution periods with OLD Employers	Employed Insured
3. EOSI Obligation estimated for those eligible to the additional ½ EOSI month	Employed Insured
4. Estimated Settlement Obligations that fall (as per regulation) on Employers	Employed Insured
5. Estimated Return of Contribution Obligations	Taxi Drivers & likes

Calculation basis for the EOSI Obligation's Main Elements (cont'd)

EOSI Accrued Obligations Components	Calculation Basis
1 + 4. These two elements together represent the EOSI that the insured is expected to get in relation to his/her contribution periods with LAST Employers	1 Last Monthly Declared Earning X Contribution Years with LAST Employer
2. EOSI Obligation related to contribution periods with OLD Employer(s)	EOSI Contributions (8.0%) paid by OLD Employer(s) + Interest Credited on these contributions
3. EOSI Obligation estimated for those eligible to the additional ½ EOSI month	Applicable to those who meet all three conditions: (1) reached age 60, (2) completed 20 contribution years, and (3) did not cashed-out in the past Additional EOSI = ½ Last Monthly Declared Earning X (Total Service – 20)
5. Estimated Return of Contribution Obligations	EOSI = Return of Paid EOSI Contributions (for taxi drivers and likes)

- "Interest Credited" is calculated up to YE2020 based on NSSF regulations and on the schedule of historical rates adopted by the Board
- "Total Service" used for element (3) is composed of the sum of the Contribution Periods with Last Employer + Contribution Periods with Old Employer(s)
- Any past Contribution Period associated with an EOSI amount the insured has cashed-out in the past is disregarded and carved out from any consideration & calculation
- As mentioned in the Approach Development: No % reduction on the EOSI is applied for those who have not reached 60 or have not completed 20 years of service

EOSI Obligations - Best-Estimate as at YE2020

Below we present our main estimates. Status Quo: based on 2020 actual declared earnings

EOSI Accrued Obligations Components	Status Quo Best-Estimate As at YE2020
1. EOSI Obligation related to contribution periods with LAST Employers	LBP 6,288 billion
2. EOSI Obligation related to contribution periods with OLD Employers	LBP 1,355 billion
3. EOSI Obligation estimated for those eligible to the additional ½ EOSI month	LBP 106 billion
4. Estimated Settlement Obligations that fall (as per regulation) on Employers	LBP 1,469 billion
5. Estimated Return of Contribution Obligations (for Taxi Drives and likes)	TBD*
TOTAL Estimated EOSI Accrued Obligations (Status Quo) as at YE2020	**LBP 9,218 billion**

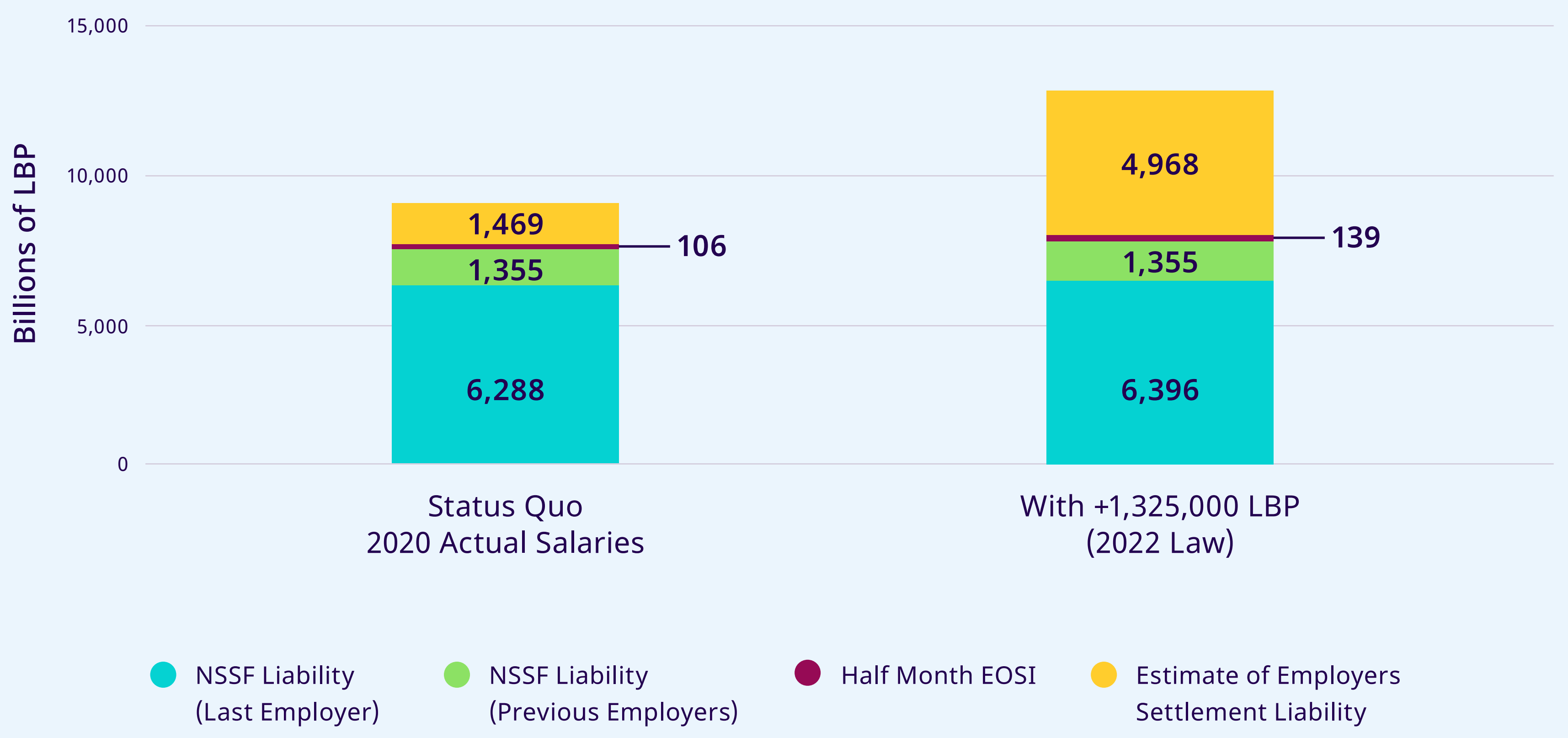
* Amount unavailable but should be minimal in comparison with the total EOSI obligations

Note: above estimates, as well as other results in this section, hold some degree of uncertainty given the number of inconsistencies that exist in NSSF's data, the data mining, cleaning, and "missing-data-estimates" we had to carry out (all of which are detailed in the full report).

EOSI Branch's Obligations as at YE2020 - Stress Test & Shock Scenarios

Impact of the May 2022 Decree and prescribed Salary Increases on EOSI Obligations

NSSF EOSI Liabilities Estimates as of 31-12-2020

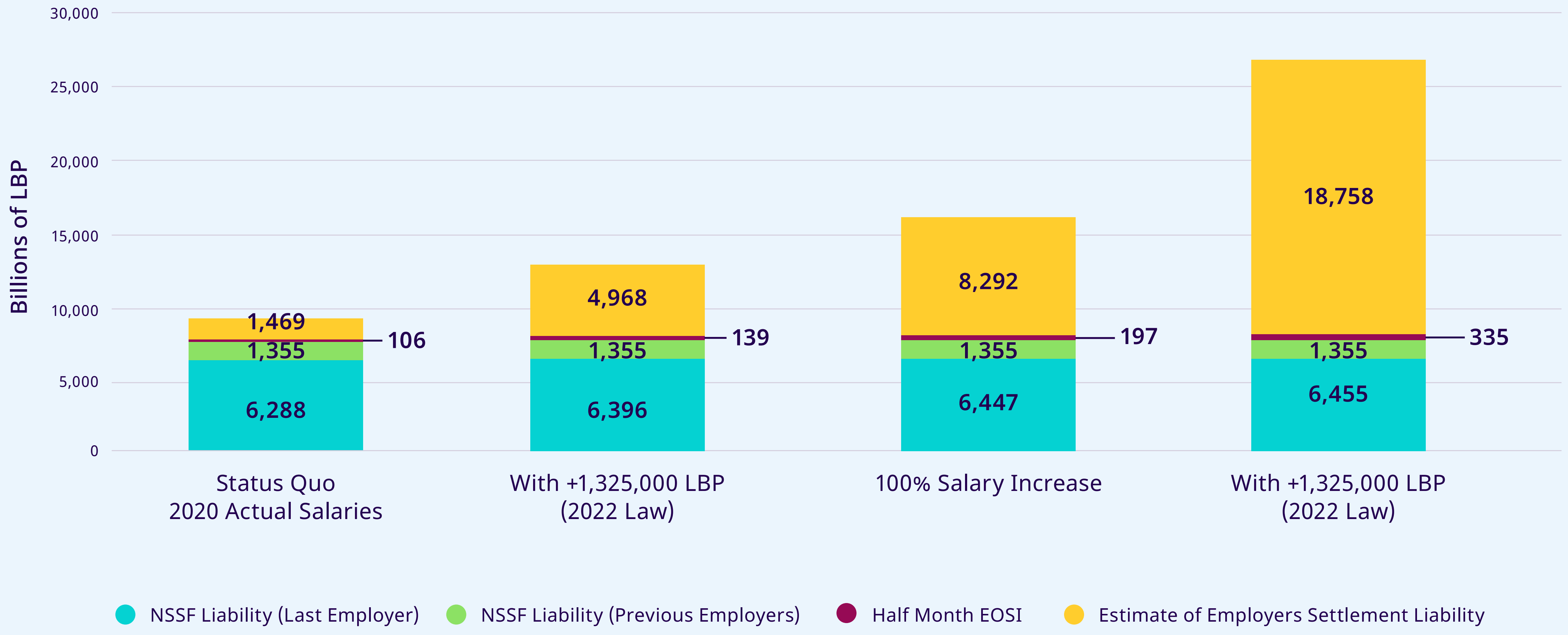


We observe/estimate an increase in EOSI's Liabilities by around 3.6 trillion LBP.

EOSI Branch's Obligations as at YE2020 - Stress Test & Shock Scenarios

Impact of Other Salary Increase Scenarios on EOSI Obligations

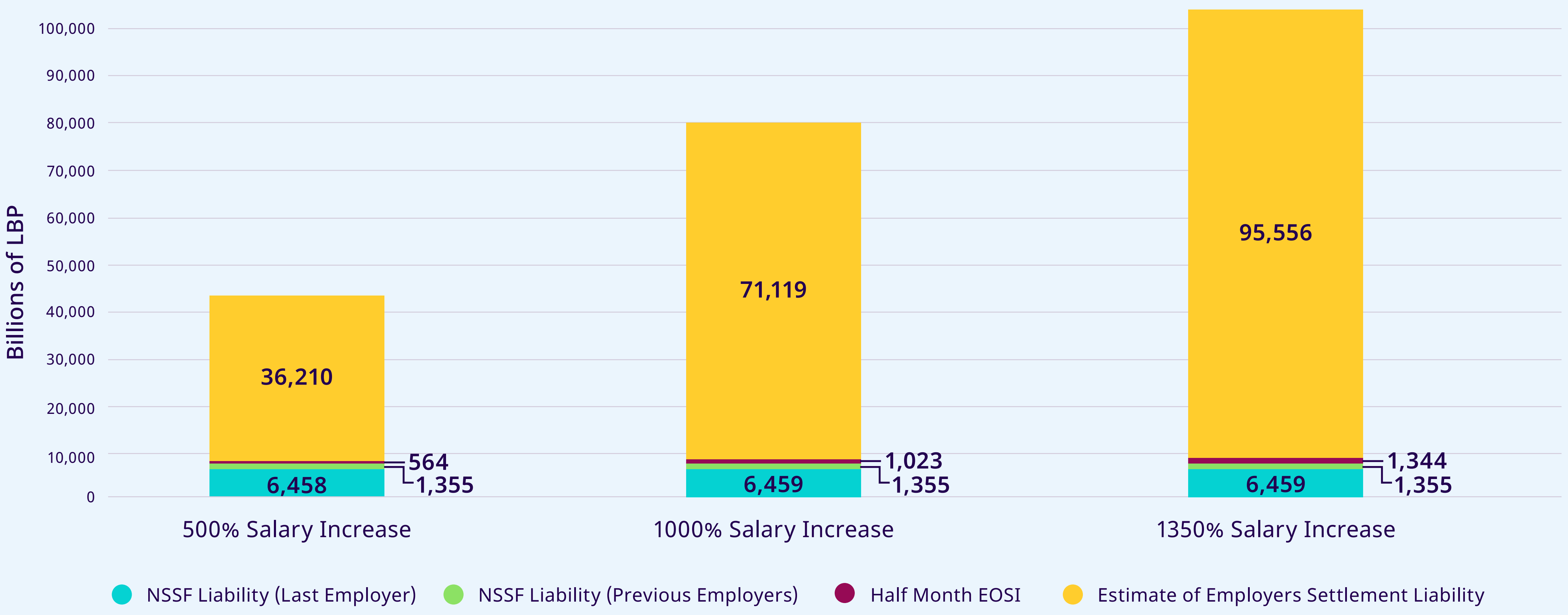
NSSF EOSI Liabilities Estimates as of 31-12-2020



EOSI Branch's Obligations as at YE2020 - Stress Test & Shock Scenarios

Impact of Other Salary Increase Scenarios on EOSI Obligations

NSSF EOSI Liabilities Estimates as of 31-12-2020



06

Family Allowance
Five-year Cashflow Projections

6. Family Allowance Cashflow Projections

Contributory Salary Growth Scenarios

Scenarios *	Description
1. Realistic	Actual Salaries and FA Contributory Salary Cap are assumed to move in line with the Salary Growth Assumption for each year (2023-2026) – see Annex. Implicitly, for 2023 onward, it is assumed under this scenario that employers declare the actual value of salaries (regardless of the mode salaries are paid to employees). Under this scenario, the ratio of “Earnings subject to contributions” (for the FA Branch) to the “Declared Salaries” is assumed to remain constant over the projection period (2023-2026).
2. Pessimistic (stagnating declared earnings)	Declared Salaries do not evolve as per the Salary Growth Assumption (from 2023 onward). In other words, even if the actual value of salaries increases to compensate (in part or in full) for inflation, the value of declared earnings does not catch up with the actual salary growth from 2023 onward. The Family Allowance Contributory Salary Cap is assumed to remain at LBP 2.825 Million. Consequently, under this scenario, the ratio of “Earnings subject to contributions” (for the FA Branch) to the real value of salaries will gradually decrease over the projection period (2023-2026).

Note: *See annex for details*

* Under all scenarios the salary growth for the year 2022 is based only on the minimum salary increase applied as of May 2022.

Realistic Scenario

(future declared salaries & CAP will increase significantly from 2023 onward – based on ILO assumptions)

Year	Average Monthly Declared Earnings (LBP)	FA 6.0% Contributions (Billions LBP)	FA Payments Current Levels (Billions LBP)	Increasing FA Monthly Amounts (Billions LBP)	FA Payments Increased Levels (Billions LBP)
2022	2,127,000	842	(326)	60,000 / 33,000	(326)
2023	6,705,000	2,719	(334)	**x3** → 180,000 / 99,000	(1,002)
2024	13,965,000	5,771	(340)	**x4** → 720,000 / 396,000	(4,084)
2025	22,699,000	9,513	(345)	**x2** → 1,440,000 / 792,000	(8,282)
2026	34,090,000	14,463	(349)	**x1.5** → 2,160,000 / 1,188,000	(12,576)

Key Observations

- Under this scenario, and with the current levels of monthly FA amounts, significant Annual Cash "Surplus" are expected.
- NSSF can comfortably decide at this stage to triple the current FA amount levels to 180,000 LBP for eligible spouses and 99,000 LBP for eligible children. NSSF can take this decision without financial risks to the FA Branch, given the increase in declared earnings and FA Contributory Cap that has already been applied from May 2022.
- Further FA monthly amount escalations can be applied, as declared earnings and CAP are increased (as shown above).

Pessimistic Scenario - with Stable Declared Salaries

(future declared salaries will be stable from 2023 onward and CAP remain as is – i.e. no short-term salary)

Year	**Average Monthly Declared Earnings** (LBP)	**FA 6.0% Contributions** (Billions LBP)	**FA Payments Current Levels** (Billions LBP)	**Increasing FA Monthly Amounts** (Billions LBP)	**FA Payments Increased Levels** (Billions LBP)
2022	2,127,000	842	(326)	60,000 / 33,000	(326)
2023	2,580,000	1,046	(334)	**x3** → 180,000 / 99,000	(1,002)
2024	2,709,000	1,120	(340)	**x1** → 180,000 / 99,000	(1,021)
2025	2,825,000	1,184	(345)	**x1** → 180,000 / 99,000	(1,035)
2026	2,825,000	1,198	(349)	**x1** → 180,000 / 99,000	(1,048)

Key Observations

- Under this scenario, NSSF can comfortably triple the current FA amount levels to 180,000 LBP for eligible spouses and 99,000 LBP for eligible children. NSSF can take this decision without financial risks to the FA Branch.
- In 2022, Cash "Surplus" is expected due to the increased declared earnings and FA Contributory Cap that has already been applied from May 2022. For years 2023 onward, contribution income and FA payments are expected to be more or less aligned under the abovementioned FA amount levels.

07

Conclusions

7. High-Level Conclusions – NSSF’s Financial Position

- Net position as of the end of FY2020 is positive in aggregate terms and for each of the three branches. However, the real value of benefits provided by NSSF has been almost fully eroded by inflation. Therefore the institution is unable to perform its mandate of providing social security to insured members and their dependents as before the crisis.
- Over 40% of NSSF’s “Assets” are dues/receivables: mostly receivables from the Government to the S&M Branch, which in turn materialize as loans from the EOSI to the S&M branch. Share of employers’ receivables are also expected to grow exponentially and at high risk of default.
- Because of the prevailing labor market structure there is a clear trend of under - declaration of salaries, which in turn prevents the NSSF from receiving the additional revenues required to enhance real value of benefits. This locks the NSSF in a dangerous vicious cycle!
- Solutions are in sight - through new proposed pension scheme - to re-equilibrate system for old-age protection through exploiting collective financing and inter-generational solidarity. In the case of the heath insurance branch a comprehensive structural reform appears to be unavoidable.
- Results are based on NSSF’s weak accounting processes that, as is the case for other public institutions in Lebanon, do not follow international financial reporting standards. Finally, figures have not been audited for over 10 years.

7. Conclusions - Sickness & Maternity Branch

- Our cashflow projections of the Maternity & Sickness Fund contributions and expenses were based on historical experience, ILO's economic outlook for Lebanon as well as current developments in the healthcare market where cost are becoming fully dollarized, and taking into account the impact of the salary adjustment implemented in May 2022 and future salary inflation.
- Three economic scenarios for contributory salary growth were considered ranging from minimum growth of contributory salaries to uncapped salaries.
- **Under all scenarios and if the NSSF wants to continue providing its services based on the same terms as before the crisis, healthcare expenses are expected to highly exceed the Fund's revenues in each year as medical inflation exceeds salary growth considerably, given the devaluation of the currency and the fact that healthcare costs have become dollarized.**

7. Conclusions - Sickness & Maternity Branch

Recommendations

In what follows we highlight a road map for the NSSF and the Government to consider to address the financial challenges of providing minimum healthcare coverage to the Lebanese population:

- **Strategies to improve NSSF Coverage and Operations:**
  - Shift from fee-for-service purchasing arrangements with medical providers to more efficient arrangements (e.g., capitation basis, case-based payment).
  - Implement a gatekeeping and referral system and increase focus on primary and preventive healthcare.
  - Index the contributory salary cap to general inflation or consider removing the salary cap altogether.
  - Reduce the scope of the healthcare package to concentrate on essential healthcare services (e.g. primary care, maternity & newborn care, in-hospital treatment of major ailments, emergency care, essential generic drugs).

- **Strategies to achieve Universal Health Coverage:**
  - Prevent gradual implicit shift to private-insurance based solutions that will have adverse effects on health equity and solidarity in health financing.
  - Harmonize/combine the NSSF and MoPH schemes in a streamlined/single risk pool - with common benefit package, tariff structure and contracting modalities - and foster solidarity and equity to cover the population with no or little contributory capacity.
  - Expand NSSF coverage through integration of smaller schemes and risk pools.
  - Provide access to medical care scheme to non-national workers who are contributing.

For more detail regarding the role of the NSSF in achieving Universal Health Coverage refer to ILO report “Extending Social Health Protection to the uncovered in Lebanon”, October 2020.

7. Conclusions - EOSI Branch

- YE2020 EOSI's financial position is acceptable. But only when measured based on declared earnings levels of 2020. Real benefits have been fully eroded and "individual accounts" system is unable to deliver meaningful EOSI values.
- Recent increase in minimum earnings reflects in an increase of EOSI's estimated Obligations by around 3.6 Trillion LBP. This is primarily due to the rise in the Estimated Employers Liabilities (i.e., settlements). Additional increases in future declared earnings are expected.
- The Employers Settlement liabilities will increase exponentially. Are employers able to bear these additional liabilities? If not, NSSF will not be able to pay any meaningful EOSI amounts. Settlement Liabilities also represent an impediment to full salary declaration, which constrains NSSF revenue also for other branches (i.e. medical branch).

Recommendations

- A Transition to the new pension scheme is essential - and should be implemented as soon as possible. The New Pension Law is ready and available for approval.
- The Transitional Arrangement proposed by NSSF could be considered for a short transitional period (i.e. until the new pension scheme is in effect).
- **Urgent discussions & decisions are needed.**

7. Conclusions – Family Allowance Branch

- The FA Branch has few financial risks associated with it. Moreover, there are no significant levels of unreported liabilities for this branch. **However**, the monthly FA benefit levels being provided have lost their value and are practically insignificant.
- With the recent decision that adjusted declared earnings to the NSSF and increased the FA contributory cap from LBP 1.5 Million to LBP 2.825 Million, NSSF has room to improve its offering.
- Indeed, without any significant risks, we estimate that the NSSF can triple the level of its monthly FA benefit levels (i.e. to 180,000 LBP for eligible spouses and 99,000 LBP for eligible children).
- In the future, additional FA benefit amount increases may be applied, provided the earnings cap subject to contributions is also adjusted upward.

7. Recommendations – Family Allowance Branch

- Adopt an immediate increase of the monthly FA benefit levels to 180,000 LBP for eligible spouses and 99,000 LBP for eligible children.
- Consider an automatic adjustment of the FA Contribution Cap (as a % of average declared earnings).
- Consider an automatic adjustment of the monthly FA benefit amounts linked to the increase of the branch's Contribution CAP (based on an actuarial assessment and recommendation), so to avoid constant change in legislation.
- Consider reallocating some contribution space to the S&M Branch, at least temporarily, until a more permanent and stable solution is adopted for the S&M Branch. Allocating the totality of FA contributions to the S&M Branch could contribute to financing (in the short-term) around 7.5% to 10% of the Pre-Crisis S&M Benefit Package/Level.
- Enhance workers awareness on FA payments, some of whom currently do not know that they receive it. This can be achieved through an awareness campaign, and/or by incorporating to the inspection process a review of payroll statements workers receive from their employers and ensuring they are aware of said monthly payments.

7. Recommendations – NSSF's Financial Reporting

The recommendations address the areas of concern emphasized earlier:

- Apply the accrual basis of accounting & recognize interest impact on T-Bills, EOSI dues, as well as provisions & impairment adjustments.
- Automate & decentralize the accounting process and implement a unified double entry ERP system on a branch level, to improve consolidating and branch reporting.
- Shift to IPSAS in financial reporting and adopt strict accounting policies
- Restructure internally using IT solutions to improve operations and analytical reporting outputs.
- Conduct a valuation of properties.
- Carry out regular and consistent audits (external, medical, internal).
- Abide by 2003 Budget Law for all public institutions in Lebanon on establishing internal audit units.
- Revise bylaws; diversify investment portfolio based on bank ratings & alternative non-bank investments; decrease volume of direct investment in the public sector.
- Activate the MOF-NSSF committee to resolve disputes & balances.
- Settle claims with third parties especially the government.
- Improve medical bill processing efficiency & revise the advance payment system with hospitals.
- Revisit all outstanding private sector debts.
- Negotiate terms of settlement of outstanding government receivables in the context of a plan of reform.

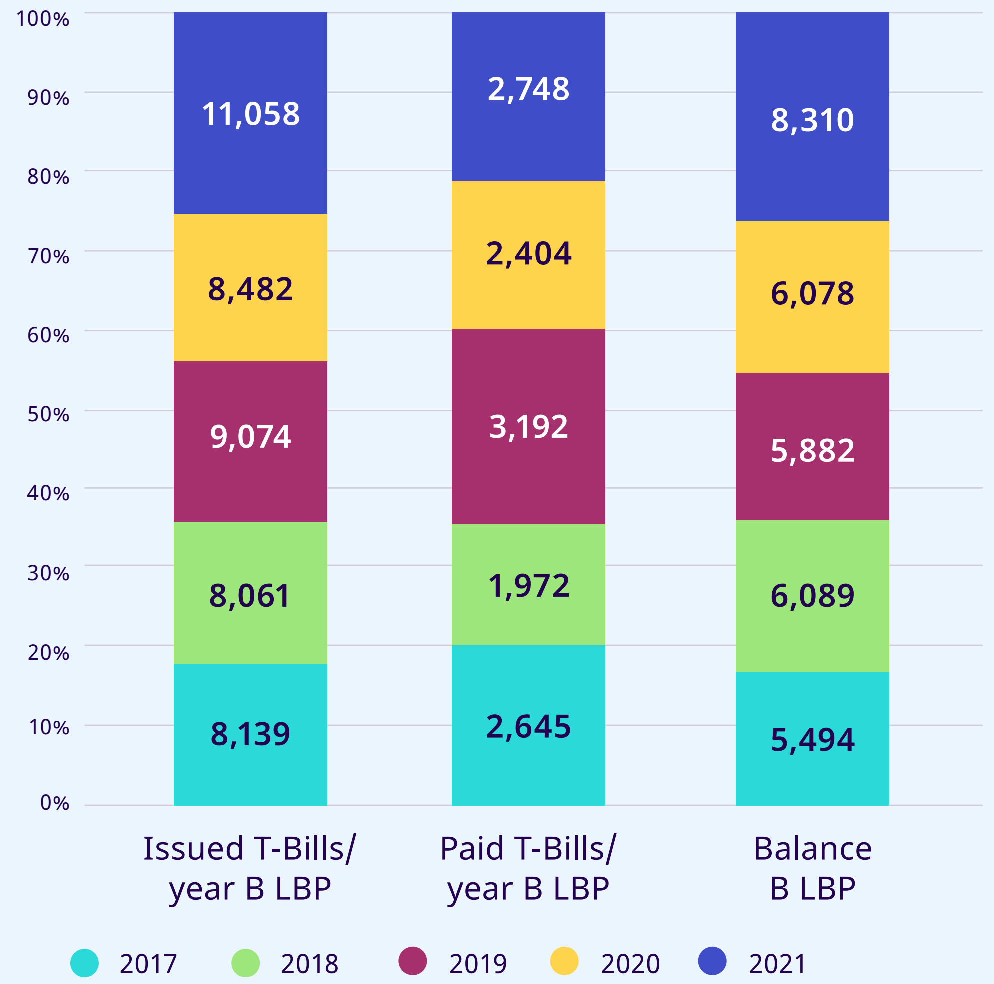
Additional Analysis

Movement of LT-Bill

With the government defaulting on bills/debts payments & being downgraded from the one side and the other its attempt to protect the NSSF's financial resources by passing laws – there still is a looming problem of the loss on time value of money as well as the probability of default of banks holding the NSSF's funds.

- No provision was constituted due to legislative protection of NSSF funds and monies, however, it may be prudent to constitute some provision. The currency devaluation as per Sayrafa platform is about 94% (between 1,515 & 24,500 LL).
- It is expected that government dues be paid in the form of T-bills as per recent investment policy (see page 51).

LT-Bills Transactions 2017-2021



Balances by currency held with local banks

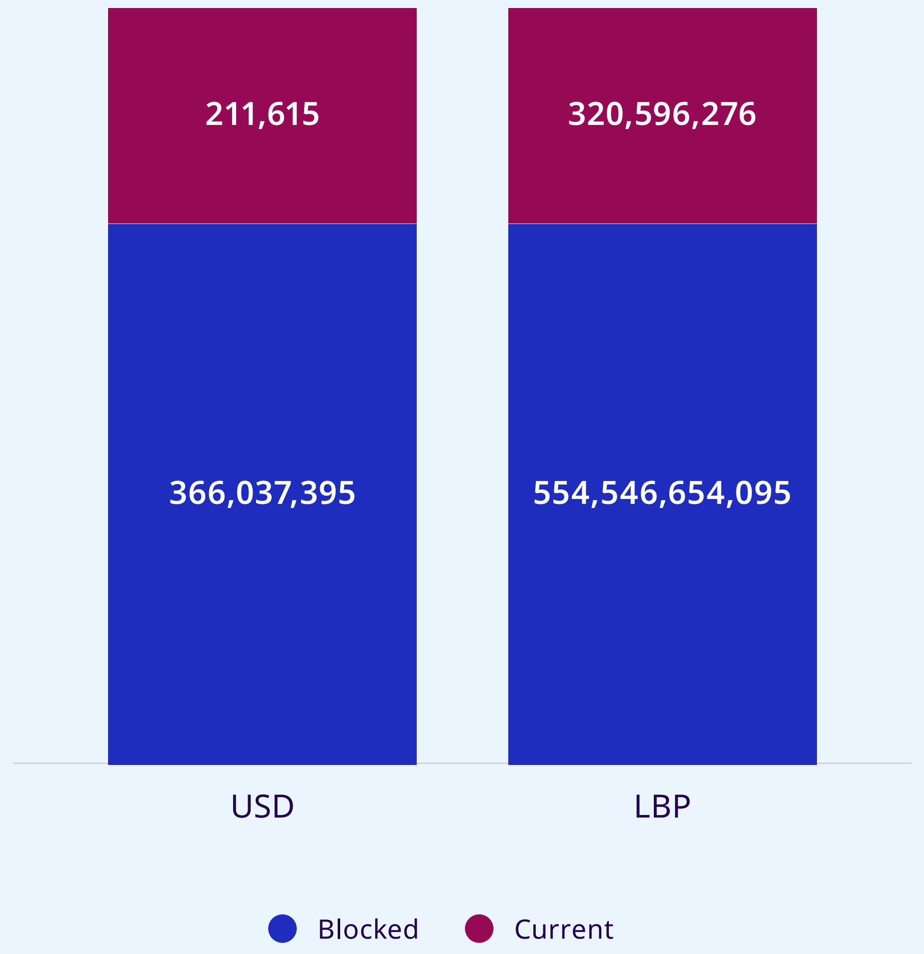
As the financial crisis uncovered the unmeasurable exposure of the banking system in Lebanon, with looming threats of bankruptcy; this puts a strain on the NSSF's accounts regardless of government laws protecting such funds.

Accounts are held with about 27 financial institutions including BDL with majority of balances held with mid- to low-tier banks:

Bank Grade	B LBP	%
BDL	72.0	1.1
High-Tier	1,736.6	26.7
Mid/Low-Tier	4,689.0	72.2
Total	**6,497.6**	**100.0**

Note: *Law 210/2020 entitles NSSF to withdraw bank deposits at any time and in the currency they are deposited in. It was not possible to verify the effective applicability of this provision – i.e. whether NSSF USD deposit can be accessed as "fresh dollars".*

Bank account balances by nature & currency as of 31-12-2020



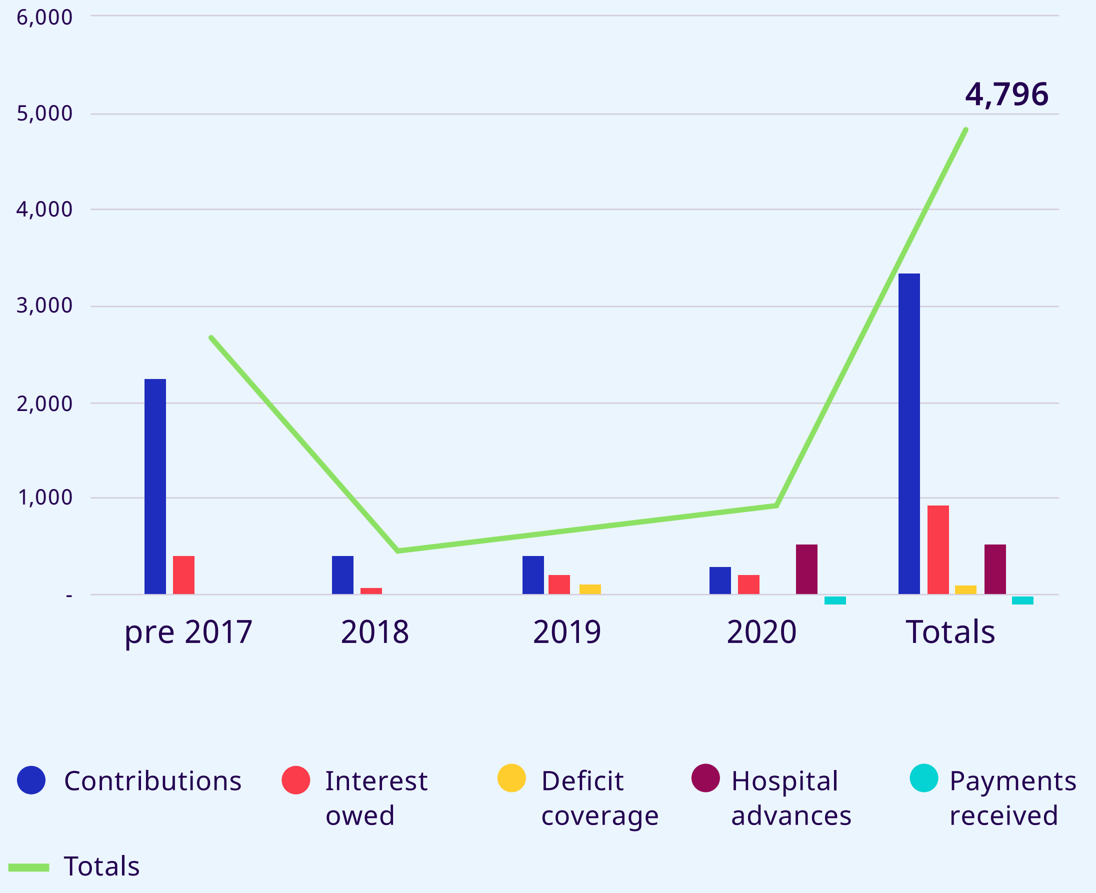
Movement of Government dues to NSSF

As per the NSSF's *'off-ledger'* statement received, the government owes NSSF regular contributions (plus interest), supports with the coverage of hospital payments and deficits in S&M:

- Government contribution as employer for non-public employees working with government agencies ●
- Contribution subsidies for drivers for both the S&M & FA funds, mayors for the S&M fund ●
- 1% contribution for health coverage of retirees (per Law no. 27/2017) ●
- 25% of the total hospital medical bills advances paid by both the S&M & optional funds to hospitals ●
- Other transactions:
    - contributions to cover deficits in the S&M voluntary fund ●
    - interests owed to the NSSF based on published legislations ●

The resulting total amount of 4,796 B LBP is assumed to be settled by the government over a 10-year period in the form of LT-Bills, which are further discounted (based on LBP T-Bills yields) to 3,369 B LBP

Movement of Government dues to NSSF up till 2020 (Billions LBP)



Key macroeconomic indicators

	Inflation	Real GDPgrowth
2017	4.4%	0.9%
2018	6.1%	-1.9%
2019	2.9%	-6.9%
2020	84.9%	-25.9%
2021	154.8%	-15.2%
2022	207.0%	-2.7%
2023	111.4%	2.3%
2024	70.0%	3.6%
2025	37.3%	4.0%
2026	30.0%	4.4%

Data from the Lebanese Central Administration of Statistics (CAS) (April 2022)

Forecast (March 2022) from the Economist Intelligence Unit (EIU)

- The Economist Intelligence Unit (EIU) identifies several major risks to their forecast, and gives them a very high probability.
- The International Monetary Fund (IMF) does not even publish any economic forecast for Lebanon right now.
- Nobody expects a recovery faster than 5 to 15 years.
- Even if no precise data is available, it is understood that emigration and unemployment have increased considerably in 2020 and 2021.Also, the EIU mentions that there is a very high risk that "mass emigration depletes the pool of high-skilled workers".
- It is also understood, even if not precisely quantified, that wages did not increase much compared to the very high inflation in 2020-2021.

Price and wage inflation assumptions

Year	Total Salary Growth	% of Total Salary Declared *			General Inflation	Medical Inflation
		Scenario 1 (Realistic)	Scenario 2 (Pessimistic)	Scenario 3 (Optimistic)		
2022	80%	33%	33%	33%	207%	647%
2023	173%	38%	35%	100%	111%	111%
2024	108%	38%	33%	100%	70%	70%
2025	63%	38%	31%	100%	37%	37%
2026	50%	38%	30%	100%	30%	30%

* Applies only to the employees group since for retirees and special groups the contributory base is fixed by the NSSF.
Under all scenarios the salary growth for the year 2022 is based only on the minimum salary increase applied as of May 2022.

International
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