



LEBANON ECONOMIC MONITOR

Mounting Burdens on a Crisis-Ridden Country

Fall 2024



THE WORLD BANK

IBRD • IDA | WORLD BANK GROUP

Middle East & North Africa

Lebanon Economic Monitor

Mounting Burdens on a Crisis-Ridden Country

Des pressions accrues sur un
pays rongé par la crise

تفاقم الأعباء على بلد مأزوم

Fall 2024

Global Practice for Macroeconomics, Trade & Investment
Middle East and North Africa Region



Document of the World Bank

© 2024 International Bank for Reconstruction and Development/The World Bank
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

Cover photos: Mohamad Azakir/World Bank.
Further permission required for reuse.

Publication design and layout by The Word Express, Inc.

TABLE OF CONTENTS

Acronyms	v
Preface	vii
Executive Summary	ix
ملخص تنفيذي	xi
Résumé analytique	xiii
1. The Policy Context	1
2. Recent Economic Developments	3
Output and Demand	3
Fiscal Developments	6
External Sector	10
Money and Banking	12
3. Outlook and Risks	17
Special Focus: The Impact of the Conflict on the Lebanese Economy	21
Annex I. Night-Time Lights	31
Annex II. Methodology of the Tourism Shock Projections for 2024	35

List of Figures

Figure 1	Real GDP Contraction Since 2018	4
Figure 2	Consumption and Net Exports are Positive Contributors to Real GDP Growth in 2023	4
Figure 3	Change in Luminosity between 2019 and 2023	5
Figure 4	Changes in NTL at the First Administrative (i.e., Governorate) Level	5
Figure 5	Real GDP and NTL Growth	6
Figure 6	Overall and Primary Deficits are Projected for 2023 and 2024 (pre-September 2024 Conflict escalation)	7
Figure 7	Evolution of Public Finances in Nominal (LBP) and Real Terms, 2019 vs. 2024 (pre-September 2024 Conflict Escalation)	7
Figure 8	Increase in Nominal GDP Prompting a Slight Decrease in Debt-to-GDP in 2024 is Not Indicative of improved Debt Dynamics	9
Figure 9	Despite Slightly Narrowing Current Account Deficit, Ratio to GDP Remains Similar to pre-Crisis Years in 2023	11
Figure 10	Reserve Accumulation in 2024 Reversed Due to Escalating Conflict	12
Figure 11	Dollar Earners Benefitted During the Time of FX Subsidies and Only Experienced a 4.9 percent Inflation by September 2024	14
Figure 12	Exchange Rate Stability as of July 2023 Drives Deceleration in Inflation	16
Figure 13	CPI Subcategories' Monthly Contribution to Headline Inflation (Aug 2019–Sep 2024)	16
Figure 14	Israeli Strikes and Casualties Across Lebanon, with a Concentration in the South and El Nabatieh Governorates	22
Figure 15	Close to 80 Percent of IDPs are from the El-Nabatieh and South Governorates	22
Figure 16	Flights Arriving at Beirut International Airport are at a Fraction of their pre-Escalation Levels	23
Figure 17	Losses in Travel Receipts (excluding Expat Spending) are Expected to Be Most Prominent in Q4-2024	24
Figure 18	The Five Governorates Heavily Affected by the Israeli Strikes Accounted for 80% of Total Economic Activity in 2023	25
Figure 19	Lebanon: The Conflict Cut Real GDP Growth in Lebanon by 6.6 Pp in 2024	27
Figure 20	Real GDP and NTL in Levels	33
Figure 21	Real GDP and NTL Growth	34

List of Tables

Table 1	Fiscal Balance (2020–2025)	8
Table 2	Selected Economic Indicators (2015–2024)	19
Table 3	Losses in Q4-2024 Outweigh those Materialized Over the Year from Q4-2023 to Q3-2024	24
Table 4	NTL-Implied Administrative Level Economic Activity Relative to Total Economic Activity	25
Table 5	Shocks to Consumption (in US\$ Million)	25
Table 6	Total Losses in Net Exports and Consumption Due to the Conflict (US\$ mln)	26
Table 7	Lebanon: Real GDP Estimates and Projections Under Alternative Conflict Scenario	26
Table 8	Estimates of the Inverse (reduced Form) Elasticity of Lights to GDP for Lebanon	34

List of Boxes

Box 1	Night-Time Lights and Economic Activity in Lebanon	5
Box 2	2025 Draft Government Budget Draft	8
Box 3	Measuring the Purchasing Power of Dollar Earners	13
Box 4	The Motives and Consequences of Lebanon's Designation as a Jurisdiction under Increased Monitoring (i.e., Grey Listing)	15
Box 5	Comparing the Current Conflict to the 2006 Hostilities	28



ACRONYMS

AER	Average Exchange Rate	IDP	Internally Displaced Person
AML	Anti-Money Laundering	IOM	International Organization for Migration
ARMA	Autoregressive Moving Average	LBP	Lebanese Pound
BdL	Banque du Liban	LEM	Lebanon Economic Monitor
BNR	Banknote Rate	MIDAS	Mixed-Data Sampling
BoP	Balance of Payments	ML	Money Laundering
CA	Current Account	MoF	Ministry of Finance
CAS	Central Administration of Statistics	NTL	Nighttime Light
CFT	Counter the Financing Of Terrorism	OLS	Operational Linescan System
CPI	Consumer Price Index	PMI	Purchasing Manager's Index
CRS	Common reporting standards	pp	Percentage Points
DMSP	Defense Meteorological Satellite Program	RBA	Risk-based approach
DNFBP	Designated non-financial businesses and professions	RD	Restricted Default
DRF	Deposit Recovery Fund	SIC	Special Investigation Commission
EdL	Electricité du Liban	TF	Terrorist Financing
EUR	Euro currency	UN	United Nations
FATF	Financial Action Task Force	US\$	United States Dollar
FX	Foreign Exchange	VAT	Value Added Tax
GDP	Gross Domestic Product	VIIRS	Visible Infrared Radiometer Suite
HFI	High-frequency indicators	XM-2023	First X months of the year
IMF	International Monetary Fund	yoy	Year over Year

PREFACE

The *Lebanon Economic Monitor* provides an update on key economic developments and policies over the past six months. It also presents findings from recent World Bank work on Lebanon. The *Monitor* places these developments, policies, and findings in a longer-term and global context and assesses their implications on the outlook for Lebanon. Its coverage ranges from the macro-economy to financial markets to indicators of human welfare and development. It is intended for a wide audience, including policy makers, business leaders, financial market participants, and the community of analysts and professionals engaged in Lebanon.

The *Lebanon Economic Monitor* is a product of the World Bank's Lebanon Macroeconomics, Trade and Investment (MTI) team. It was led by Dima Krayem (Senior Economist), Ibrahim Jamali (Consultant), and Naji Abou Hamde (Economic Analyst). The Special Focus entitled *Impact of the Conflict on the Lebanese Economy* was prepared by Dima Krayem (Senior Economist), Ibrahim Jamali (Consultant), and Naji Abou Hamde (Economic

Analyst). The *Lebanon Economic Monitor* has been completed under the guidance of Eric Le Borgne (Practice Manager), Norbert Fiess (Lead Economist), and Jean Christophe Carret (Country Director). Zeina Khalil (Communications Officer) is the lead on communications, outreach, and publishing.

The findings, interpretations, and conclusions expressed in this *Monitor* are those of World Bank staff and do not necessarily reflect the views of the Executive Board of The World Bank or the governments they represent.

For information about the World Bank and its activities in Lebanon, including e-copies of this publication, please visit www.worldbank.org/lb.

To be included on an email distribution list for this *Lebanon Economic Monitor* series and related publications, please contact Alain Barakat (abarakat@worldbank.org). For questions and comments on the content of this publication, please contact Dima Krayem (dkrayem@worldbank.org). Questions from the media can be addressed to Zeina Khalil (zelkhalil@worldbank.org).

EXECUTIVE SUMMARY

As a direct spillover of the conflict in the Middle East, the conflict in Lebanon has escalated sharply in September 2024 cutting real GDP growth by an estimated 6.6%. Economic activity is projected to contract by 5.7% in 2024 (compared to a 0.9% expansion under a no-conflict scenario). This contraction, equivalent to a loss of US\$4.2 billion in consumption and net exports, reflects the devastating impact of mass displacement, destruction, and reduced private consumption, which accounted for 134% of GDP in 2023. Key sectors such as tourism, a pillar of Lebanon’s economy, have suffered major losses in service exports. The destruction of capital stock and skilled labor migration further erodes Lebanon’s economic potential, posing significant risks to long-term growth (see Special Focus).

The cumulative decline in real GDP since 2019 is now expected to exceed 38 percent by the end of 2024, deepening Lebanon’s pre-existing economic crisis. Key indicators—including GDP growth, inflation, fiscal balance, and trade deficits—are increasingly skewed toward the downside. Although the exchange rate has stabilized since August 2023, this stability remains fragile and unsustainable, as it is not underpinned by a robust monetary framework. Instead, it depends on fiscal restraint and spending restrictions imposed on public institutions’ accounts at BdL, alongside increased revenue collection and

unspent public sector surpluses. This strategy has temporarily curbed currency in circulation but at the cost of delaying critical investments needed for recovery and development. Rising post-conflict funding demands threaten to deplete remaining foreign reserves or increase currency in circulation, which would undermine exchange rate stability and intensify inflationary pressures, highlighting the unsustainability of the current approach to exchange rate stabilization.

Lebanon’s fiscal position is expected to deteriorate further as ministries face urgent funding needs to support affected populations and maintain essential services and support recovery efforts. These pressures are compounded by reduced fiscal revenues, particularly from VAT. The sovereign default since March 2020 restricts Lebanon to minimal humanitarian aid for internal displacement and conflict response and comprehensive debt restructuring is needed to regain access to international capital markets, enabling the country to tackle its multifaceted challenges. The current account deficit, already a chronic issue, is likely to deepen. Imports of essential goods are expected to remain high, barring disruptions to trade routes, while declining exports and tourism receipts further strain Lebanon’s economic fundamentals. The current account deficit, for the most part, continues to be financed by a heavily dollarized cash economy, undermining the prospects for recovery.

This LEM also leverages innovative data and contextual analyses to capture aspects of the Lebanon's crisis that go beyond traditional economics. Night-time Lights (NTLs), a high-frequency and readily available tool to gain insights into Lebanon's economic activity, points to a dramatic 62.3 percent decline in luminosity from 2019 to 2023, reflecting the severe contraction in economic activity following the financial crisis. Comparing differences in purchasing power between a hypothetical dollar earner and an LBP earner, the report finds dollar earner whose income has been fully denominated in USD since 2019 would have experienced a cumulative 4.9 percent decrease in purchasing power from September 2019 to 2024, albeit with significant year-on-year fluctuations. Despite these fluctuations, this overall decline is dramatically lower than the staggering 5,970.7 percent cumulative inflation faced by an LBP earner over the same period.

The deepening economic contraction exacerbates unresolved macroeconomic chal-

lenges and highlights the urgent need for comprehensive reforms as the only viable path forward post-conflict. Key priorities include achieving macroeconomic stability, improving governance, enhancing public utilities, and bolstering human capital. The recent grey-listing by the Financial Action Task Force (FATF), which has heightened reputational risks and may lead to increased transaction costs and delays in capital inflows, underscores the urgent need to strengthen supervision and compliance in high-risk non-financial sectors to exit the grey list. Targeted investments are critical to support sustainable reforms, facilitate the recovery of essential services, and rebuild Lebanon's damaged capital stock. These efforts must also prioritize strengthening social safety nets and restoring critical infrastructure. Unlocking access to financing, particularly through comprehensive reform including banking sector resolution and debt restructuring, is vital to achieving these priorities and providing the institutional support necessary for Lebanon's recovery and long-term development.



ملخص تنفيذي

والحفاظ على الخدمات الأساسية ودعم جهود التعافي بعد الصراع. وتتفاقم هذه الضغوط بسبب انخفاض إيرادات المالية العامة، لا سيما تلك التي يتم تحصيلها من ضريبة القيمة المضافة. كما أن التخلف عن سداد الديون السيادية منذ مارس/آذار 2020 لا يتيح للبنان سوى الحصول على الحد الأدنى من المساعدات الإنسانية المخصصة للنزوح الداخلي والاستجابة للصراع، وهناك حاجة إلى إعادة هيكلة شاملة للديون لاستعادة القدرة على النفاذ إلى أسواق رأس المال الدولية، وتمكين البلاد من مواجهة تحدياتها المتعددة الأوجه. ومن المرجح أن يتفاقم عجز الحساب الجاري، وهو الذي يمثل مشكلة مزمنة بالفعل. ومن المتوقع أن تظل واردات السلع الأساسية مرتفعة، ما لم تحدث اضطرابات في خطوط التجارة، في حين أن تراجع الصادرات وعائدات السياحة يزيد من الضغط على أسس الاقتصاد اللبناني. ولا يزال عجز الحساب الجاري، في الجانب الأكبر منه، ممولاً من اقتصاد نقدي مدولر بدرجة عالية، مما يقوض احتمالات التعافي.

كما يعتمد هذا الإصدار من تقرير المرصد الاقتصادي للبنان على البيانات المبتكرة والتحليلات الخاصة بالسياق السائد لرصد أبعاد الأزمة اللبنانية التي تتجاوز الاقتصاد التقليدي. وتشير الأضواء الليلية (-Night Lights)، وهي أداة عالية التردد ومتاحة بسهولة للتوصل إلى رؤية أشمل عن النشاط الاقتصادي في لبنان، إلى انخفاض كبير بنسبة 62.3% في كثافة الأضواء من عام 2019 حتى عام 2023، مما يعكس الانكماش الحاد في النشاط الاقتصادي في أعقاب الأزمة المالية. وبمقارنة الاختلافات في القوة الشرائية بين شخص يحصل على دخل بالدولار الأميركي وآخر يحصل على دخل بالليرة اللبنانية، وجد التقرير أن الشخص الذي يكسب دخله بالدولار الأميركي والذي تم تقييم دخله بالكامل بالدولار الأميركي منذ عام 2019 كان سيواجه تراجعاً تراكمياً بنسبة 4.9% في القوة الشرائية من سبتمبر/أيلول 2019 حتى عام 2024. وإن كان ذلك مصحوباً بتقلبات كبيرة على أساس سنوي. رغم التقلبات، يبقى هذا التراجع أقل بكثير من التضخم التراكمي الهائل البالغ 5,970.7% الذي واجهه متقاضو الأجور بالليرة اللبنانية خلال نفس الفترة.

يؤدي تزايد معدلات الانكماش الاقتصادي إلى تفاقم تحديات الاقتصاد الكلي التي لم تجد حلولاً حتى الآن، كما يسلط الضوء على

امتداد مباشر للصراع في الشرق الأوسط، تصاعد الصراع في لبنان بشكل حاد في سبتمبر/أيلول 2024، مما أدى إلى خفض نمو إجمالي الناتج المحلي الحقيقي بنسبة تقدر بنحو 6.6%. ومن المتوقع أن ينكمش النشاط الاقتصادي بنسبة 5.7% في عام 2024 (مقارنة بنموه بنسبة 0.9% في ظل سيناريو عدم حدوث الصراع). ويعكس هذا الانكماش، الذي يعادل خسارة قدرها 4.2 مليار دولار في الاستهلاك وصافي الصادرات، التأثير المدمر للنزوح الجماعي والدمار وانخفاض معدلات الاستهلاك الخاص، الذي شكل 134% من إجمالي الناتج المحلي في عام 2023. وقد تكبدت قطاعات رئيسية مثل السياحة التي تُعد ركيزة أساسية من ركائز الاقتصاد اللبناني، خسائر كبيرة في صادرات الخدمات. ويؤدي تدمير مخزون رأس المال وهجرة العمالة الماهرة إلى المزيد من تآكل الإمكانات الاقتصادية للبنان، مما يشكل مخاطر كبيرة على النمو طويل المدى (راجع القسم الخاص من التقرير).

من المتوقع أن يتجاوز الانخفاض التراكمي في إجمالي الناتج المحلي الحقيقي منذ عام 2019 نسبة 38% بنهاية عام 2024، مما يؤدي إلى تعميق الأزمة الاقتصادية القائمة في لبنان. وتميل المؤشرات الرئيسية، ومنها نمو إجمالي الناتج المحلي، والتضخم، ورسيد المالية العامة، والعجز التجاري، بشكل متزايد نحو الهبوط. وبالرغم من استقرار سعر الصرف منذ أغسطس/ آب 2023، إلا أن هذا الاستقرار لا يزال هشاً وغير مستدام، نظراً لغياب الإطار النقدي القوي اللازم لدعمه. فهو يعتمد، بدلاً من ذلك، على القيود المالية وقيود إنفاق مفروضة على حسابات المؤسسات العامة لدى مصرف لبنان، إلى جانب زيادة تحصيل الإيرادات وفوائض القطاع العام غير المنفقة. وقد نجحت هذه الإستراتيجية في كبح الكتلة النقدية المتداولة بصورة مؤقتة، لكن على حساب تأخير الاستثمارات الحيوية اللازمة لتحقيق التعافي والتنمية. ويهدد تزايد متطلبات التمويل في مرحلة ما بعد الصراع باستنزاف الاحتياطات الأجنبية المتبقية أو زيادة الكتلة النقدية المتداولة، الأمر الذي من شأنه أن يقوض استقرار سعر الصرف ويزيد من الضغوط التضخمية، مما يسلط الضوء على عدم استدامة النهج الحالي لتحقيق استقرار سعر الصرف. من المتوقع أن يزداد تدهور وضع المالية العامة في لبنان، حيث تواجه الوزارات احتياجات تمويلية عاجلة لدعم السكان المتضررين

الاستثمارات الموجهة لضرورة لدعم الإصلاحات المستدامة، وتسهيل استعادة الخدمات الأساسية، وإعادة بناء مخزون رأس المال المتضرر في لبنان. ويجب أن تعطي هذه الجهود الأولوية أيضاً لتعزيز شبكات الأمان الاجتماعي واستعادة خدمات البنية التحتية الحيوية. ويعد تيسير حصول لبنان على التمويل، لا سيما من خلال الإصلاح الشامل الذي يتضمن استعادة الاستقرار في القطاع المصرفي وإعادة هيكلة الديون، أمراً حيوياً لتحقيق هذه الأولويات وتوفير الدعم المؤسسي اللازم لتحقيق التعافي والأهداف الإنمائية طويلة الأجل في لبنان.

الحاجة الملحة لإجراء إصلاحات شاملة بوصفها السبيل الوحيد للمضي قدماً في مرحلة ما بعد الصراع. وتشمل الأولويات الرئيسية تحقيق استقرار الاقتصاد الكلي، وتعزيز الحوكمة، وتحسين أداء الخدمات والمرافق العامة، وتعزيز رأس المال البشري. وأدى إدراج لبنان على القائمة الرمادية لمجموعة العمل المالي مؤخراً إلى زيادة المخاطر المتعلقة بالسمعة، وقد يؤدي إلى ارتفاع تكاليف المعاملات والتأخير في تدفقات رأس المال، مما يؤكد الحاجة الملحة لتعزيز إجراءات الرقابة والامتثال في القطاعات غير المالية عالية المخاطر بهدف رفع اسم لبنان عن هذه القائمة. وتعد

RÉSUMÉ ANALYTIQUE

Conséquence directe du conflit au Moyen-Orient, le conflit au Liban s'est fortement aggravé en septembre 2024, entraînant une baisse d'environ 6,6 % de la croissance du PIB réel. L'activité économique devrait se contracter de 5,7 % en 2024 (contre une expansion de 0,9 % dans un scénario sans conflit). Cette contraction, qui équivaut à une perte de 4,2 milliards de dollars en termes de consommation et d'exportations nettes, reflète l'impact dévastateur des déplacements massifs, des destructions et de la réduction de la consommation privée, qui représentait 134 % du PIB en 2023. Des secteurs clés comme le tourisme, pilier de l'économie libanaise, ont subi des pertes importantes en termes d'exportations de services. La destruction du stock de capital et la migration de la main-d'œuvre qualifiée érodent encore plus le potentiel économique du Liban, ce qui pose des risques importants pour la croissance à long terme (voir *Special Focus*).

La baisse cumulée du PIB réel observée depuis 2019 risque désormais de dépasser 38 % d'ici à la fin de 2024, ce qui aggravera la crise économique préexistante du Liban. Les indicateurs clés, notamment la croissance du PIB, le taux d'inflation, le solde budgétaire et les déficits commerciaux, sont de plus en plus orientés à la baisse. Bien que le taux de change se soit stabilisé depuis août 2023, cette stabilité reste précaire et non durable, faute d'un cadre monétaire solide. Au contraire, elle

dépend des restrictions budgétaires et des limitations de dépenses imposées sur les comptes des institutions publiques à la Banque du Liban (BDL), ainsi que de l'accélération du recouvrement des recettes et des excédents non dépensés du secteur public. Cette stratégie a permis de limiter temporairement la circulation des devises, mais au prix d'un retard dans les investissements essentiels au redressement et au développement. L'augmentation des demandes de financement post-conflit risque d'épuiser les réserves de change restantes ou d'accroître la circulation des devises, ce qui compromettrait la stabilité du taux de change et intensifierait les pressions inflationnistes, soulignant le caractère non durable de l'approche actuelle de stabilisation du taux de change.

La situation budgétaire du Liban risque encore de se détériorer, car les ministères doivent faire face à des besoins de financement urgents pour soutenir les populations touchées, maintenir les services essentiels et soutenir les efforts de redressement. Ces pressions sont aggravées par la diminution des recettes fiscales, en particulier de la TVA. En situation de défaut souverain depuis mars 2020, le Liban est limité à une aide humanitaire minimale pour les déplacements internes et la riposte au conflit, et une restructuration complète de la dette est nécessaire pour rétablir l'accès aux marchés internationaux des capitaux, ce qui permettrait au pays de faire face aux problèmes multiformes auxquels il est

confronté. Le déficit du compte courant, déjà chronique, devrait encore se creuser. Les importations de biens essentiels devraient rester élevées, à moins que les voies commerciales ne soient perturbées, alors que la baisse des exportations et des recettes touristiques continue de peser sur les fondamentaux économiques du pays. Le déficit du compte courant continue, pour l'essentiel, d'être financé par une économie monétaire fortement dollarisée, ce qui compromet les perspectives de reprise.

La présente édition du Rapport de suivi de la situation économique du Liban (Lebanon Economic Monitor, ou LEM) de la Banque mondiale s'appuie également sur des données et des analyses contextuelles innovantes, permettant de saisir les aspects de la crise libanaise qui dépassent le cadre de l'économie traditionnelle. La luminosité nocturne, ou Night-time Lights (NTLs), un outil facilement disponible qui fournit des données à haute fréquence sur l'activité économique du Liban, indique une baisse spectaculaire de 62,3 % de la luminosité entre 2019 et 2023, reflétant le grave ralentissement de l'activité économique consécutif à la crise financière. En comparant les écarts de pouvoir d'achat entre un travailleur hypothétique percevant un revenu en dollars et un autre rémunéré en livres libanaises (LBP), le rapport constate que le premier, dont le revenu est entièrement libellé en USD depuis 2019, aurait subi une baisse cumulée de 4,9 % de son pouvoir d'achat de septembre 2019 à 2024, bien qu'avec d'importantes fluctuations d'une année sur l'autre. Malgré ces fluctuations, cette baisse globale

est considérablement inférieure à l'inflation cumulée vertigineuse de 5 970,7 % à laquelle a été confronté un salarié rémunéré en livres libanaises au cours de la même période.

L'aggravation du ralentissement économique exacerbe les problèmes macroéconomiques non résolus et souligne l'urgence de mettre en œuvre des réformes globales, seule voie viable après la sortie du conflit. Les principales priorités incluent la stabilité macroéconomique, l'amélioration de la gouvernance, le renforcement des services publics et le développement du capital humain. L'inscription récente du Liban sur la liste grise du Groupe d'action financière (GAFI), qui a accru les risques pour sa réputation et pourrait entraîner une hausse des coûts de transaction ainsi que des retards dans les entrées de capitaux, souligne la nécessité urgente de renforcer la supervision et la conformité dans les secteurs non financiers à haut risque afin de sortir de cette liste grise. Des investissements ciblés sont essentiels pour soutenir des réformes durables, faciliter le rétablissement des services essentiels et reconstruire le stock de capital endommagé du Liban. Ces efforts doivent également donner la priorité au renforcement des filets de sécurité sociale et à la remise en état des infrastructures essentielles. Le déblocage de l'accès au financement, en particulier par le biais d'une réforme globale comprenant la résolution de la crise du secteur bancaire et la restructuration de la dette, est essentiel pour atteindre ces priorités et fournir le soutien institutionnel nécessaire au redressement et au développement à long terme du Liban.

THE POLICY CONTEXT

Since October 2023, and as a direct spillover of the conflict in the Middle East, military confrontations on the southern border with Israel have escalated, evolving into a full-blown conflict by September 2024. Before this significant escalation, confrontations largely contained to southern Lebanon had already resulted in hundreds of casualties, injuries, and the displacement of over 100,000 individuals. Tens of thousands of households lost their livelihoods, and hundreds of homes were destroyed amid massive damage to local infrastructure. Agricultural lands in the south were severely affected, with substantial burning and contamination.

The significant conflict escalation starting in September 2024 has led to thousands of casualties, mass displacement, and unprecedented destruction. By mid-November 2024, the Ministry of Public Health reported over 3,500 deaths and 14,500 injuries. More than 1.2 million people, or a quarter of Lebanon's population, have been displaced, marking one of the largest displacements in the country's history and unravelling dire humanitarian needs. The International Organization for Migration (IOM),¹ has registered more than 880,000 Internally Displaced

Persons (IDPs) as of November 14th, primarily from the South and El Nabatieh governorates, with close to a quarter residing in 1,027 government-designated shelters across the country. By October 7th, 326,000 individuals had left the country, around half of whom are Lebanese citizens.² Universities and schools struggle to resume the academic year, with many converted to shelters for the internally displaced, while healthcare systems face severe resource shortages. The Lebanon Interim Damage and Loss Assessment (DaLA)³ finds that damages to physical structures alone amount to US\$3.4 billion and that economic losses have reached US\$5.1 billion.

The conflict has introduced yet another shock to Lebanon's already crisis-ridden economy

¹ International Organization for Migration (IOM), Nov 14 2024. DTM Mobility Snapshot – Round 62 – 14-11-2024. IOM, Lebanon.

² International Organization for Migration (IOM), Oct 07 2024. DTM Lebanon – Mobility Snapshot – Round 51 – 07-10-2024. IOM, Lebanon.

³ World Bank. Lebanon Interim Damage and Loss Assessment (DaLA): Assessment Report (English). Washington, D.C.: World Bank Group. Link.

and stalled political landscape. Prior to the conflict, Lebanon remained mired in a crippling socio-economic crisis for over four years, amidst political and institutional vacuum. A presidential vacuum for more than two years, a caretaker government with restricted executive powers, an interim central bank governor, and limited legislative action by parliament, all contribute to a bleak outlook on sustainable economic recovery and comprehensive reform. This already precarious situation has been further compounded by the conflict, straining the already limited resources available to address urgent needs.

On October 25, 2024, Lebanon was designated by the Financial Action Task Force (FATF) as a jurisdiction under increased monitoring (i.e., placed on the “grey list”). While this designation is not expected to further impact Lebanon’s already strained correspondent banking relationships, it poses reputational risks and may lead to higher transaction costs and delays in capital inflows. To exit the grey list, Lebanon must strengthen supervision in high-risk non-financial sectors and enhance its understanding and mitigation of risks arising from corruption. If Lebanon is blacklisted, it could face severe restrictions on international transactions, limited access to foreign aid, and exposure to sanctions, further undermining its integration within the global financial landscape (refer to Box 4).

On September 3, Former Central Bank governor Riad Salameh was detained, signaling a rare potential case of accountability if his prosecution proceeds to trial. This followed an interrogation by the Lebanese judiciary into allegations of corruption, embezzlement of public funds, and illicit enrichment. Salameh served as central bank governor for thirty years before leaving his position in July 2023. Even before his term ended, he was already under investigation by several European countries for corruption and money laundering allegations. In May 2023,

Interpol issued red notices declaring him wanted by both the French and German authorities. The United States, United Kingdom, and Canada had also jointly sanctioned Salameh in August 2023. Salameh left his post after one of the largest financial crises in modern history, leaving the Central Bank and the financial system with losses exceeding US\$70 billion. Salameh has remained in detention since September; should his prosecution proceed to trial, it would represent one of the rare cases of accountability faced by a senior Lebanese official.

The paucity of reliable economic data, likely worsened by the conflict, undermines sound policymaking, budget preparation, accountability, and transparency. This long-standing challenge recently prompted Fitch Ratings, an international credit ratings agency, to withdraw Lebanon’s sovereign rating. Lebanon’s longstanding weaknesses in statistical capacity were already magnified by the 2019 economic and financial crisis. The financial crisis left public institutions with inadequate human and technological resources, and the conflict has further strained these limited capacities, hindering public servants’ ability to fulfill their duties. Over three years of high volatility and multiple exchange rates have further complicated accurate reporting of fiscal aggregates and the publication of fiscal accounts. These persistent data gaps not only hinder economic monitoring and analysis but also critically impair the ability to prepare budgets and formulate sound policies, perpetuating uncertainty and inefficiency in governance. On July 23, 2024, Fitch Ratings formally withdrew Lebanon’s rating, citing the absence of official fiscal and national accounts data since 2021. Similarly, Standard & Poor’s, in its report on August 19, 2024, highlighted the infrequent and limited data disclosures in Lebanon as major factors contributing to unusually high uncertainty in historical data and economic forecasts.

RECENT ECONOMIC DEVELOPMENTS

Output and Demand

The real GDP contraction has been revised down to 0.8 percent in 2023, reflecting the conflict's knock-on effects on economic growth in Q4 2023 and weaker-than-expected high-frequency data.

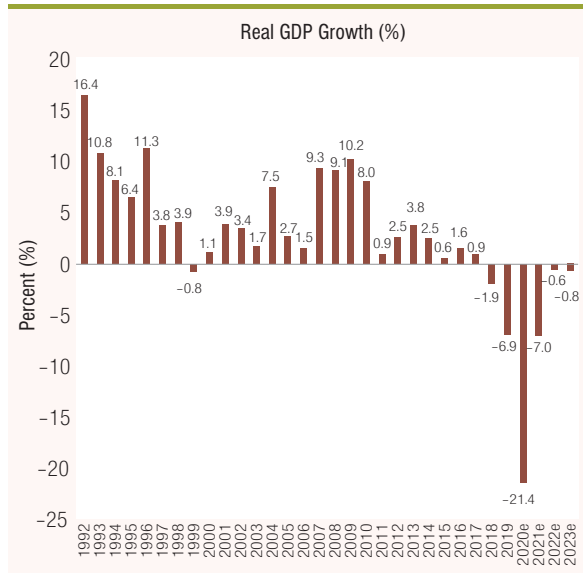
The conflict along Lebanon's southern border, which began on October 8, 2023, dented the strong upward trajectory in tourism starting in Q4-2023. While tourist arrivals increased by 25.3 percent in 9M-2023 relative to 9M-2022 (itself a record year following COVID-19 restrictions), the upward trend reversed sharply in Q4-2023 with tourist arrivals decreasing by 24.1 percent, relative to Q4-2022. Moreover, significant destruction and internal displacement from South Lebanon and El Nabatieh governorates, have also weighed on consumption and economic activity. The conflict led to an overall contraction of 1 percent in GDP relative to the pre-conflict baseline (i.e., a real GDP contraction of 0.8 percent in lieu of a tepid growth of 0.2 percent) (refer to special focus of the Fall 2023 Lebanon Economic Monitor). The contraction in real GDP growth is expected to deepen significantly in 2024 as the conflict escalates and prolongs, driven

primarily by a severe shock to tourism receipts—the main engine of economic growth—as well as substantial declines in consumption due to mass displacement and extensive disruptions to economic activity (refer to special focus below).

Data on high frequency indicators (HFIs) and nowcasts of real GDP, corroborate the evidence of a widening contraction in real GDP in 2023. On a year-on-year basis and using mean-level data, Night-Time Lights suggest a decline in economic activity in October and December 2023.⁴ Indicators of activity in the real estate sector offer mixed evidence. Whereas cement deliveries increased by 10.8 percent

⁴ Full-year alternative data on Night-Time Lights, which are examined in Box 1, do not suggest a contraction in economic activity in 2023. Although they contain information on economic activity, Night-Time Lights data are imperfect proxies and time series predictors of real GDP growth, as discussed next, and must be interpreted with care. Hence, they cannot be relied upon as exclusive predictors of real GDP growth. These alternative and higher frequency data are, therefore, considered and included as one of the HFIs in the nowcasting models of real GDP growth.

FIGURE 1 • Real GDP Contraction Since 2018



Source: CAS and WB Staff calculations.

(yoy) in 2023, construction permits fell by a notable 43 percent (yoy). The number of cleared cheques in foreign and domestic currencies declined by, respectively, 84.9 and 56.1 percent (yoy). Other HFIs also point to a slowdown in economic activity in 2023. Imports of machinery and electrical equipment, as well as imports of vehicles, aircraft, vessels, and transport equipment (in net weight) decreased by 41.2 and 42.1 percent, respectively.⁵ Except for June and July of 2023, two months in which it narrowly edged above 50, the BLOM-PMI index remained in contractionary territory for the entirety of 2023 and has been trending downward since October 2023.⁶ Additionally, nowcasts of real GDP for 2023—using an expanded set of HFIs and sophisticated econometric models⁷—indicate a deeper contraction in real GDP for 2023, supporting a downward revision in growth projections.

From the demand side, private consumption and net exports positively contributed to real GDP growth in 2023. The contribution of private consumption to GDP growth stood at 0.2 percentage points (pp). In a counterfactual scenario of absence of conflict, the contribution of private consumption to real GDP growth would have been larger. The decline in imports contributed 0.2 percentage points (pp) to real GDP growth, while exports made the largest

FIGURE 2 • Consumption and Net Exports are Positive Contributors to Real GDP Growth in 2023



Source: CAS and WB Staff calculations.

- Imports of capital goods provide a proxy for investment spending and are used by the Central Administration of Statistics to estimate investment. The set of HFIs employed by the WB staff to gauge the state of the economy is enlarged to encompass these indicators.
- A reading of the PMI that is below 50 suggests an economic contraction, whereas a reading above 50 indicates an improvement in economic activity. The increase in the PMI in June and July 2023 corresponds to the buoyant tourism season in the summer of 2023. The PMI stood at 48.4 in December 2023.
- The econometric models used to nowcast economic growth since the 2019 financial crisis include: Mixed Data Sampling (MIDAS) regressions with a large set of HFIs, a dynamic factor model, neural networks, and more recently elastic net and Least Absolute Shrinkage and Selection Operator (LASSO) regressions. Further details on the methodology employed to nowcast real GDP are provided in the Annex to the Spring 2023 Lebanon Economic Monitor: The Normalization of Crisis is No Road for Stabilization. The set of HFIs is augmented to include construction permits and imports of capital goods. The results from the LASSO and elastic net regularization suggest that the largest loadings on real GDP growth are associated with cleared cheques, the coincident indicator of BdL, imports of machines and electrical equipment, and construction permits. Due to potential model misspecification and uncertainty about individual HFIs, forecast combination (or averaging) is employed. Additional information on forecast combination is also offered in Annex to the Spring 2023 Lebanon Economic Monitor: The Normalization of Crisis is No Road for Stabilization.

BOX 1. NIGHT-TIME LIGHTS AND ECONOMIC ACTIVITY IN LEBANON

Background

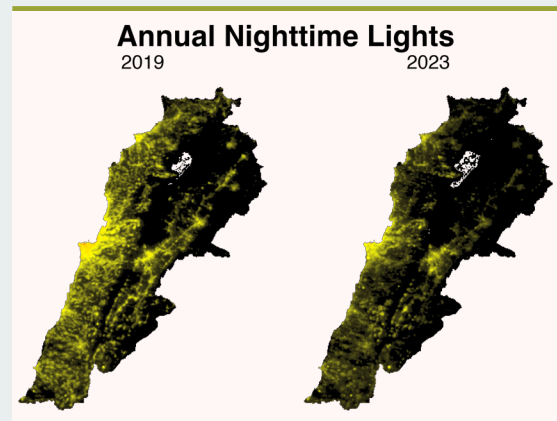
Night-time Lights (NTLs) offer a valuable alternative to traditional national accounts, providing a high-frequency and readily available measure of economic activity at the national and administrative levels. National accounts are prone to errors, subject to revisions, and often delayed. This is particularly true in countries with weak statistical capacity and longstanding data weaknesses, such as Lebanon. The *2016 Systematic Country Diagnostic* highlights Lebanon's poor statistical performance compared to countries at a similar level of development.⁸ The 2019 financial crisis further exacerbated these challenges, with Lebanon's score on the World Bank's statistical capacity indicator dropping sharply from 51.1 in 2018 to 44.4 in 2019 and 2020.⁹ NTL data are especially useful in countries with limited data availability, offering insights into local (i.e., subnational) economic activity. Existing research also indicates that NTLs can capture informal economic activity and are particularly effective in measuring economic performance in urban and metropolitan areas with large retail and service sectors. However, they are less effective in regions where agriculture dominates.¹⁰ (For an in-depth analysis of the evolution of NTLs, refer to annex II.)

The Evolution of NTLs in Lebanon

Data on Night-time Lights (NTLs) in Lebanon, collected by the World Bank's data lab,¹¹ reveal a dramatic 62.3 percent decline in luminosity from 2019 to 2023, reflecting the severe contraction in economic activity following the financial crisis. Figure 3 demonstrates that luminosity in Lebanon has dimmed significantly since 2019. Using VIIRS data from Black Marble, NTL radiance decreased by about 62.3 percent from 2019 to 2023 (Figure 3). The decrease in NTL from 2019 to 2022 is spatially broad-based, with Lebanon's governorates experiencing declines in luminosity ranging from 78.7 percent in Akkar and 75.4 percent in Baalbek El-Hermel to 48 percent in the Bekaa. Lebanon's capital, Beirut, experienced a decline in NTL of 56.8 percent over the same period. Despite their spatial accuracy, NTL data may not detect electricity generable using renewable energy and power outages, particularly during the height of fuel shortages of summer 2021, could affect the high frequency (i.e., quarterly) empirical relation between real GDP and NTL. Moreover, temporary shortages may not align with satellite imaging times, leading to potential overestimation or underestimation of economic activity. The empirical analysis of the relation between NTL and real GDP, offered next, employs data through 2020 and is less prone to the latter caveats.

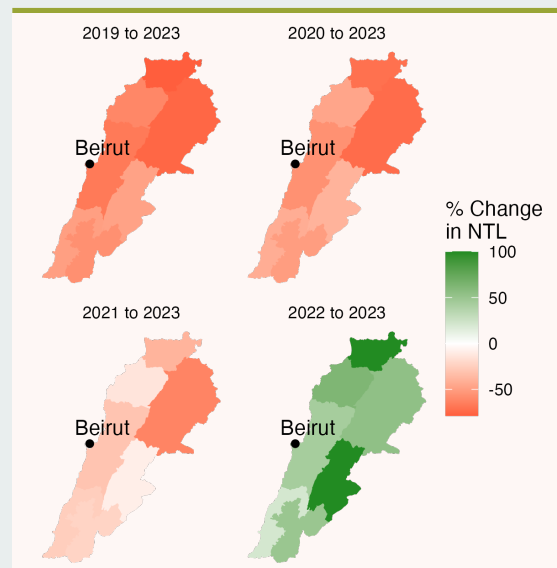
The dynamics of NTL growth suggest that the country-wide contraction in economic activity accelerated in 2021 and 2022 with the growth in NTL contracting by about 34.9 and 51.3 percent, respectively, relative to a decline of 21.5 percent in 2020. Except for Beirut in 2021, which experienced a modestly lower contraction in NTL growth of 31.7 percent, the administrative-level data corroborate the more precipitous decline in economic activity in 2021 and 2022 (Figure 4). In contrast, NTL growth turned positive between 2022 and 2023 suggesting a broad-based pick-up in economic activity (Figures 4 and 5). The decrease in nighttime radiance is due, in part, to the rolling blackout strategy that was adopted in the post-2019 period by Lebanon's electricity utility, the Electricité du Liban (EdL), as propounded in the 2022 Public Finance Review. The lack of public service provision by EdL, which is due to its inability to secure cash and foreign exchange for fuel payments, was exacerbated by the massive loss in purchasing power that made households' and business' substitution to private electricity generation cost prohibitive and slow. In this context, Mercy Corps (2023)¹² notes that

FIGURE 3 • Change in Luminosity between 2019 and 2023



Source: WB Data Lab.

FIGURE 4 • Changes in NTL at the First Administrative (i.e., Governorate) Level



Source: WB Data Lab.

(continued on next page)

BOX 1. NIGHT-TIME LIGHTS AND ECONOMIC ACTIVITY IN LEBANON *(continued)*

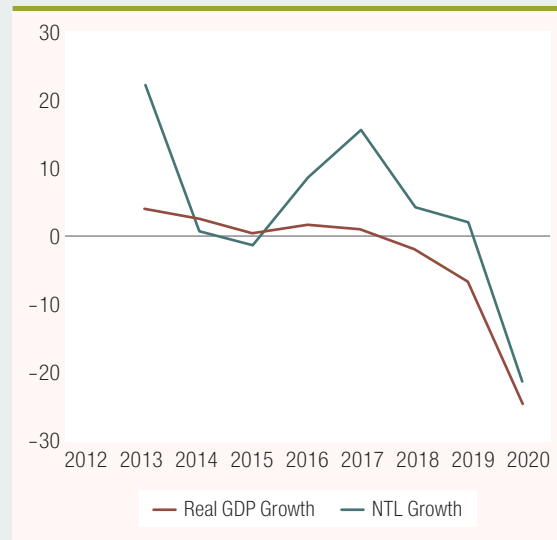
the disorderly removal of fuel subsidies in September 2021 was followed by a more rapid contraction in luminosity. Drawing on the results of a survey, Mercy Corps (2023) find that NTLs are positively associated with income levels.

Gauging economic activity from NTL

The relation between real GDP and NTL is examined using annual data for the period 2013 to 2020 for Lebanon. Figures 4 and 5 provide, respectively, the time series dynamics of real GDP and data on NTL (VIIRS from Black Marble) in levels and growth rates for Lebanon (for an in-depth analysis of the methodology refer to Annex II).

The correlation between real GDP and NTL growth over the period 2013 to 2020 is 0.84. Despite the small sample size, the inverse elasticity of output to lights of 1.16 is highly significant. Moreover, the growth in NTL explains about 71.1 percent of the change in GDP growth. The latter estimate is biased due to measurement errors and not directly usable because it does not represent a structural elasticity of output to lights. However, the results suggest that the growth in NTL is a useful gauge of economic activity for Lebanon, despite the small sample. The structural estimates of the elasticity reported in the literature, which fall within similar ranges, can be relied on to provide light-based estimates of real GDP growth in 2021, 2022, and 2023.^{9h} The light-based estimates suggest a widening contraction in real GDP growth in 2021 and 2022. Light-based direct forecasts of real GDP growth for 2021 and 2022 corroborate the latter findings.

FIGURE 5 • Real GDP and NTL Growth



Source: WB Data Lab.

^a Indeed, the 2016 *Systematic Country Diagnostic* indicates that Lebanon fares only worse than Gabon in terms of statistical capacity for a group of comparators with a similar real GDP per capita in purchasing power parity terms.

^b The latter score places Lebanon in the lowest quintile of all countries for which data on the statistical capacity indicator was disseminated in 2020.

^c Hu and Yao (2022) write: "During economic downturns, formal economic activity disappears and informal economic activity springs up. While not recorded by official data, informal economic activity is captured by night lights. As a result, the new measure suggests higher growth than official data. Conversely, the flow of economic activity from the informal to the formal sector during economic upturns could make official GDP growth higher than the new measure".

^d See, for example, Chen and Nordhaus (2019). An excellent review of the literature is provided by Gibson, Olivia, and Boe-Gibson (2020).

^e Data on NTL can be obtained from the Earth Observation Group of the Colorado School of Mines. However, the World Bank's data lab relied on data from Black Marble, which employs different, and potentially more advanced algorithm to remove the effect of ephemeral light, for example, to process NTL data.

^f Mercy Corps (2023). Night-time light reflectance: Potential uses in Lebanon. Thematic report.

^g Henderson, Storeygard, and Weil (2012) provide estimates of the structural elasticity of elasticity of lights with respect to income that ranges from 1.034 to 1.72. Hao and Yu (2022)'s estimate the structural elasticity of nighttime lights to GDP to be around 1.3 whereas Beyer, Hu, and Yao (2022) estimates of the structural elasticity range from 1.46 to 1.64 for emerging markets and developing economies. Hao and Yu (2022)'s sample includes data for Lebanon.

^h More specifically, the elasticity of 1.55 provided by Beyer, Hu, and Yao (2022) for emerging markets and developing economies can be employed for Lebanon.

positive contribution at 0.9 pp. In contrast, government expenditures, which declined by 0.9 pp, were the largest negative contributor to real GDP growth, followed by investment, with a negative contribution of 0.2 pp.

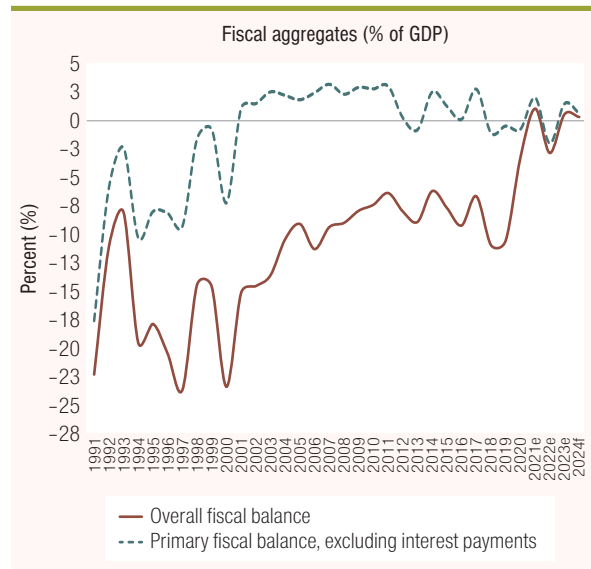
Fiscal Developments

The modest improvement in the fiscal stance of 2023, was expected to extend into 2024 prior

to the escalation in conflict in September 2024.

Increased revenues, resulting from the correction of exchange rate mis-valuations for customs and taxes, and expenditure restraints in part driven by the lack of a ratified budget in 2023, resulted in an estimated fiscal surplus of 0.5 percent in 2023, with revenues and expenditures at 13.7 percent and 13.2 percent of GDP, respectively. In addition, monetary financing of the budget has been halted since July 2023 due to fiscal surpluses, eliminating the need for monetization. The 2024 government budget, ratified in February

FIGURE 6 • Overall and Primary Deficits are Projected for 2023 and 2024 (pre-September 2024 Conflict Escalation)

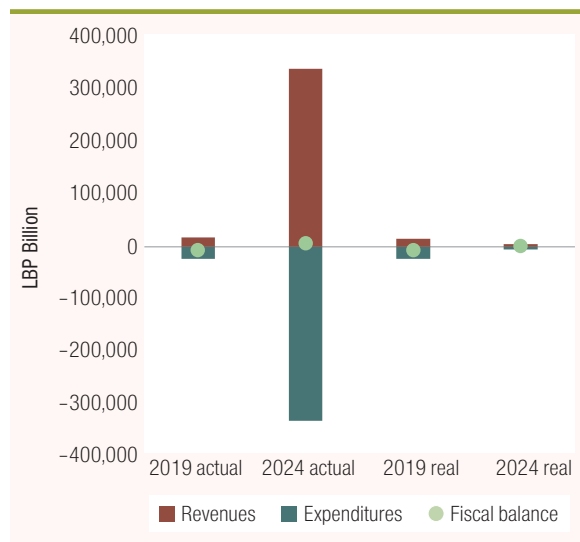


Sources: Lebanese authorities and WB staff calculations.

2024, projected a zero fiscal balance with revenues and expenditures at 13.6 percent of GDP (based on World Bank GDP estimates for 2024).

A fiscal surplus (on a cash basis) of 0.2 percent is projected for 2024, based on estimates made prior to the escalation of conflict in September 2024. This figure excludes anticipated revenue declines and potential increases in expenditures in Q4 due to the conflict, which are likely to worsen the fiscal stance (Figure 6). Revenues in 2024 are expected to exceed estimations of the ratified government budget and reach about 15 percent of GDP; LBP340,100 billion (US\$3,800 million) in nominal terms, representing a 44.1 percent nominal increase from 2023. This is in part due to better-than-expected tax collection rates in 9M 2024. Expenditures, on the other hand, are expected to remain below collected revenues, reaching 14.8 percent of GDP in 2024, and LBP334,602 billion (US\$3,739 million) in nominal terms, representing a 47 percent nominal increase from 2023 (Figure 7). Additionally, the escalation of conflict in Q4-2024 has likely had a significant impact on revenue collection, adversely affecting the fiscal stance, especially as emergency fiscal spending is allocated to meet urgent humanitarian needs for the remainder of the year. Although the government

FIGURE 7 • Evolution of Public Finances in Nominal (LBP) and Real Terms, 2019 vs. 2024 (pre-September 2024 Conflict Escalation)



Sources: Lebanese authorities and WB staff calculations.

approved a draft budget for 2025 prior to the escalation of conflict in September 2024, the budgeted revenues, expenditures, and resulting fiscal outcomes are expected to differ significantly from initial projections due to the conflict (refer to Box 2).

Prior to the escalation of conflict, Lebanon's debt-to-GDP ratio was projected to decrease to 141.9 percent in 2024, although this decline does not indicate improved debt dynamics (Figure 8). The reduction is primarily attributed to a base effect from higher nominal GDP following the stabilization of the exchange rate in August 2023, with minimal contribution from decreased interest expenses, as interest payments on Eurobonds have been halted since the sovereign default in March 2020.⁸ Interest expenses are projected to be 0.3 percent of GDP in 2024, down from 0.9 percent in 2023. However, the expected decline in nominal GDP due to the escalation of conflict is likely to increase the debt-to-GDP ratio. Lebanon's debt remains unsustainable amid an ongoing sovereign default, and debt dynamics show no improvement.

⁸ Except for the concessional loans, the treasury has resumed the settlement of external loans with maturities beginning in 2024 and cleared up some of the accumulated arrears on previous loans.

BOX 2. 2025 DRAFT GOVERNMENT BUDGET DRAFT

On September 23, 2024, the Council of Ministers (CoM) approved a draft budget for 2025. The draft was prepared before the escalation of the conflict and was sent to parliament within the constitutional deadlines, but it has not yet been discussed. Fiscal outcomes are expected to deviate significantly from the draft due to the conflict and its aftermath, which is likely to reduce revenues, increase expenditures, and widen the deficit. Clarity on the way forward remains limited. Parliamentary discussions may result in amendments to the draft without the authority to increase the overall spending envelope, meaning the expenditure limits will remain unchanged but could be reallocated. By the end of January, if parliament has not discussed the budget, it may be ratified by the Council of Ministers (CoM) and become effective. If the budget is neither ratified by parliament nor approved by the CoM, spending in 2025 will be governed by the 1/12th rule based on the 2024 budget.

The current budget draft targets a zero fiscal deficit^a

Revenues are projected to reach 21.8 percent of GDP, representing a 78 percent contraction in real terms compared to 2019.^b Revenue projections in the ongoing crisis are primarily based on cash flow trends, with key aggregates including revenue cash flows in local currency (more than half of which come from import taxes), in addition to FX revenues from the ports and airport fees. In line with pre-crisis budgets, the draft relies heavily on indirect taxes and does not consider more progressive revenue measures. Tax revenues account for 81.2 percent of total revenues, predominantly composed of indirect taxes, standing at 64.9 percent of total revenues.

To increase revenues, the draft also proposes increasing rates for various fees (such as licenses and official transactions) and penalties, primarily by adjusting their nominal values to align with inflation, thereby restoring the value of fees that had been eroded by years of triple-digit inflation. Some of the proposed increases in fees include (i) the transaction fees that are collected by the General Security; (ii) stamp fees for invoices issued by public institutions, municipalities in LBP, USD, and EUR; (iii) the penalty on the delay in executing death certificates; (iv) the annual dues on patents; and (v) import license fees. However, the draft budget notably allows the usage of e-stamps for official documents, which would potentially help curb the black market for stamps that arose after their shortage. The draft squanders another opportunity at more equitable taxation by proposing an extension of the Land Tax law, thereby continuing to favor the affluent.

Expenditures are budgeted at 21.8 percent of GDP. Current expenditures account for 88.5 percent of expenditures, with salaries, wages, and social benefits (including pensions) amounting to 48.1 percent of expenditures. Interest payments constitute 7.1 percent of total

TABLE 1 • Fiscal Balance (2020-2025)

	Actual	Actual	Budget	WB Est.	Budget Draft	WB Est.	Original Budget Draft	Modified Budget Draft	Budget Law	Budget Draft (30/08)
LBP Bln	2020	2021	2022	2022	2023	2023	2024	2024	2024	2025
Revenue	15,341	20,264	29,986	35,137	147,739	236,000	258,785	277,924	308,435	410,129
Expenditure	19,236	17,861	40,870	51,849	181,923	227,663	300,519	295,113	308,435	427,695
Fiscal Balance	-3,895	2,403	-10,884	-16,712	-34,184	8,337	-41,734	-17,190	0	-17,567

% of GDP	Actual	Actual	Budget	WB Est.	Budget Draft	WB Proj.	Original Budget Draft	Modified Budget Draft	Budget Law	Budget Draft (30/08)
	2020	2021	2022	2022	2023	2023	2024	2024	2024	2025
Revenue	13.1	7.5	5.2	6.1	8.6	13.7	13.2	14.2	15.1	20.1
Expenditure	16.4	6.6	7.1	9.0	10.6	13.2	15.4	15.1	15.1	21.0
Fiscal Balance	-3.3	0.9	-1.9	-2.9	-2.0	0.5	-2.1	-0.9	0.0	-0.9

USD Mln	Actual	Actual	Budget	WB Est.	Budget Draft	WB Proj.	Original Budget Draft	Modified Budget Draft	Budget Law	Budget Draft (30/08)
	2020	2021	2022	2022	2023	2023	2024	2024	2024	2025
Revenue	4,160	1,724	1,098	1,287	1,721	2,750	3,015	3,238	3439.4	4582.4
Expenditure	5,216	1,519	1,497	1,899	2,120	2,653	3,501	3,438	3439.4	4778.7
Fiscal Balance	-1,056	204	-399	-612	-398	97	-486	-200	0.0	-196.3

* The 2025 GDP ratios are calculated using the World Bank's estimated GDP for 2024, as the World Bank is not producing a 2025 forecast due to heightened uncertainty.

(continued on next page)

BOX 2. 2025 DRAFT GOVERNMENT BUDGET DRAFT *(continued)*

expenditures. Foreign interest payments have been reinstated in the draft budget, accounting for 5.4% of total expenditures, primarily allocated to servicing foreign loans. Moreover, capital expenditure is allocated 11.5 percent of total expenditures.

Once again, the draft budget is lacking much needed changes to fiscal and tax policies. Ambitious fiscal reforms require revamped tax policies; however, these efforts cannot succeed without addressing critical pre-requisites. Strengthening and capacity building of the tax administration is essential to enhance collection capacity, which has been severely undermined by multiple and prolonged crises. Equally important is addressing widespread non-compliance and the large informal economy, which significantly reduce the effectiveness of tax policies. Recognizing this, the Ministry of Finance (MoF) is currently focusing on these two foundational aspects before introducing more ambitious fiscal reforms. Without these pre-requisites, even best-practice tax policies would fail to deliver meaningful revenue enhancement or improve the overall fairness and equity of the tax system. In terms of policy recommendations, Lebanese authorities could mobilize revenues in a progressive manner by taxing offshore wealth and higher strata of income. Income inequality and concentration are among the highest in the world, with the top 1 and 10 percent of the adult population accounting for about 25 and 55 percent of national income, respectively.^c Moreover, the income share of billionaires is among the top three relative to a group of comparator countries and is higher than in some of the oil-exporting countries of the Gulf Cooperation Council (Kuwait, Kingdom of Saudi Arabia, the United Arab Emirates). The latter estimates suggest that there is ample room for revenue mobilization in a highly progressive manner should the political will to do so exist.^d Given that Lebanon participates in the common reporting standards (CRS) of the Organization of Economic Cooperation and Development, tax authorities could exploit the information provided through the CRS to gauge potential revenues from taxing offshore wealth.

Beyond the urgent need for fundamental reforms in fiscal and tax policies, the prolonged conflict—with its devastating human, social, and physical toll—is expected to severely impact the fiscal stance in 2025. On the expenditure side, key ministries, such as the Ministry of Public Health, may require urgent and additional funds to support hospitalization and medical care, while the Ministry of Social Affairs will likely need resources to continue to assist a quarter of the population that remains forcibly displaced. On the revenue side, declines in economic activity, consumption, and tourism will depress revenues from the Value Added Tax, the government’s primary revenue source, as well as other direct and indirect revenues. As a result, the initially projected revenues and expenditures do not reflect the conflict-ridden environment, and significant primary and overall deficits could materialize in 2025.

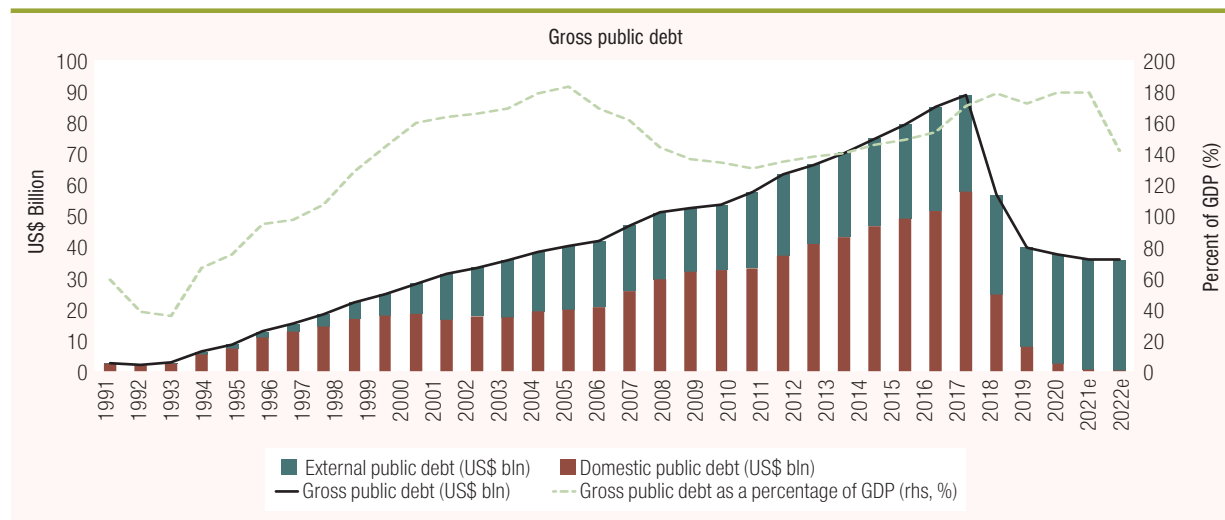
^a The fiscal balance is calculated using the 2024 GDP projection as the World Bank is not producing forecasts for 2025 due to heightened uncertainty.

^b The inflation forecast for 2024 is used to compute revenues in real terms for 2025.

^c Assouad, L. (2023). Rethinking the Lebanese economic miracle: The extreme concentration of income and wealth in Lebanon, 2005–2014. *Journal of Development Economics*, 161, 103003.

^d There is a significant overlap between economic and political elites in Lebanon, which renders proposals for wealth taxation highly contentious and unlikely to be pursued by the ruling elites. As a case in point, property taxation, which is a function of revealed wealth, is subject to several loopholes and gaps.

FIGURE 8 • Increase in Nominal GDP Prompting a Slight Decrease in Debt-to-GDP in 2024 is Not Indicative of Improved Debt Dynamics^a



Sources: BdL and WB staff calculations.

^a To convert domestic debt to US\$, the World Bank Average Exchange Rate is used for 2020–2024, estimated at LBP 3,688, 11,755, 27,309, 85,828, and 89,500 per US\$, respectively.

The primary surplus has narrowed from 1.4 percent of GDP in 2023 to 0.6 percent in 2024, while nominal GDP growth—both in local and foreign currency terms—reflects price inflation and exchange rate fluctuations rather than actual economic growth. While surging inflation has rapidly eroded the real value of domestic debt, the sharp currency depreciation continues to render Lebanon’s external and overall sovereign debt burden unsustainable. The World Bank’s debt model assumes a stable foreign-denominated debt stock and does not account for accumulated arrears.

Debt restructuring remains critical to achieve substantial debt reduction, restore fiscal space, and regain market access to respond to the multi-faceted challenges most recently compounded by the conflict. Four years into the default, the authorities have yet to initiate serious negotiations with external creditors. With the median default spell, defined as the period from the start of the credit event to its conclusion with an agreement that cures the default for a period of 24 months, lasting seven years, Lebanon is slowly nearing the entirety of the median seven-year default spell without any action.^{9,10} Further, the expiry of the statute of limitations in March 2025 (five years after the default), which is likely to trigger legal action by creditors, poses another immediate risk. Research on sovereign defaults highlights that creditor losses (haircuts) alone do not guarantee significant debt relief, as they often apply only to a portion of debt. Without sufficient debt relief, Lebanon risks “serial restructurings,” where repeated debt exchanges provide limited long-term relief and lead to higher cumulative haircuts. A quick, decisive, and significant decrease in the debt burden, in part through a deep haircut, is crucial to create fiscal space.¹¹ An improved fiscal position and access to international capital markets would enable Lebanon to address its multi-faceted challenges, repair multi-year damage to capital stock via capital spending and support social safety nets and other essential services in the aftermath of the conflict.¹²

External Sector

Despite the ongoing economic crisis and sovereign default, Lebanon continued to post a significant current account deficit, driven by a

substantial trade-in-goods deficit. Following a sharp rise to 34.6 percent of GDP in 2022, the CA deficit decreased slightly to 28.1 percent of GDP in 2023 and was projected to reach 20 percent of GDP in 2024 before the escalation of conflict in September 2024 (Figure 9). In nominal terms, the CA deficit followed a downward trend, declining from a record 7.2 billion US\$ in 2022 to 5.6 billion US\$ in 2023, with a further projected decrease to 4.9 billion US\$ in 2024, prior to the escalation. The contraction in the CA deficit in 2023 was mainly driven by a 7 percent reduction in imports. Although exports also decreased by 8.3 percent in 2023, it did not offset the narrowing trade-in-goods balance, as imports remained four times the volume of exports; consequently, the trade-in-goods balance decreased by nearly 6 percent. In 2024, the CA deficit was expected to decrease slightly to 20 percent of GDP, largely due to the “denominator effect” of a higher nominal GDP rather than significant import compression, similar to trends in previous crisis years. Although conflict escalated in the last quarter of 2024, ports and official trade routes into Lebanon, except for the Masna’ crossing, have remained open, thereby not (yet) affecting import inflows.¹³

⁹ Graf von Luckner, C. M., Meyer, J., Reinhart, C. M., & Trebesch, C. (2021). External sovereign debt restructurings: Delay and replay. World Bank Blogs.

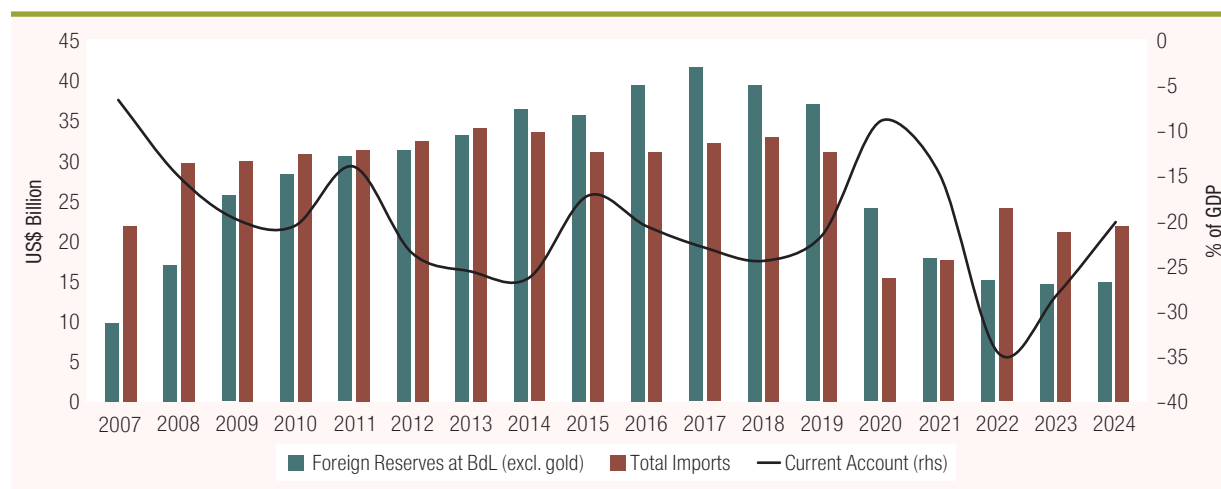
¹⁰ In the post-World War II period, the median default spell is shorter and stands at five years.

¹¹ The Jamaican experience provides a case in point of a successful debt restructuring. In fact, Jamaica succeeded, despite low economic growth, natural disasters and the COVID-19 pandemic, in reducing its debt-to-GDP from 144 percent in 2012 to 72 percent by 2023. This was achieved through fiscal rules, such as the Fiscal Responsibility Framework, which helped set clear debt reduction targets. For further information on the Jamaican example, please see Arslanalp, S., Eichengreen, B., & Henry, P. B. (2024). Sustained debt reduction: The Jamaica exception. Brookings Institution.

¹² A decisive debt restructuring is one that allows a country to regain capital market access, and yields improved macroeconomic performance. Please see Reinhart, C. M., & Trebesch, C. (2016). Sovereign debt relief and its aftermath. Journal of the European Economic Association, 14(1), 215–251.

¹³ The share of land trade is relatively small. While the closure of informal trade routes reduced smuggling activity, this may have been offset by increased demand

FIGURE 9 • Despite Slightly Narrowing Current Account Deficit, Ratio to GDP Remains Similar to pre-Crisis Years in 2023



Sources: BdL, CAS and WB staff calculations.

The trade in service surplus that materialized in 2023, despite the conflict, was expected to persist in 2024 prior to the escalation in conflict.

The persistent trade-in-goods deficits have historically been partially buffeted by a trade-in-services surplus. The decrease in tourism receipts, owing to the conflict, weighed down on trade-in-services in 2023 and 2024, which declined to 3.5 percent (a surplus) and -1 percent (a deficit) of GDP, respectively, vis-à-vis a surplus of 4.3 percent and 7.3 percent in 2021 and 2022, respectively. The latter decrease is a reflection of the effects of the conflict on the export of tourism services, which serve as a main engine for growth.

Historically weak BOP data, and the prevalence of a pervasive dollarized cash economy are likely to skew official estimates of hard currency inflows to Lebanon, potentially overstating the current account deficit. This is further compounded by the likelihood that Lebanon’s official imports serve two countries (Lebanon and Syria); while imports are recorded, the inflows from the re-exportation of these goods to Syria may not be accounted for, adding further distortion to the current account deficit.

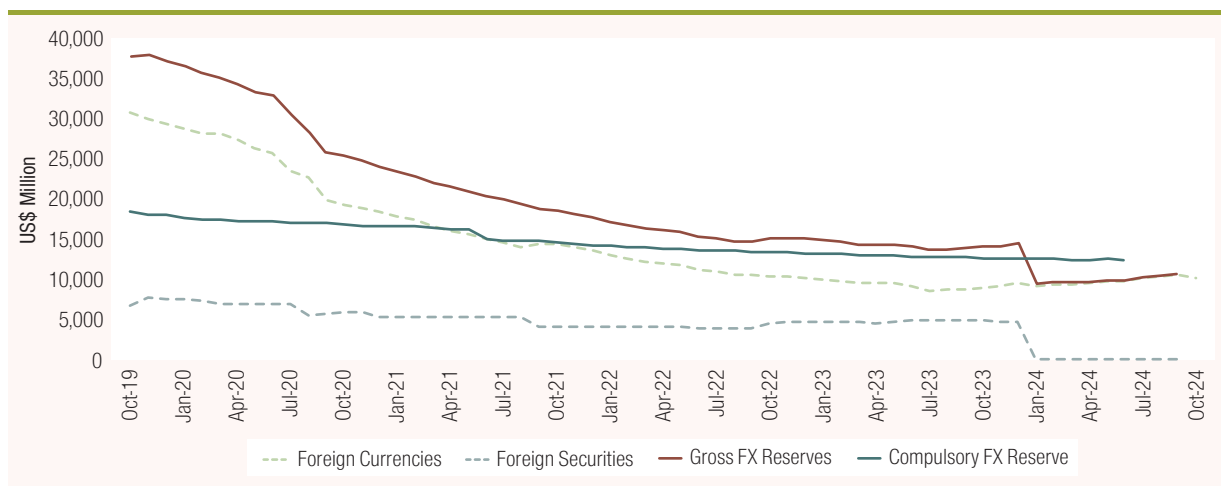
BdL’s recent trend of accumulating reserves in 2024 has reversed amid the escalation of conflict. Prior to the escalation of conflict, foreign reserve assets (liquid reserves) increased by US\$ 1,012 million in 9M-2024, reaching US\$ 10.654 billion. However, this rise did not reflect a sustainable improvement in the

net foreign asset position. The accumulation of liquid reserves was largely driven by: (i) the suspension of the Sayrafa platform and cessation of monetary financing of the government budget since July 2023, and (ii) BdL’s purchase of foreign currency inflows, especially from the tourism sector. This approach has proven highly vulnerable to external shocks. The conflict has significantly reduced tourism receipts, undermining the viability of reserve accumulation through surplus inflows. The central bank’s interim balance sheet indicates a decrease in foreign reserve assets of US\$ 391 million by the end of October compared to the end of September (Figure 10).¹⁴ This decline partially reflects BdL’s additional payouts to depositors during the conflict, as well as the disbursement of public sector salaries in US\$. As the conflict endures, BdL’s reserves face additional pressure from declining capital inflows and the increasing need to finance emergency support. Overall, foreign reserve assets have declined by US\$ 20.719 billion between end October 2019 and end October 2024 (Figure 10).

for formal imports, which could explain the absence of significant import compression.

¹⁴ Foreign Assets was reclassified as “Foreign Reserve Assets” to only include non-resident and liquid foreign assets. The revision was introduced to the end-October interim balance sheet, and backwards from January to September 2024 (latest available data) in the monthly BdL published foreign assets and liabilities.

FIGURE 10 • Reserve Accumulation in 2024 Reversed Due to Escalating Conflict



Sources: BdL and WB staff calculations.

Money and Banking

Following episodes of rapid depreciation and high volatility, the BdL succeeded in stabilizing the LBP since August 2023, albeit at a high opportunity cost.

The LBP depreciated sharply since October 2019 and lost 98 percent of its value by August 2023. These episodes of depreciation, which were exacerbated by BdL's own interventions in the foreign exchange market via the Sayrafa platform, were accompanied by high exchange rate volatility. The LBP stabilized in August 2023, following the termination of the Sayrafa platform ushering in a new era of de-facto exchange rate stability. The exchange rate stability hinges on higher revenue collection by the Ministry of Finance following the correction of the mis-valuation in the exchange rate for customs' collections starting in November 2022. Enhanced revenue collection in 2023, on a cash basis, decreased currency in circulation markedly (by 31.2 percent in 2023), thereby significantly supporting BdL's efforts to maintain exchange rate stability.

Exchange rate stability in Lebanon remains heavily dependent on fiscal restraint and spending restrictions imposed on public institutions' accounts, rather than a robust monetary framework. This approach, while temporarily stabilizing the exchange rate, delays urgent investments and expenditures critical for the country's recovery and development. As of October 15, 2024, these measures have contributed to the accumulation of LBP

529.3 trillion (approximately USD 5.9 billion at an exchange rate of LBP 89,500 per USD) in public sector deposits at the BdL, comprising LBP cash, USD cash, and pre-crisis USD-denominated balances ("dollars"). This represents a 236.5 percent year-on-year increase from 2023. The exchange rate stability has been largely maintained by reduced currency in circulation, driven by increased revenue collection and the buildup of public sector surpluses at the central bank. However, any use of these surpluses and deposits risks increasing currency in circulation, placing additional pressure on the exchange rate, or further depleting liquid foreign currency reserves. While this strategy has supported exchange rate stability, it carries a significant opportunity cost. The fiscal restraint and spending restrictions have severely limited ministries' ability to invest in critical infrastructure and capital projects, sustain public services, support public sector recovery, and address the escalating demands of the conflict and its aftermath.

Exchange rate stabilization since the second half of 2023 has driven a steady deceleration in monthly inflation.

The acceleration of inflation to 221.3 percent in 2023, was primarily on account of the steep depreciation of the LBP in the first half of 2023. Since then, the exchange rate stabilization has led to a steady decrease in month-to-month inflation, to an average of 1.2 percent between August and December 2023 (excluding October that witnessed a six-fold increase in the education CPI component). Year-on-year inflation has also started to decelerate in

2024, registering a double-digit figure for the first time in March after recording triple-digit figures since July 2020; yoy inflation has decreased to 32.9 percent in September 2024 (Figure 12). Education has become the largest contributor to headline inflation in 9M-2024, as the base effect recedes in other categories. Of the other categories in the CPI basket, (i) owner occupied housing costs (i.e., equivalent rent); (ii) food and non-alcoholic beverages; (iii) health; and (iv) transportation are the other main drivers of headline inflation with contributions standing at, respectively, 17.6, 11.4,

4.1, and 3.7 percent (Figure 13). The latter inflationary dynamics can be ascribed to the increasing dollarization of prices across sectors, which drives domestic-currency inflation. As more components of the CPI basket become increasingly dollarized, and assuming exchange rate stability is maintained for the remainder of 2024, annual inflation is projected to decline to double digits in 2024 (refer to Box 3. Measuring the Purchasing Power of Dollar Earners for a discussion on Measuring the Purchasing Power of Dollar Earners).

BOX 3. MEASURING THE PURCHASING POWER OF DOLLAR EARNERS

This box examines “dollar inflation”, which is defined specifically as the change in the purchasing power of a representative consumer, whose earnings are fully denominated in USD, and not a direct measure of inflation in USD. The analysis considers the purchasing power of a hypothetical dollar earner, whose wage has been fully denominated in USD since the onset of the 2019 financial crisis and finds that the representative dollar earner has experienced an overall decrease in purchasing power of 4.9 percent over the period September 2019 to 2024, which is markedly lower than the 5,970.7 percent cumulative inflation experienced by an LBP earner. The purchasing power of dollar earners has experienced significant year-on-year fluctuations. These include a 54% increase in 2021, followed by successive declines of 14% in 2022, 19.1% in 2023, and 26.6% in 2024. These declines are attributed to the removal of foreign exchange (FX) subsidies and the increasing dollarization across all sectors of the economy.

The sharp deterioration in the currency has driven surging inflation, which remained in triple digits from July 2020 to April 2024. Inflation acts as a highly regressive tax, disproportionately impacting the poor, vulnerable populations, individuals on fixed incomes, and pensioners whose earnings are in LBP. In 2021, inflation averaged 155 percent, climbing to 171 percent in 2022, following the gradual removal of price subsidies, marking one of the highest inflation rates globally. Inflation peaked at 221 percent (year-on-year) in 2023, a testament to the economic hardships and deepening cost of living crisis for LBP earners, particularly as food inflation reached a peak of 350 percent (yoy) in April 2023.

Inflation is measured by the Consumer Price Index (CPI) reported by the Central Administration of Statistics (CAS), an aggregate price index denominated in national currency, and computed based on a fixed basket of goods and services (Laspeyres index). Although consumption patterns have likely shifted significantly since the 2019 financial crisis, potentially rendering the weights used to calculate the CPI and the consumption basket outdated,⁹ the CPI still serves as a useful indicator of the cumulative loss in purchasing power and inflation experienced by LBP earners in both public and private sectors.

The CPI, denominated in LBP, does not accurately reflect the purchasing power of a (limited) segment of society earning in US dollar. In other words, changes in the purchasing power of a representative consumer whose earnings are partially or fully in USD are mismeasured by the CPI. For simplicity, the analysis considers the purchasing power of a hypothetical dollar earner, whose wage has been fully denominated in USD since the onset of the 2019 financial crisis. The approach that is adopted is a simplified version of that used to compute the real exchange rate, and consists of dividing the CPI by the (market or Black-Note Rate) nominal exchange rate:

$$CPI_t^{USD} = CPI_t^{LBP} / e_t$$

where e_t is the exchange rate measured as units of LBP per USD. The time series evolution of the CPI in USD is provided in Figure 11.

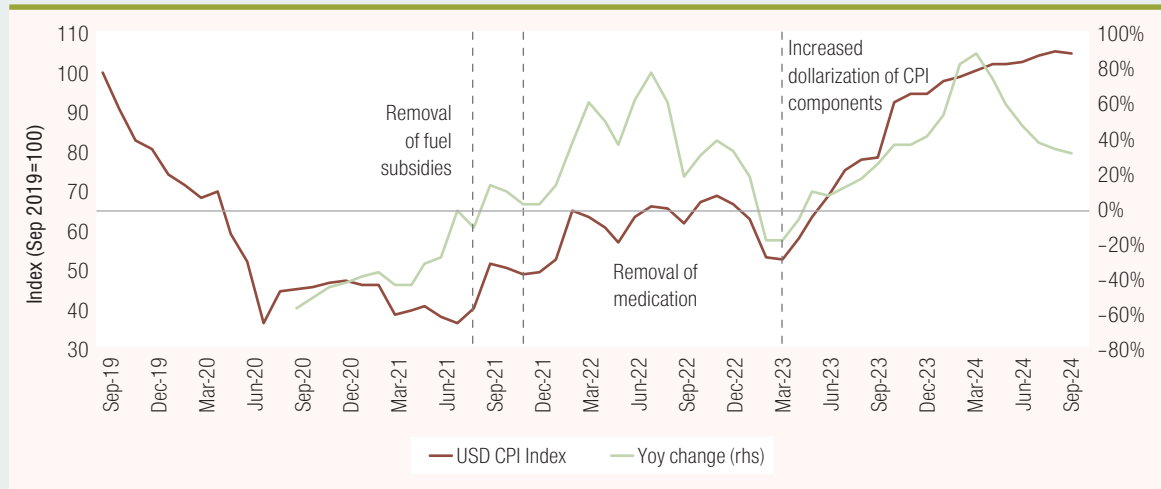
Following the onset of the crisis, a dollar earner’s purchasing power markedly improved, increasing by 142.7 percent by August 2021 compared to September 2019 (Figure 1). In other words, dollar earners by August 2021, could buy more than double what they could before the crisis. Specifically, for every \$1 they could spend in September 2019, by August 2021, they could buy goods and services worth about \$2.43. This can be ascribed to: (i) the continuation of foreign exchange (FX) subsidies on crucial imports by BdL, through August 2021, which would have benefitted a dollar earner and (ii) the exchange rate pass-through not being perfect (i.e., equal to one) for most components of the CPI basket, as in changes in the exchange rate do not fully translate into proportional changes in the prices of most items in the Consumer Price Index (CPI) basket.

However, starting in August 2021, the purchasing power of dollar earners began to steadily decline, with their gains fully eroded by March 2024. This decrease in the purchasing power of the dollar earner stems mainly from (i) the near complete removal of foreign exchange subsidies (fuel, medication, and subsequently wheat; please refer to for the dates of the removal of fuel and medication subsidies); (ii) the

(continued on next page)

BOX 3. MEASURING THE PURCHASING POWER OF DOLLAR EARNERS *(continued)*

FIGURE 11 • Dollar Earners Benefitted During the Time of FX Subsidies and Only Experienced a 4.9 percent Inflation by September 2024



Sources: CAS and WB Staff calculations.

gradual dollarization of the components of the CPI basket, and, in particular, the domestic services such as transportation, education, healthcare, and housing, water, electricity, gas and other fuels (including rents), and (iii) unmonitored price increases to hedge against future depreciation episodes.^b

The cumulative change in purchasing power of dollar earners obscures year-on-year (YoY) fluctuations, which reveal much sharper declines in recent years. From September 2020 to September 2021, the purchasing power of dollar earners increased by 54 percent following the termination of fuel subsidies. However, this improvement was followed by significant YoY decreases: 14 percent in 2022, 19.1 percent in 2023, and 26.6 percent in 2024. Cumulatively, the purchasing power of wage earners in USD has only declined by 4.9 percent from September 2019 to 2024, a much smaller reduction compared to the larger annual losses seen in the past three years. In contrast, wage earners in Lebanese pounds (LBP) experienced a staggering 5,970.7 percent cumulative inflation over the same period. Interestingly, in August and September 2024, the purchasing power loss in USD terms was nearly identical to the inflation rate in LBP. This convergence reflects the de facto stabilization of the exchange rate since August 2023, which has led to a similar purchasing power decline for wage earners in both currencies.

^a The CPI also suffers from other important drawbacks. Macroeconomists have long recognized that the CPI tends to overstate inflation relative to a Paasche index, like the GDP deflator. A Laspeyres index is a price index constructed from a fixed basket of goods and services whereas a Paasche index is constructed from a changing basket of goods and services. This partly reflects the substitution bias embedded in the CPI. That is, the CPI does not reflect the ability of consumers to substitute towards less expensive goods and services. See, for example, Shapiro and Wilcox (1996) and the Symposium on "Measuring the CPI" in the Journal of Economic Perspectives.

^b For more details on the unmonitored price increases, please refer to the *Spring 2023 Lebanon Economic Monitor: Normalization of Crisis is no Road for Stabilization*, World Bank, Washington DC.

BdL continues to provide limited access to encumbered pre-2019 financial crisis deposits and focuses on a circular-centric management of the systemic banking crisis. With the lack of action on a comprehensive crisis resolution plan, at the core of which is restructuring the banking sector, BdL persevered with its approach of adopting regulatory forbearance to manage the systemic banking crisis. The central bank issued circular 166 on February 2, 2024, aiming to repay foreign currency deposits that have been accumulated between October 31, 2019, and June 30, 2024, excluding those obtained via conversion from the domestic

to foreign currency, deposit of cheques, or accounts that have benefitted from operations on the Sayrafa platform. The amount that is accessible under this circular is US\$ 1,800 per annum, or US\$ 150 monthly. BdL restricted depositors from benefitting from both circulars 158 and 166. The latter restriction was then relaxed, allowing depositors who previously benefitted from circular 158 to benefit from circular 166, although not concomitantly.¹⁵ The depositor base benefitting

¹⁵ For instance, if the ceiling for withdrawals under circular 158 is exhausted, the depositor may benefit from circular 166.

from circular 166 was then widened to encompass individuals who exchanged domestic to foreign currency deposits after October 30, 2019, and to minors. Following the escalation of conflict in September 2024, BdL amended circulars 166 and 158 to permit, exceptionally, depositors to obtain three payouts in October 2024.¹⁶ As mentioned earlier, it is likely that the majority of the US\$ 391 million decrease in foreign reserve assets in October 2024 is likely attributed to payouts

under these circulars, a trend that is expected to persist if further payouts under circulars 166 and 158 continue.¹⁷

¹⁶ Intermediate circular 710, decision 13669, issued on September 25, 2024.

¹⁷ For instance, Bank Audi (2024) estimates that US\$ 180 to 200 mln were supplied by BdL to pay out the three installments under circulars 158 and 166 in October 2024. For more detail, see Bank Audi (2024), Lebanon Weekly Monitor, October 7–October 14, Week 41.

BOX 4. THE MOTIVES AND CONSEQUENCES OF LEBANON'S DESIGNATION AS A JURISDICTION UNDER INCREASED MONITORING (I.E., GREY LISTING)

Justifications for Designating Lebanon on the “Grey List”

Inadequate Legal Framework

On October 25, 2024, Lebanon was placed on the Financial Action Task Force (FATF) grey list (as a jurisdiction under increased monitoring).

The FATF report, which evaluates money laundering (ML) and terrorist financing (TF) risks, highlights major weaknesses in Lebanon's anti-ML (AML) and Countering the Financing of Terrorism (CFT) frameworks. More specifically, corruption, customs smuggling, tax evasion, drug trafficking, and smuggling are identified as primary ML threats whereas a limited understanding of ML and TF risks in the unregulated financial sector (i.e., traders in precious metals and stones, the informal cash economy) and by designated non-financial businesses and professions (DNFBP) (i.e., real estate agents, dealers in precious metals and stones, notaries, casinos, among others), except notaries, is highlighted as a critical weakness.

Lack of Enforcement

The report underscores the lack of enforcement, and that investigations and prosecutions are not fully aligned with the country's risk profile.^a The regulatory oversight is found to overlook individual transactions in favor of a focus on companies. In addition to the laws designed to combat ML and TF being deficient, the resources for investigating financial crime are insufficient. The report also finds that the penalties for engaging in ML are small and reveals weaknesses in identifying the beneficial owners of economic transactions.

Other Gaps

Whereas the understanding of ML and TF risks by the banking sector and money transfer companies is deemed to be sound and due diligence is properly applied, the report uncovers that gaps pertaining to the definition of politically exposed persons remain. Further, the report finds that the confiscation of criminal proceeds is limited. The FATF report underscores that investigative efforts should not be confined to the SIC (Lebanon's multi-function financial intelligence unit) and must include the cassation public prosecution, the internal security forces, tax, and customs authorities. Despite the weak enforcement, the risk-based supervisory approach of Banque du Liban (BdL) and the Special Investigation Commission (SIC) are found to be adequate.

Expected Impact on Lebanon's Financial Sector

The key impact channels of grey listing include: (i) reputational damage, (ii) increased transaction costs, and (iii) potential delays in capital inflows. While grey listing often prompts correspondent banks to “de-risk” by restricting or severing relationships, this is less likely for Lebanon, as correspondent banks have already implemented enhanced due diligence following the financial crisis of October 2019. Another potential outcome could be disruptions in remittance inflows; however, the FATF report notes that Lebanese banks and money transfer companies are already applying a risk-based approach (RBA) for customer assessments, which they update periodically. Consequently, remittance inflows will likely face higher transaction costs, additional scrutiny, and more rigorous compliance requirements, leading to processing delays.

Priorities Moving Forward

To exit the FATF grey list, the report indicates that Lebanon should prioritize (i) strengthening supervision and compliance enforcement in high-risk non-financial sectors (DNFBPs) such as real estate, jewelry, law, and accounting, ensuring adherence to AML/CTF standards, and (ii) enhancing understanding and mitigation of risks arising from government corruption, local organizations, and the informal financial sector.

Addressing these areas through rigorous monitoring, transparency improvements, and bringing informal activities into the formal sector would bolster Lebanon's financial integrity and reduce vulnerabilities in its AML/CTF framework.

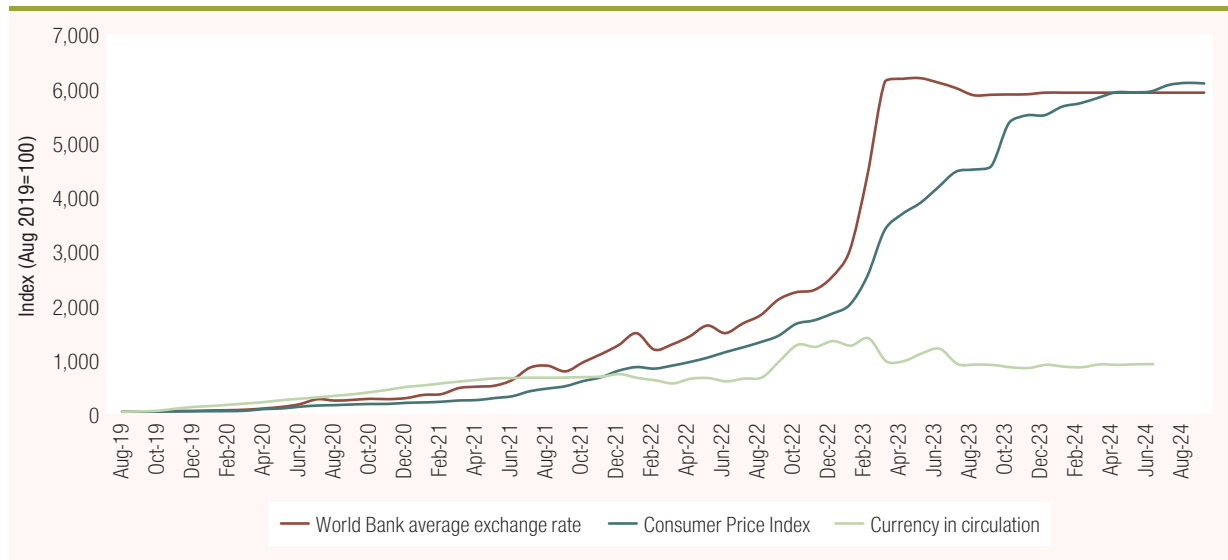
(continued on next page)

BOX 4. THE MOTIVES AND CONSEQUENCES OF LEBANON'S DESIGNATION AS A JURISDICTION UNDER INCREASED MONITORING (I.E., GREY LISTING) *(continued)*

Conversely, if no progress is made on the above priorities, being blacklisted by the FATF is likely to further restrict Lebanon's ability to engage in global financial transactions, limit access to essential international aid, and potentially expose the country to sanctions. This designation brings increased scrutiny and reduced foreign investment, undermines Lebanon's integration within the global financial landscape, and is challenging to reverse, as it requires a comprehensive overhaul of its anti-money laundering (AML) and counter-terrorist financing (CTF) frameworks.

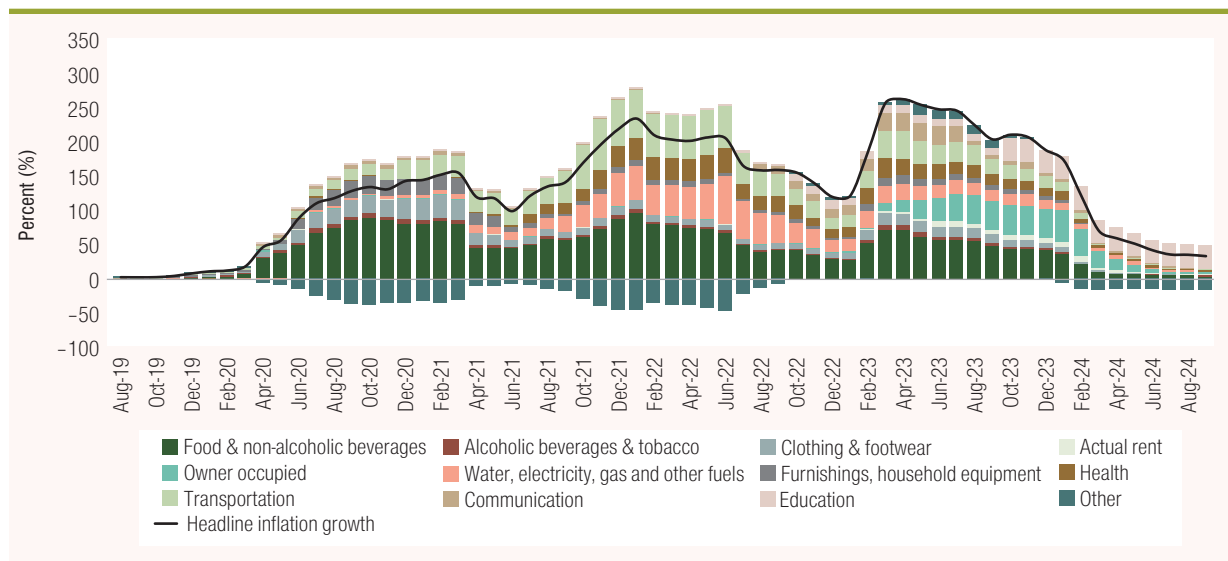
^a For instance, the findings are that ML investigations are largely focused on self-laundering and, hence, limited with regards to third-party and stand-alone laundering. Further, the report highlights that investigations related to major crimes such as drug trafficking, corruption, and tax evasion are inconsistent with the identified risks.

FIGURE 12 • Exchange Rate Stability as of July 2023 Drives Deceleration in Inflation



Sources: Lebanese authorities and WB staff calculations.

FIGURE 13 • CPI Subcategories' Monthly Contribution to Headline Inflation (Aug 2019-Sep 2024)



Sources: CAS and WB staff calculations.

OUTLOOK AND RISKS

Absent the conflict, the economic contraction was forecast to bottom out in 2023 and 2024, following five years of cumulative contraction totaling 34 percent of real GDP.

The conflict and its spillovers have had negative knock-on effects on economic growth in 2023 and 2024, even prior to the escalation of conflict in Q4-2024. The primary channels of impact in 2023 and 9M-2024 are common: a fall in tourism receipts, the main engine of economic growth, as well as losses in consumption, yielding a contraction of -0.8 and -1 percent in 2023, and 2024 pre-escalation respectively.

Since Q4-2024, the escalation of conflict has inflicted a severe human toll, mass displacement, and extensive destruction, cutting real GDP growth by an estimated 6.6% (refer to special focus below). By mid-November 2024, over 3,500 lives have been lost, with more than 14,500 injured. Although the primary economic impacts—declines in tourism revenue and a substantial shock to consumption—remain unchanged, their severity has intensified significantly. The conflict has also caused widespread physical destruction; the World Bank Interim Damage and Loss Assessment (DaLA)¹⁸ finds that damages to

physical structures alone amount to US\$3.4 billion, with almost 100,000 housing units partially or fully damaged. These damages to the country's capital stock, along with human capital losses, are expected to have lasting consequences on potential GDP for years to come.

With the conflict and in its aftermath, key economic fundamentals—such as GDP growth, inflation, fiscal balance, and the trade balance—are increasingly weighted toward the downside.

Although the exchange rate has stabilized since August 2023, the conflict and recovery needs pose risks of renewed pressure and further depletion of the remaining liquid reserves. Exchange rate stability relies on fiscal restraint and spending restrictions imposed on public institutions' accounts at BdL to control currency circulation. This stability has been supported by increased revenue collection from the Ministry of Finance and other public entities, such as EdL, which has reduced liquidity, and by unspent

¹⁸ World Bank. Lebanon Interim Damage and Loss Assessment (DaLA) : Assessment Report (English). Washington, D.C. : World Bank Group. Link.

public sector surpluses held at BdL. However, with the conflict and in its aftermath, fiscal restraint and spending restrictions on public entities are likely to become even more contentious. Line ministries are bound to request an increase in spending, in the domestic and foreign currency, to mitigate the humanitarian, physical, and sectoral effects of the conflict. Increased spending will either draw down central bank reserves or expand currency in circulation, placing additional pressure on the exchange rate, threatening the fragile exchange rate stability achieved to date.

The conflict is expected to significantly impact Lebanon's fiscal position through the remainder of 2024 and into 2025. Ministries will likely require urgent funding to address the immediate needs of displaced populations, sustain essential public services, and support recovery efforts, while revenues are expected to decline due to reduced economic activity, particularly affecting Value Added Tax, the government's primary revenue source. This situation necessitates a reevaluation of the 2025 budget to better align with the country's current realities and urgent needs. Without progress on debt restructuring, Lebanon's capacity to effectively respond to and recover from the conflict will remain severely constrained. The ongoing sovereign default means Lebanon will be heavily reliant on limited international humanitarian assistance to manage internal displacement and respond to the conflict, while financing for post-conflict recovery and reconstruction remains highly uncertain.

The impact on Lebanon's current account balance, which has faced a chronic deficit for decades, remains uncertain but could deteriorate further. While trade routes into Lebanon remain open, significant import reduction is unlikely. However, any closure of trade routes would be detrimental to a country that imports the vast majority of its basic necessities, including food. Exports, are expected to decline due to reduced economic activity, potentially worsening the trade in goods balance. The trade in services balance is also likely to decline further, as tourism revenues continue to drop amid the conflict. Nonetheless, tourism receipts are anticipated to rebound quickly once the conflict subsides, as tourists, particularly expatriates, are expected to quickly return.

The conflict is expected to drive the total cumulative decline in real GDP since 2019 to over 38% in 2024, up from 34% in 2023 amplifying existing macroeconomic challenges rooted in the unresolved economic and financial crisis, now intensified by a new external shock. Exchange rate stability relies on fiscal restraint rather than a sustainable monetary framework, while unaddressed debt restructuring restricts Lebanon's access to external financing, which is crucial to weather the conflict's impact and support recovery and reconstruction efforts. Compounding this, a persistent current account deficit is financed by an opaque cash economy, heightening money laundering risks and skewing official statistics away from reflecting economic reality.

The conflict has only reinforced that comprehensive reform remains the sole viable path forward. Key priorities include achieving macroeconomic stability, improving governance, enhancing public utilities, and bolstering human capital.¹⁹ Targeted investments are essential to support sustainable reforms, facilitate the recovery of essential services, and rebuild Lebanon's damaged capital stock. These efforts must also prioritize strengthening social safety nets and restoring critical infrastructure. Lebanon's institutions and public sector urgently require substantial assistance to prevent a collapse in service delivery and to address pressing citizen needs, especially as the conflict persists. Strengthening public institutions is key to restoring and maintaining essential social services, laying the groundwork for long-term resilience and state-building once the conflict subsides. Literature highlights that effective governance and resilient institutions are foundational for recovery in post-conflict settings (World Bank, 2003; Paris, 2004).²⁰ As Buvinic and

¹⁹ In this vein, the Lebanon Systematic Country Diagnostic outlines a strategy to tackle Lebanon's critical challenges and establishes realistic policy priorities: World Bank. Lebanon – A Systematic Country Diagnostic (English). Washington, D.C. : World Bank Group. Link

²⁰ World Bank. (2003). *Reforming Public Institutions and Strengthening Governance: A Sourcebook*. Washington, DC: The World Bank; Paris, R. (2004). *At War's End: Building Peace After Civil Conflict*. Cambridge University Press.

Morrison (2000)²¹ note, investing in public institutions not only improves service delivery but also fosters social cohesion and stability over time. Unlocking access to financing, particularly through comprehensive reforms including debt restructuring, is critical for enabling the investments needed to achieve these priorities and provide the institutional support necessary for Lebanon's recovery and long-term development.

²¹ Buvinic, M., & Morrison, A. R. (2000). *Gender and Post-Conflict Reconstruction: A New Vision for Addressing the Challenges of the 21st Century*. In *Reconstruction, Development and the Role of Women*. Washington, DC: World Bank.

TABLE 2 • Selected Economic Indicators (2015-2024)

	2015	2016	2017	2018	2019	2020 Est.	2021	2022	2023	Pre-Escalation 2024 Proj.	Post-Escalation 2024 Proj.
(annual percentage change, unless otherwise specified)											
Real Sector											
Real GDP	0.5	1.6	0.9	-1.9	-6.9	-21.4	-7.0	-0.6	-0.8	-1.0	-5.7
Real GDP per Capita*	-1.5	4.0	3.6	1.0	-3.9	-20.1	-7.3	-1.1	-1.3	-1.5	-8.9
(Share of Real GDP)											
Agriculture	3.7	3.8	4.3	4.4	4.7	6.0	6.0	6.0	6.0	6.0	6.0
Industry	12.7	12.8	12.3	12.0	10.7	12.8	12.8	12.8	12.9	12.9	12.9
Services	72.0	71.7	71.8	72.2	73.9	76.9	78.6	78.6	78.4	78.4	78.4
Net Indirect Taxes	11.6	11.7	11.6	11.4	10.6	4.3	2.6	2.6	2.6	2.6	2.6
(annual percentage change, unless otherwise specified)											
Inflation (Consumer Price Index)	-3.7	-0.9	4.5	6.1	2.9	84.3	154.8	171.2	221.3	45.7	45.7
Public Finance											
(percent of GDP, unless otherwise specified)											
Revenue	19.2	19.4	21.9	21.0	20.8	13.1	7.5	6.1	13.7	15.0	16.7
o/w Tax revenue	13.7	13.7	15.5	15.4	15.6	9.0	5.6	4.9	10.0	12.0	13.3
Expenditure	26.9	28.7	28.6	32.0	31.4	16.4	6.5	9.0	13.2	14.8	16.7
Current expenditure	21.7	23.2	23.6	26.0	26.1	14.3	5.8	7.8	11.5	10.6	11.8
o/w Interest payment	8.9	9.3	9.4	9.9	10.1	2.5	0.9	0.4	0.9	0.3	0.4
Capital expenditure	1.4	1.4	1.5	1.7	1.3	0.4	0.1	0.2	0.2	0.9	1.0
Overall fiscal balance	-7.7	-9.3	-6.7	-11.0	-10.6	-3.3	1.0	-2.9	0.5	0.2	0.0
Primary balance	1.2	0.0	2.7	-1.2	-0.5	-0.8	1.9	-2.5	1.4	0.6	0.4
External Sector											
(percent of GDP, unless otherwise specified)											
Current Account Balance	-17.1	-20.5	-22.9	-24.3	-21.5	-8.8	-14.7	-34.6	-28.1	-20.0	-25.3
Trade balance	-22.9	-23.7	-24.8	-24.8	-25.1	-20.3	-31.0	-55.0	-53.2	-42.8	-50.7
o/w Export (GNFS)	39.7	37.3	36.1	35.7	35.7	28.2	44.9	60.1	52.7	44.0	45.8
Exports of goods	8.0	7.7	7.6	7.0	9.4	12.9	19.9	21.5	20.6	16.7	18.6
Exports of services	31.7	29.6	28.5	28.7	26.3	15.3	24.7	38.6	32.1	27.2	27.2

(continued on next page)

TABLE 2 • Selected Economic Indicators (2015-2024) *(continued)*

	2015	2016	2017	2018	2019	2020 Est.	2021	2022	2023	Pre- Escalation 2024 Proj.	Post- Escalation 2024 Proj.
o/w Import (GNFS)	62.6	61.0	60.9	60.5	60.8	48.5	75.9	115.1	105.9	86.8	96.5
Imports of goods	35.2	35.1	34.8	34.4	35.3	33.4	55.4	86.4	83.9	59.0	65.5
Imports of services	27.4	25.9	26.1	26.1	25.5	15.1	20.5	31.3	21.9	27.8	30.9
Factor services and transfers	5.8	3.2	1.9	0.5	3.0	11.0	18.5	22.3	25.1	22.8	25.4
o/w Net remittance inflows	7.2	6.7	5.2	4.2	6.1	11.9	17.8	21.9	21.2	19.1	21.3
Total Public Debt											
Total debt stock (US\$ million) ^b	70,315	74,959	79,530	85,139	88,900	56,813	39,903	37,718	36,090	35,966	36,027
Debt-to-GDP ratio (percent)	140.8	146.6	150.0	155.1	172.3	179.2	172.5	179.7	179.7	141.9	158.0
Memorandum Items											
Nominal GDP (LBP billion)	75,268	77,105	79,939	82,764	80,196	116,954	271,916	573,282	1,723,308	2,267,706	2,040,425
Exchange rate, average (LBP/US\$)	1,508	1,508	1,508	1,508	1,554	3,688	11,755	27,309	85,828	89,500	89,500
Nominal GDP (US\$ million) ^b	49,929	51,147	53,028	54,902	51,606	31,712	23,132	20,992	20,079	25,337	22,798

^a Per-capita calculations are based on population estimates produced by UN population division. These estimates have been significantly revised down for Lebanon, to 5.5 million, from 6.7 million, in 2022. This change has a prominent effect on Real GDP per capita growth and Nominal GDP per capita.

^b The WB-AER is used to calculate the total debt stock and nominal GDP in US\$ million for 2019-2024.

SPECIAL FOCUS: THE IMPACT OF THE CONFLICT ON THE LEBANESE ECONOMY

The significant escalation of the conflict between Lebanon and Israel that started mid-September 2024, is estimated to have cut real GDP growth in Lebanon by 6.6 percent, or a loss of US\$ 4.2 billion in consumption and net exports for the crisis-stricken economy. Economic activity for 2024 is thus projected to contract by 5.7 percent in 2024 (against a no conflict scenario where activity would have expanded by 0.9 percent). The primary transmission channels for the conflict's impact on the Lebanese economy are shocks to consumption and net exports in 2024.

Situational Analysis

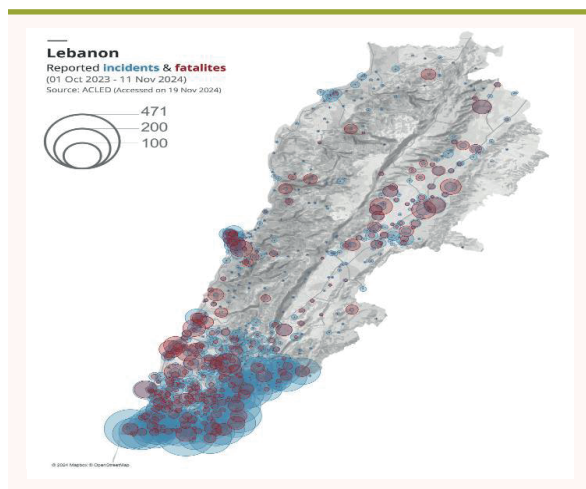
Military confrontations between Lebanon and Israel escalated into a full-scale conflict by September 2024, resulting in a devastating human toll, mass displacement, and widespread physical destruction. By mid-November, the death toll has exceeded 3,500, with more than 14,500 injured and over 10,000 attacks recorded across the

country (Figure 14). The conflict has triggered one of the largest displacements in Lebanon's history, with nearly 1.2 million people—over a quarter of the population—displaced. The International Organization for Migration (IOM), has registered close to 881,000 Internally Displaced Persons (IDPs) as of November 14, 2024, primarily from the South and El Nabatieh governorates, with close to a quarter residing in 1,027 government-designated shelters across the country (Figure 15).²² The cost of physical damages and economic losses from the conflict in Lebanon is estimated at US\$8.5 billion, with damages to physical structures alone amounting to US\$3.4 billion.²³ While it is too early to fully assess the shock's impact on Lebanon's capital stock, the destruction is expected to materially decrease the country's potential GDP.

²² International Organization for Migration (IOM), Nov 14 2024. DTM Mobility Snapshot – Round 62 – 14-11-2024. IOM, Lebanon.

²³ World Bank. Lebanon Interim Damage and Loss Assessment (DaLA): Assessment Report (English). Washington, D.C.: World Bank Group. Link.

FIGURE 14 • Israeli Strikes and Casualties Across Lebanon, with a Concentration in the South and El Nabatieh Governorates



Sources: ACLED, accessed October 7th, 2024, and WB Data Lab.

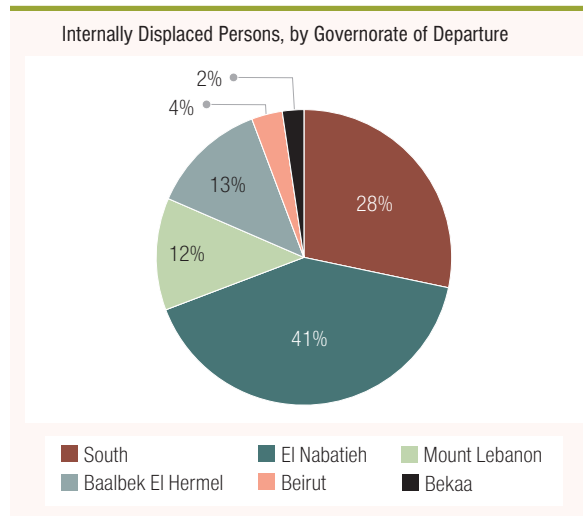
Real-time high-frequency data on flight activity indicate a sharp decline in key services sectors, particularly tourism, which is a primary driver of economic growth, due to the recent escalation of the conflict. Alternative data on cancelled, landed, diverted, scheduled, and completed flights to Lebanon reveals severe travel disruptions post September 23, 2024 (Figure 16). These disruptions are consistent with international carriers cancelling their flights to Beirut following the escalation of the conflict. Lebanon's national carrier remained as the sole company that continued to operate flights in and out of Beirut's international airport post September 23, 2024.²⁴

Assessing the Impact of the Conflict

The Counterfactual Scenario

The impact of the conflict on the Lebanese economy in 2024 is assessed by analyzing shocks to net exports and consumption, particularly following the significant escalation in mid-September 2024. The analysis uses an expenditures-based approach to evaluate losses in the economy's two main aggregates: Consumption and net exports, which are crucial drivers of real GDP growth. Starting in Q4-2023, the conflict

FIGURE 15 • Close to 80 Percent of IDPs are from the El-Nabatieh and South Governorates



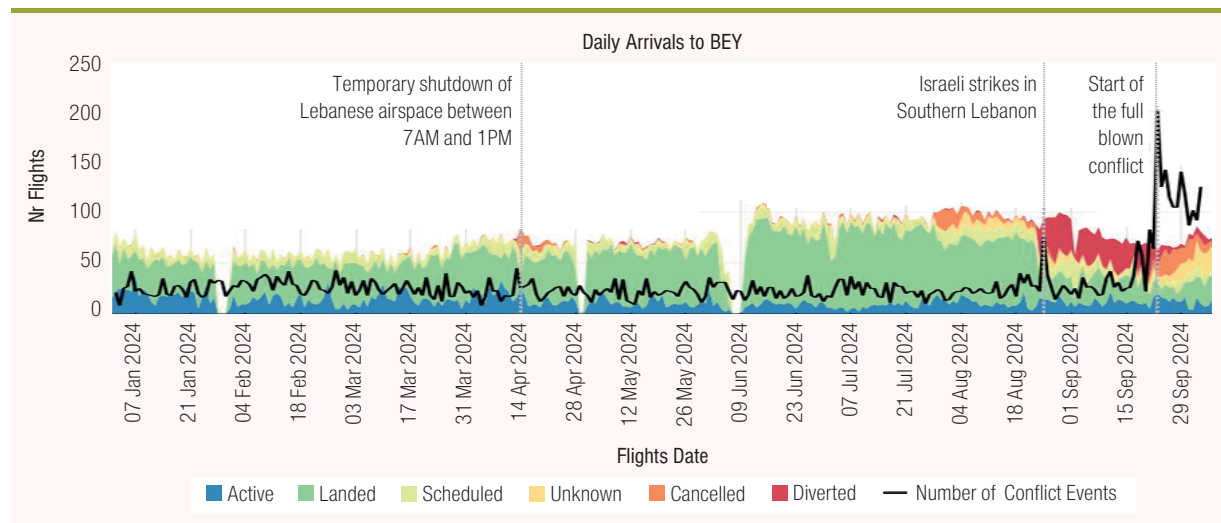
Source: International Organization for Migration (IOM), October 28th, 2024.

severely impacted tourism—one of Lebanon's main growth pillars—resulting in substantial losses in service exports. These losses have been further aggravated by the prolonged conflict in 2024. The conflict has triggered a significant consumption shock due to widespread displacement and mass destruction, severely weighing on economic activity. As private consumption, which accounted for 134 percent of Lebanon's real GDP in 2023, is the largest component of the economy, assessing the impact on both consumption and tourism provides a comprehensive view of the conflict's overall impact on the economy in 2024.

While the conflict is likely to have a devastating effect on Lebanon's capital stock across sectors, and particularly fixed capital formation, profoundly impacting potential GDP, this analysis does not account for the destruction of the capital stock. Heightened uncertainty and the conflict are likely to lead to a decrease in investment further contributing to the erosion of the capital stock. Without public and private investment and the availability of financing for the reconstruction of the affected

²⁴ Continuity of operations by Lebanon's national carrier, Middle East Airlines, was made possible due to the Council of Ministers' decision to cover the airline's insurance premium.

FIGURE 16 • Flights Arriving at Beirut International Airport are at a Fraction of their pre-Escalation Levels



Source: World Bank Data Lab based on flight data from AviationStack and conflict events from ACLED.

governorates, the capital stock will continue to depreciate, and the impact of its destruction on potential output will persist for years.²⁵ The analysis assumes that remittance inflows will remain unaffected, with a steady stream of remittances similar to that seen during the crisis years continuing to serve as a de facto safety net for households recently impacted by the devastating conflict.

To isolate the impact of the conflict on the Lebanese economy in 2024, a counterfactual scenario was developed. This scenario assumes no conflict as of Q4-2023, and projects a continued upward trajectory in tourist arrivals. In the absence of conflict, the scenario assumes that this growth in tourism would have extended through 2024. It also assumes the continuation of pre-conflict consumption trends, which had been contributing positively to economic growth. Due to a lack of comprehensive data, night-time lights (NTL) data are used as a proxy to gauge relative economic activity and consumption across Lebanon’s geography. The computation of the consumption shock is detailed in the following sections.

Absent the conflict GDP would have grown, albeit tepidly, by 0.9 percent in 2024.

Assessing the Tourism Shock in 2024

Losses in travel receipts due to the conflict in 2024 are computed based on forecasts of

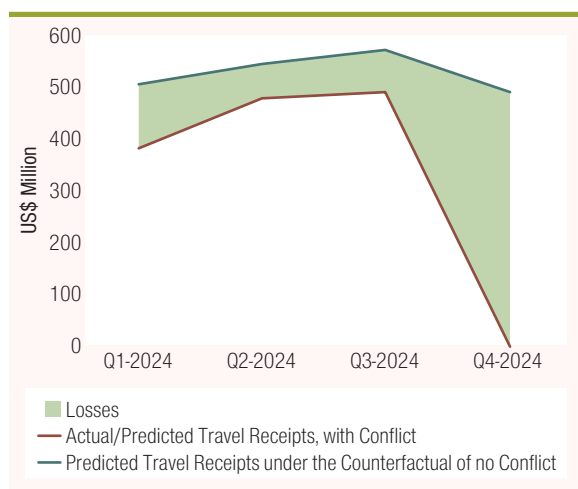
tourist arrivals under a counterfactual scenario of absence of conflict and the elasticity of receipts from travel services to tourist arrivals (refer to annex I for methodology). The total losses in travel receipts for 2024 are estimated at US\$ 756 million, with more than 60% of the losses materializing in Q4, due to the escalation of conflict (Figure 17).

However, receipts from travel services are likely to underestimate actual tourism spending.

This is due to (i) the prevalence of cash transactions in the economy, and (ii) some Lebanese expatriates, particularly those who have left the country recently, being misclassified as residents. To better estimate lost tourism receipts, the lost spending by Lebanese expatriates is accounted for as follows: average spending per tourist in Lebanon is first computed and then multiplied by the difference between the counterfactual number of Lebanese expatriates under the no conflict scenario and the actual number of Lebanese expatriates who visited the country in Q4-2023 and

²⁵ Public investment is curtailed by the severely limited fiscal space. In fact, capital expenditures declined markedly in the post-reconstruction era and amounted to less than 2 percent of GDP since 2001. As a result, the capital stock declined to less than 50 percent of GDP since 2010, owing to significant dis-investment. Private investment will also not be forthcoming absent a favorable investment climate and should uncertainty and instability persist.

FIGURE 17 • Losses in Travel Receipts (excluding Expat Spending) are Expected to Be Most Prominent in Q4-2024



Source: BdL and World Bank Staff Calculations.

H1-2024.^{26,27} When factoring in losses from expatriate spending, total losses in travel receipts are estimated at US\$ 1.2 billion for 2024 (Table 3. Losses in Q4-2024 outweigh those materialized over the year from Q4-2023 to Q3-2024).

Gauging the Consumption Shock

Beyond the heavy human toll, the conflict is inflicting mass internal displacement and significant physical destruction, which continues to severely weigh on consumption and economic activity. With the conflict escalation since September 2024, economic activity has been severely dented in five out of eight governorates, and internal displacement across all governorates has had knock-on effects on consumption and economic activity.

TABLE 3 • Losses in Q4-2024 Outweigh Those Materialized Over the Year from Q4-2023 to Q3-2024

	Losses in Tourism Receipts (including expat Spending)-Million US\$
Q1-2024	186.6
Q2-2024	66.3
Q3-2024	102.9
Q4-2024	907.9
Total (2024)	1,263.7

Because of their spatial accuracy, Night-time lights (NTL) data are used to gauge relative economic activity across Lebanon's geography.²⁸

NTL-implied estimates suggest that the five governorates most affected by the conflict account for 80 percent of total economic activity in the post 2019 financial crisis period (Table 4). NTL-Implied Administrative Level Economic Activity relative to Total Economic Activity and Figure 18). These governorates are Baalbek-El Hermel, Mount Lebanon, South Lebanon, El Nabatieh, and the Bekaa. In fact, displacement from South Lebanon and El Nabatieh (accounting for close to 22 percent of total economic activity in 2023) account for around 78 percent of total displacement across the country (Figure 15. Close to 80 percent of IDPs are from the El-Nabatieh and South governorates.), a testament to the significant shock to economic activity in those governorates.²⁹ NTL-implied estimates indicate that the southern suburbs of Beirut (Dahieh area) accounts for 2.82 percent of

²⁶ The data source for expatriate arrivals is CAS. Spending by Lebanese expatriates is computed as tourist spending in 2022 from BLOMINVEST's BRITE database in 2022 divided by actual or projected tourist arrivals. It is assumed that 70% of total Lebanese arrivals consists of expatriates who exhibit the same spending patterns as tourists whereas 30 percent are residents returning home.

²⁷ Given that the actual number of Lebanese expatriates visiting Lebanon under the baseline (i.e., conflict) scenario is not available in H2-2024, a forecast is produced using a well-specified time series model, which accounts for seasonality, using data up to H1-2024 to capture conflict dynamics. In contrast, the arrivals of Lebanese expatriates under the counterfactual (i.e., no conflict) scenario are generated from a well-specified time series model, which accounts for seasonality, using data up to 2023Q3 (i.e., prior to the onset of the conflict) to capture pre-conflict trends.

²⁸ The existing research suggests that Defense Meteorological Satellite Program (DMSP) data lack spatial accuracy, but Visible Infrared Radiometer Suite (VIIRS) NTL data are far more spatially accurate and, hence, can be used to gauge economic activity geographically. The analysis of administrative-level geographic activity, provided, employs VIIRS NTL data from Black Marble that is collected by the World Bank's data lab. Black Marble employs a potentially more advanced algorithm for NTL data collection. This superior algorithm removes, for example, the effect of ephemeral light.

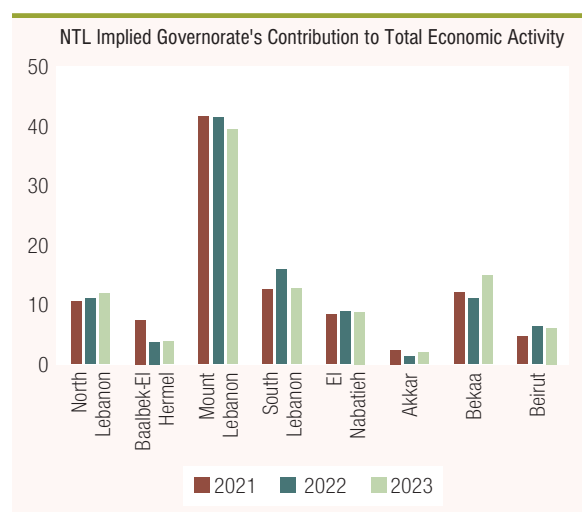
²⁹ Link.

TABLE 4 • NTL-Implied Administrative Level Economic Activity Relative to Total Economic Activity

	2017	2018	2019	2020	2021	2022	2023
Mount Lebanon	46.4	45.2	45.3	43.4	41.8	41.6	39.5
Bekaa	10.2	10.6	10.8	11.8	12	11	14.9
South Lebanon	9.6	9.7	9.5	10.5	12.5	15.9	12.7
El Nabatieh	7.3	7.7	7.7	8.5	8.3	8.9	8.8
Baalbek-El Hermel	4.5	5.3	5.8	6.7	7.4	3.7	3.8
North Lebanon	13.3	12.5	11.7	10.9	10.6	11.01	11.9
Beirut	5.3	5.2	5.3	4.4	4.6	6.3	6.1
Akkar	3.1	3.4	3.6	3.3	2.4	1.3	2

the economic activity in Mount Lebanon.³⁰ The latter area has seen substantial displacement amid mass

FIGURE 18 • The Five Governorates Heavily Affected by the Israeli Strikes Accounted for 80% of Total Economic Activity in 2023



Source: World Bank staff Calculations based on Black Marble VIIRS Night-Time Lights data collected by the World Bank's Data Lab.

TABLE 5 • Shocks to Consumption (in US\$ Million)

	South Lebanon	El Nabatieh	Baalbek	Bekaa	Mount Lebanon (Baabda; Dahieh)
2024Q1	132.7	107.1	–	–	–
2024Q2	89.4	31.2	–	–	–
2024Q3	154.4	178.4	–	–	–
2024Q4	689.6	477.8	206.3	809.7	60.4
Total 2024	1,066.1	794.5	206.3	809.7	60.4
Total 2024 across Governorates					2,937

destruction, and economic activity has ground to a complete halt at the end of September 2024.

Taking into account the significant escalation in conflict since September 2024, the size of the shock to consumption implied from NTLs for 2024 is US\$ 2,937 million (Table 5. Shocks to Consumption (in US\$ million)). For the first nine months of 2024, and given that the conflict and displacement was largely contained in the South and El Nabatieh governorates, the shock to consumption derived from NTLs is only computed in those governorates.³¹ The losses in

³⁰ The latter estimate is produced using NTL data at the third administrative level, the most granular and detailed level for areas outside of Beirut and uses the Caza of Baabda to proxy for Beirut's southern suburb. The population density in Beirut's southern suburb is the highest in all Baabda and Mount Lebanon.

³¹ Forecasts of NTLs for El Nabatieh and South Lebanon governorates are produced for Q4-2023 to Q3-2024 using data up to September 2023 to capture pre-conflict dynamics. These forecasts serve as the counterfactual scenario of absence of conflict.

consumption for the South and El Nabatieh governorates for 9M-2024 amount to 693 US\$ million.³² With the escalation of conflict in Q4-2024 and the further massive displacement from the South, El Nabatieh, Bekaa, Baalbek El-Hermel, and Beirut's southern suburb, consumption in these governorates or areas is assumed to be considerably larger in Q4-2024. The relative weight of each governorate in total economic activity and an estimate of aggregate consumption are employed to obtain forgone or lost consumption in Q4-2024 (Table 5. Shocks to Consumption (in US\$ million)).³³

Impact of the Conflict on Lebanon's GDP

For 2024, the conflict is estimated to have cut Lebanon's real GDP growth rate by 6.6 percentage points due to the combined shocks to tourism and consumption. With the conflict escalating to a full-blown conflict since September 2024, the significant shocks to both tourism and consumption are estimated at \$4,200 million (Table 6. Total Losses in Net Exports and Consumption due to the Conflict (US\$ mln)). As a result, real GDP is now projected to contract by 5.7 percent in 2024. In a counterfactual scenario without conflict in 2024, real GDP growth would have been 0.9 percent.

When combining the impact of the conflict in 2023 and 2024, real GDP growth has cumulatively contracted by 7.6 percent. As outlined in the special focus of the *Fall 2023 Lebanon Economic Monitor*, the conflict has reduced Lebanon's real GDP growth by 1 percentage points to a contraction of 0.8 percent in 2023.³⁴ In a counterfactual scenario without conflict, real GDP growth would have been 0.2 percent in 2023 (Table 7).

Conclusion and Looking Ahead

Our estimates are in line with recent research's estimates of the impact of civil conflicts and wars

TABLE 6 • Total Losses in Net Exports and Consumption Due to the Conflict (US\$ mln)

	2024
Losses in Tourism Receipts (including expats)	1,263.7
Losses in Consumption	2,937
Total	4,200

on real GDP growth, GDP per capita, and macro-economic aggregates.³⁵ Civil wars are found to lead to a decline of 2.3 percent, on average, in real GDP growth per conflict year. A key takeaway from existing

³² First, the difference in NTLs between the baseline (i.e., conflict) and counterfactual (i.e., no conflict) scenarios is translated into an output effect using the structural elasticity of NTLs to GDP of 1.55 that is provided in: Beyer, R. C., Hu, Y., & Yao, J. (2022). Measuring quarterly economic growth from outer space. Policy Research Working Paper 9893, World Bank, Washington DC. The computations employ mean NTLs as opposed to the sum of NTLs. Second, the latter difference is multiplied by the relative weight of each governorate in total economic activity and an estimate of aggregate consumption.

³³ Displacement to other receiving governorates could have increased consumption, particularly with the humanitarian aid offered by several countries. Nonetheless, it is assumed that this increase in consumption is completely offset by the decrease in economic activity in these governorates resulting from the war.

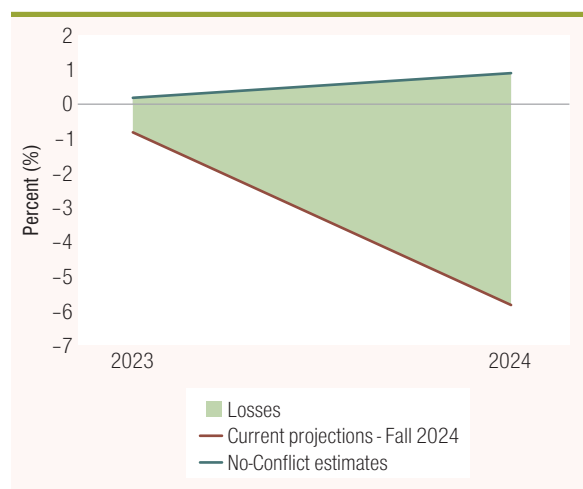
³⁴ Further details on the methodology and measurement of the shocks to consumption and tourism in 2023, please refer to the *Fall 2023 Lebanon Economic Monitor*.

³⁵ See, for example, the following non-exhaustive list of references, which the discussion draws upon. Collier, P., & Hoeffler, A. (2004). Greed and grievance in civil war. *Oxford economic papers*, 56(4), 563–595. Novta, N., & Pugacheva, E. (2021). The macroeconomic costs of conflict. *Journal of Macroeconomics*, 68, 103286. Thies, C. F., & Baum, C. F. (2020). The effect of war on economic growth. *Cato Journal*, 40, 199–212.

TABLE 7 • Lebanon: Real GDP Estimates and Projections Under Alternative Conflict Scenario

	Fall 2024 Estimates		Counterfactual (no conflict)		Total Impact of Conflict	
	2023	2024	2023	2024	2023	2024
	Est.	Proj.	Est.	Proj.	Est.	Proj.
Real GDP (%)	-0.8	-5.7	0.2	0.9	-1.0	-6.6

FIGURE 19 • Lebanon: The Conflict Cut Real GDP Growth in Lebanon by 6.6 pp in 2024



Source: WB Staff Calculations.

work is that intensity is an important determinant of the macroeconomic impact of conflicts.³⁶ The empirical evidence suggests that GDP per capita and consumption are 28 percent and 25 percent lower ten years following the onset of a conflict. Existing research also suggests that consumption, investment, exports, and imports tend to decrease during and several years following the conflict.^{37,38} The findings for Lebanon are consistent with those of the existing literature on the macroeconomic effects of conflicts, particularly since the significant escalation of the conflict in the fourth quarter of 2024. While economic activity was affected in all quarters of 2024, the impact of the conflict has been primarily concentrated in Q4-2024.

As estimated, the economic and sectoral tolls of the conflict are severe and continue to escalate. As mentioned earlier, the effects of the conflict in terms of destruction in the capital stock (or gross fixed capital formation) have not yet been accounted for. Incorporating losses in gross fixed capital formation would likely lead to a significant decrease in Lebanon's potential GDP. As mentioned in Box 5. Comparing the Current Conflict to the 2006 Hostilities, the absence of domestic financing implies that the post-war recovery would hinge on external financing, which is, contingent on geopolitical conditions. The severe infrastructure deficiencies, exacerbated by the conflict, coupled with the absence of financing, are detrimental to total factor productivity and potential growth.

In addition, the reduction in Lebanon's human capital stock due to the conflict is another significant concern, though it is still too early to fully assess the extent of the damage. Prolonged mass internal displacement is likely to create further social strains and tensions, especially as the economy grapples with a multifaceted crisis, limited financing, and restricted fiscal space for humanitarian, relief, and social services. The conflict has caused more than ten thousand casualties and disrupted education and health outcomes, with thousands of children out of school and many health facilities severely strained or damaged. Additionally, a critical issue yet to be evaluated is the anticipated wave of skilled worker departures, which could further erode the country's human capital. As of October 7th, 326,000 individuals have left the country, around half of whom are Lebanese citizens.³⁹ This number is expected to rise as the conflict continues, with little information available on the qualifications, education, and skills of those who have left, or whether they will return, potentially leading to long-term erosion of Lebanon's human capital.

³⁶ A commonly employed dataset in the literature is the Uppsala Conflict Data Program. As discussed in Novta and Pugasheva (2021), political scientists have commonly used a threshold of 1,000 battle-deaths and above to determine whether a country has undergone a major conflict. Thies and Baum (2020), who examine the effects of war on economic growth, classify conflict intensity on a scale or magnitude of 1 to 7, based on thresholds related to the number of battle deaths. Magnitude 6 and 7 conflicts or wars have respectively, 1,001 to 10,000 and 10,000 and more battle-deaths (Thies and Baum, 2020). Nonetheless, Novta and Pugacheva (2021) make the important point that, for the purpose of assessing a conflict's economic effect, conflict intensity should be considered in context and be country and population-size specific. The authors argue in favor of measuring conflict incidence based on the share of the population killed. The authors define a conflict event-year as any event with more than one hundred casualties in any given year.

³⁷ In contrast, Novta and Pugasheva (2021) find that public consumption increases during and after the conflict. This is consistent with higher spending to accommodate the effect of a conflict, establish social safety nets, provide assistance with healthcare and education, and other forms of aid. In Lebanon, the severely limited fiscal space would preclude such an increase in public spending without budget support from the international community.

³⁸ Novta and Pugasheva (2021).

³⁹ Link International Organization for Migration (IOM).

BOX 5. COMPARING THE CURRENT CONFLICT TO THE 2006 HOSTILITIES

As highlighted in the *Fall 2023 Lebanon Economic Monitor*,^a the 2006 hostilities between Lebanon and Israel serve as a benchmark for the potential effects of the current conflict, with several caveats to consider. The conflicts differ in terms of (i) human toll, physical damage, duration (ii) baseline macroeconomic environment, and (iii) geopolitical environment determining international financing appetite for reconstruction.

Human Toll, Physical Damage, Duration

In addition to the heavier human toll, the current conflict is expected to result in greater damages than the 2006 conflict which led to US\$2.3 billion in forgone output (about 10.5% of nominal GDP, US\$33.1 billion) and US\$3.2 billion in direct and indirect damages. While the 34-day conflict in 2006 primarily destroyed major infrastructure such as roads, bridges, airports, and power plants, the current conflict has predominantly caused extensive damage to housing units and non-residential infrastructure, including public buildings, water facilities, and educational institutions. In The cost of physical damages and economic losses from the conflict in Lebanon as of end-October 2024, is estimated at US\$8.5 billion, with damages to physical structures alone amounting to US\$3.4 billion.^b The death toll, already surpassing 3,500, is more than triple that of the 2006 hostilities, while injuries have also more than tripled, exceeding 13,500. Displacement has also been more severe, affecting six out of Lebanon's eight governorates and reaching a quarter of the population. Finally, the current conflict has already exceeded the 34-day duration of the 2006 conflict, and damages are expected to compound further as the conflict prolongs.

Baseline Macroeconomic Environment

Given Lebanon's current vulnerabilities, the economic impact of the conflict is estimated to materially exceed that of the 2006 hostilities, owing to markedly different initial macroeconomic conditions prior to the conflict. The current conflict erupted against a backdrop of a cumulative sharp contraction reaching 34% of real GDP in the past five years, sovereign default, systemic banking crisis, limited capital expenditures and investment flows, and severely curtailed public service provision. The impaired macroeconomic framework and limited fiscal space will curtail the authorities' ability to provide emergency assistance. Moreover, Lebanon's insolvent banking sector is incapable of extending credit to the productive sectors of the economy or to finance reconstruction and investment.

The decrease in real GDP due to the current conflict is unlikely to be short-lived given the country's binding financing constraints within the context of the financial crisis, and particularly amid sovereign default. In contrast to the negative growth projected due to the current conflict, real GDP growth in 2005 and 2006 remained positive despite the significant financial and economic strains following Prime Minister Hariri's assassination in February 2005 and the hostilities in July 2006, standing at 2.7% and 1.6%, respectively. Lebanon had also benefitted, in the lead-up to these two shocks, from a program of fiscal adjustment, which restrained the primary deficit and provided interest relief, following the Paris II donors conference in 2002. In these two episodes, deposit outflows of US\$2 billion and US\$3 billion, respectively, were quickly reversed.^c In 2006, deposits from Saudi Arabia and Kuwait totaling US\$1.5 billion played a pivotal role in stabilizing the banking sector and maintaining the currency peg. Additionally, fiscal costs from the 2006 conflict were offset by donor support from the Paris III conference, which was crucial for achieving a record 9.3% economic growth in 2008.

Moreover, unlike the rapid reversal of capital outflows following the 2006 hostilities, the conflict is expected to halt and ultimately reverse the limited investment and capital inflows into the country. The increased risk premiums associated with the conflict will raise the required return on capital, already elevated due to the sovereign default and banking crisis, making investment in Lebanon unattractive. Additionally, investor sentiment is likely to be severely impacted, and the chances of identifying viable investment opportunities in a country facing significant infrastructural, institutional, and economic declines will be minimal. The conflict will also likely disrupt any ongoing stabilization in private sector activity for an extended period.

While the BdL maintained a fixed exchange rate regime in 2006, the fragile exchange rate stability achieved since August 2023 is likely to come under increased pressure with the conflict and possibly in its aftermath. Unlike 2006, when external support^d bolstered exchange rate stability, this conflict occurs against the backdrop of a severely weakened currency, which has lost 98 percent of its value, and witnessed significant volatility between 2019 and 2023. After years of instability exacerbated by BdL's interventions through the Sayrafa platform, exchange rate stability was achieved in August 2023, driven by increased fiscal revenue collection and spending restrictions on public entities which generated unspent public sector surpluses held at the BdL. However, the conflict will likely undermine the fragile exchange rate stability as fiscal authorities would need to expand spending to sustain public services and effectively respond to the conflict and support recovery efforts, risking increased currency in circulation or further depletion of limited liquid foreign reserves.

Geopolitical Environment

Unlike the aftermath of the 2006 hostilities, international aid and investment post-conflict remain highly uncertain. In fact, the output loss from the 2006 hostilities turned out to be smaller than anticipated, and the infrastructure was rapidly repaired due to significant bilateral and multilateral funding in the immediate aftermath of the conflict.^e Significant bilateral and multilateral financing in the post-conflict period—similar to the situation following the 2006 conflict—remains uncertain due to geopolitical considerations. This financing will largely depend on the feasibility of achieving a comprehensive political settlement involving both internal and external

(continued on next page)

BOX 5. COMPARING THE CURRENT CONFLICT TO THE 2006 HOSTILITIES *(continued)*

stakeholders. In the wake of the 2006 hostilities, international donors had a strong appetite to invest in Lebanon, channeling funds into reconstruction and development initiatives. In fact, record inflows into the country spurred real GDP growth rates of 9.3, 9.1, and 10.2 percent in 2007, 2008, and 2009, respectively.¹ In contrast, without a comprehensive crisis resolution and political settlement, foreign aid is likely to focus on humanitarian assistance and emergency relief during the current conflict and its aftermath, rather than on long-term development projects.

¹ To access the Fall 2023 Lebanon Economic Monitor, please see this link.

World Bank. Lebanon Interim Damage and Loss Assessment (DaLA): Assessment Report (English). Washington, D.C. : World Bank Group. Link.

This discussion is based on the figures and analysis offered in Schimmelpfennig and Gardner (2008). Schimmelpfennig, A. & Gardner, E. H., (2008). Lebanon—Weathering the perfect storms. IMF Working Paper WP/08/17, International Monetary Fund, Washington DC.

Please refer to the prior discussion on the deposits by the Kingdom of Saudi Arabia and Kuwait at BdL following the 2006 hostilities.

The Paris III conference that was held on January 25, 2007, succeeded in raising US\$ 7.6 bln of multilateral funding thereby sustaining economic growth in 2007.

Direct investments in Lebanon were US\$ 4,002.1 mln and US\$ 4,485.1 mln in 2008 and 2009, respectively. The direct investment in 2009 was, in nominal terms, the highest over the period 2002 to 2023. Portfolio investments of US\$ 3,708.2 mln in 2009 were also the highest on record (in nominal terms) for the period 2002 to 2015, prior to the advent of the 'financial engineering' operations of BdL. These flows reflected a positive economic and political outlook following the election of President Michel Sleiman in 2008. Direct investments and portfolio flows of US\$ 3,131.7 mln and US\$ 1,665.5 mln in 2006 were essential in dampening the effect of the 2006 hostilities on real GDP growth and reflected part of the support for the reconstruction efforts.

ANNEX I.

NIGHT-TIME LIGHTS

Night-Time Lights as an Alternate Measure of Economic Activity

The first-generation low light imaging NTLs have been—and continue to be—collected by the U.S. Air Force’s Defense Meteorological Satellite Program (DMSP) Operational Linescan System (OLS) since the 1970s.⁴⁰ A second generation of NTL data, known as the Visible Infrared Radiometer Suite (VIIRS), became available in April 2012. Although not extensively used in the existing literature on the measurement of economic growth, the latter VIIRS data, gauged from the Day Night Band onboard the Polar Orbiting Satellite System, are superior to their predecessors and offer (i) a higher resolution owing to much improved low light imaging, (ii) high spatial accuracy, and (iii) temporally comparability.⁴¹ Hence, the VIIRS NTL data, despite being an imperfect measure of man-made lights, provide a better measure of the radiance of light coming from earth and a potentially better proxy of overall and local economic activity. Gibson et al. (2021) underscore the lower noise and overall superiority—widely established in the remote sensing literature prior to the use of light data in economics—of VIIRS data vis-à-vis DMSP data in measuring economic activity. Nonetheless, both VIIRS and DMSP data do not appear to be useful gauges of economic activity in low population density rural areas (Gibson et al., 2021) and the time-series predictive ability of VIIRS and DMSP data has been called into question by Nordhaus and Chen (2015) and Chen and Nordhaus (2019).

In addition to their potential effectiveness in gauging overall economic activity, existing research also suggests that NTL data are useful in capturing informal economic activity and appear to be a better gauge of economic activity in geographic or metropolitan areas with larger retail and services sectors but less effective in areas where agriculture is dominant.^{42,43} Despite being potentially eclipsed

⁴⁰ Data on DMSP-OLS lights are available since 1992. Hu and Yao (2022) and Henderson, Storeygard, and Weil (2012) propound that DMSP satellites circle earth 14 times per day and overpass a specific location between 7 pm and 9 pm. NTLs are obtained as low light imaging data where electric light emissions are observed.

⁴¹ For further information, please refer to Beyer, Hu, and Yao (2022) and Elvidge *et al.* (2023). Gibson *et al.* (2021) note that DMSP data suffer from blurring, coarse resolution, no calibration, low dynamic range, unrelated sensor amplification, which hinders comparability spatially and across time. VIIRS and DMSP data can be affected by cloud cover and gas flaring, which are not cause for concern in the Lebanese context.

⁴² Hu and Yao (2022) write: “During economic downturns, formal economic activity disappears and informal economic activity springs up. While not recorded by official data, informal economic activity is captured by night lights. As a result, the new measure suggests higher growth than official data. Conversely, the flow of economic activity from the informal to the formal sector during economic upturns could make official GDP growth higher than the new measure”.

⁴³ See, for example, Chen and Nordhaus (2019). An excellent review of the literature is provided by Gibson, Olivia, and Boe-Gibson (2020).

by background noise, NTL data could be useful even in countries with low electrification (Hu and Yao, 2022) and offer a better alternative to electricity consumption as measure of economic activity (Henderson, Storeygard, and Weil, 2012).^{44,45} Further, while DMSP data lack spatial accuracy, VIIRS data are far more spatially accurate and, hence, can be used to gauge economic activity geographically.⁴⁶

Gauging economic activity from NTL

An inherent challenge in using NTL data is to infer changes in economic activity from changes in luminosity.⁴⁷ A sizeable literature, starting with the contribution of Henderson, Storeygard, and Weil (2012), addresses the latter challenge by estimating the elasticity of lights with respect to income (or real GDP).⁴⁸ The difficulty in gauging the ('true') relation between NTLs and GDP stems, in particular, from the fact that both variables are measured with errors. This, in turn, implies that, although readily estimable, the reduced form elasticity is a biased estimate of the 'true' structural elasticity of lights to GDP.⁴⁹

In a classical measurement error in national accounts context, GDP and NTL growth are related as:

$$Z_{it} = Y_{it} + \epsilon_{zit}, \quad (1)$$

$$X_{it} = \beta Y_{it} + \epsilon_{zit}, \quad (2)$$

where Y_{it} is the growth (log difference) in true real GDP, Z_{it} is the growth of real GDP in the national accounts (which is measured with error), X_{it} is the growth in observed light, and β is the elasticity of lights with respect to income. The measurement errors in GDP and light growth are assumed to be uncorrelated, $cov(\epsilon_x, \epsilon_z) = 0$.

A regression of growth of income on growth of lights,⁵⁰

$$Z_{it} = \hat{\phi} X_{it} + e_{it}, \quad (3)$$

is a common starting point for the empirical analysis in the literature but yields a reduced form inverse elasticity which is a downward biased estimate of the

⁴⁴ More specifically, Hu and Yao (2022) write: "Both GDP and night lights contain measurement errors that vary across countries and over time, and the relationship between night light growth and true GDP growth is unknown. For countries with low levels of electrification—most of which are in Africa—night lights reflective of economic activity may be eclipsed by background noise. However, if official measures of GDP growth in those countries are poor, night lights can still serve as a useful proxy for economic activity in spite of the noise".

⁴⁵ While the predictive power of electricity consumption appears to be on par with that of NTLs, the limited availability of data on electricity consumption makes NTL data more appealing (Henderson, Storeygard, and Weil, 2012).

⁴⁶ For a detailed technical discussion of the reasons underlying the lack of spatial accuracy of the DMSP light data, please refer to Gibson *et al.* (2021).

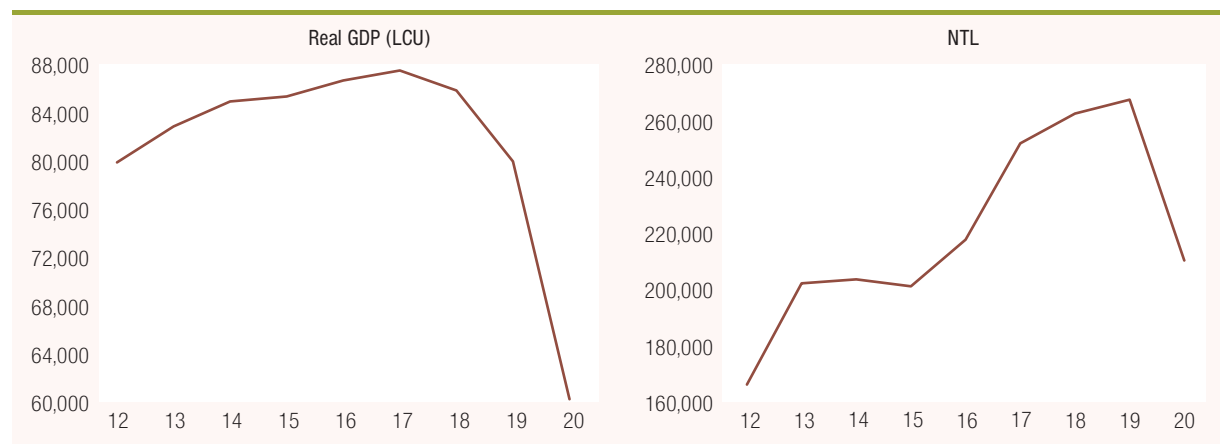
⁴⁷ Chen and Naudhaus' (2011) initial study offered only limited support for the usefulness of light data in measuring economic activity. Subsequent studies, starting with Henderson, Storeygard, and Weil (2012) provided ample support for measuring GDP growth using NTL and, in particular, VIIRS data.

⁴⁸ Another early contribution to the literature, which casts doubt on the usefulness of NTLs in gauging economic activity except for countries with very poor statistical capacity, is Chen and Nordhaus (2011). However, more recent research has rendered a more positive assessment of NTLs' ability to gauge economic activity.

⁴⁹ GDP and income are used interchangeably in the text.

⁵⁰ Estimating the specification in equation (3) using growth rates is more adequate for Lebanon in view of the sizeable informal sector. Chen and Nordhaus (2011) assume that the measurement error is in the level of output whereas Henderson, Storeygard, and Weil (2012)'s assumption is that the measurement error is in the growth rates. Hao and Yu (2022) discuss the different assumptions pertaining to the measurement error: "The past literature has assumed measurement errors to be either in output levels (Chen and Nordhaus, 2011) or in growth rates (Henderson et al., 2012). If the true measurement error is in levels, the structure of measurement error in growth rates might be complex, including possibly serial correlation. On the other hand, if GDP levels are consistently mis-measured over time, such as in the case when an economy has a sizable informal sector, assuming measurement errors in growth rates is more appropriate". Econometrically, estimating the regression in growth rates is desirable to circumvent non-stationarity in the levels of the of real GDP and NTL.

FIGURE 20 • Real GDP and NTL in Levels



inverse structural elasticity, β (Henderson, Storeygard, and Weil, 2012; Hu and Yao, 2022). Identifying the structural elasticity requires additional identifying assumptions.⁵¹ Estimates of the structural elasticity have been generally consistent among studies and, therefore, can be leveraged for gauging economic activity in Lebanon from NTL data.⁵²

The relation between real GDP and NTL is examined using annual data for the period 2012 to 2020 for Lebanon. Figure 20. Real GDP and NTL in

levels and 21 provide, respectively, the time series dynamics of real GDP and data on NTL (VIIRS from Black Marble) in levels and growth rates for Lebanon.

The correlation between real GDP and NTL growth is 0.84. Equation (3) is estimated using the growth rates of NTL and GDP.⁵³ The results are reported in Table 8. Estimates of the inverse (reduced form) elasticity of lights to GDP for Lebanon.

⁵¹ Henderson, Storeygard, and Weil (2012) employ additional assumptions on the ratio of signal to total variation in measured GDP growth to identify the structural elasticity. In their framework, they make a distinction between countries with good and bad measurement in national accounts, which yields additional moment conditions that permit identifying the structural elasticity parameter. Beyer, Hu, and Yao (2022) exploit additional data on the number of nightly observations for each country in each quarter to identify the structural elasticity. Their findings suggest that overestimation of GDP in the national accounts is positively correlated with a lower level of development, lower statistical capacity, and lower voice and accountability as measured by one of the dimensions of the World Bank's Worldwide Governance Indicators. Hu and Yao (2022) employ a nonparametric identification strategy in conjunction with assumptions on the exogeneity of lights.

⁵² Henderson, Storeygard, and Weil (2012) provide estimates of the structural elasticity of elasticity of lights with respect to income that ranges from 1.034 to 1.72. Hao and Yu (2022)'s estimate the structural elasticity of nighttime lights to GDP to be around 1.3 whereas Beyer,

Hu, and Yao (2022) estimates of the structural elasticity range from 1.46 to 1.64 for emerging markets and developing economies. Hao and Yu (2022)'s sample includes data on Lebanon.

⁵³ Estimating the specification in equation (3) using growth rates is more adequate for Lebanon in view of the sizeable informal sector. Chen and Nordhaus (2011) assume that the measurement error is in the level of output whereas Henderson, Storeygard, and Weil (2012)'s assumption is that the measurement error is in the growth rates. Hao and Yu (2022) discuss the different assumptions pertaining to the measurement error: "The past literature has assumed measurement errors to be either in output levels (Chen and Nordhaus, 2011) or in growth rates (Henderson et al., 2012). If the true measurement error is in levels, the structure of measurement error in growth rates might be complex, including possibly serial correlation. On the other hand, if GDP levels are consistently mis-measured over time, such as in the case when an economy has a sizable informal sector, assuming measurement errors in growth rates is more appropriate". Econometrically, estimating the regression in growth rates is desirable to circumvent non-stationarity in the levels of the of real GDP and NTL.

FIGURE 21 • Real GDP and NTL Growth

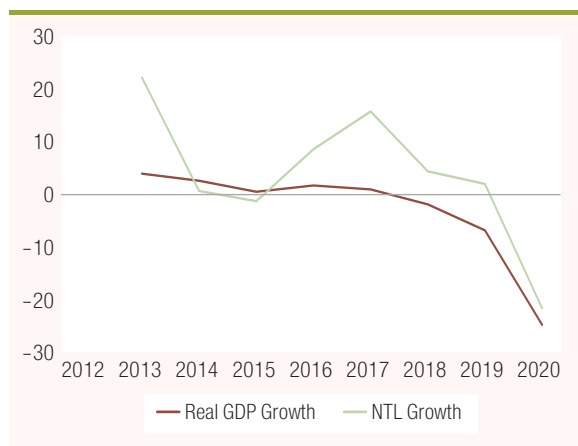


TABLE 8 • Estimates of the Inverse (reduced Form) Elasticity of Lights to GDP for Lebanon

Dependent Variable: NTL Growth	
Constant	7.257**
Standard Error	2.524
Real GDP Growth	1.167***
Standard Error	0.129
R2	0.711

Notes: Newey and West (1987) Heteroskedasticity and autocorrelation consistent standard errors are in parentheses. *** and ** denote, respectively, statistical significance at the 1% and 5% levels.

References

Beyer, R. C., Hu, Y., & Yao, J. (2022). Measuring quarterly economic growth from outer space. Policy Research Working Paper 9893, World Bank, Washington DC.

Chen, X., & Nordhaus, W. D. (2011). Using luminosity data as a proxy for economic statistics. Proceedings of the National Academy of Sciences, 108(21), 8589–8594.]

Chen, X., & Nordhaus, W. D. (2019). VIIRS nighttime lights in the estimation of cross-sectional and time-series GDP. Remote Sensing, 11(9), 1057.]

Elvidge, C. D., Baugh, K. E., Zhizhin, M., & Hsu, F. C. (2013). Why VIIRS data are superior to DMSP for mapping nighttime lights. Proceedings of the Asia-Pacific Advanced Network, 35(0), 62.]

Gibson, J., Olivia, S., & Boe-Gibson, G. (2020). Night lights in economics: Sources and uses. Journal of Economic Surveys, 34(5), 955–980.]

Gibson, J., Olivia, S., Boe-Gibson, G., & Li, C. (2021). Which night lights data should we use in economics, and where? Journal of Development Economics, 149, 102602.]

Henderson, J. V., Storeygard, A., & Weil, D. N. (2012). Measuring economic growth from outer space. American Economic Review, 102(2), 994–1028.]

Hu, Y., & Yao, J. (2022). Illuminating economic growth. Journal of Econometrics, 228(2), 359–378.]

Mercy Corps (2023). Night-time light reflectance: Potential uses in Lebanon. Thematic report.

Newey, W., & West, K. (1987). A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix. Econometrica, 55, 703–708.

Nordhaus, W., & Chen, X. (2015). A sharper image? Estimates of the precision of nighttime lights as a proxy for economic statistics. Journal of Economic Geography, 15(1), 217–246.

ANNEX II. METHODOLOGY OF THE TOURISM SHOCK PROJECTIONS FOR 2024

Quarterly forecasts of tourist arrivals for Q4-2023, H1-2024 and Q3-2024 are produced using a well-specified time series models which account for seasonality whereas the elasticity of receipts from travel services to tourist arrivals is estimated using a standard time series regression in logarithms.

The elasticity of receipts from travel services to tourist arrivals is estimated using quarterly data for the period Q1-2012 to Q3-2022.

Receipts from travel services are a component of the current account. From the national income accounting identities, $GNDI = C_p + IF_p + C_g + IF_g + IN + CAB$, where C_p is private consumption, IF_p is private fixed investment, C_g is government consumption, IF_g is government fixed investment, and IN is inventory investment.

The current account balance is $CAB = X - M + NFI + TR$, where X are exports, M are imports, NFI is net factor income from abroad and TR are transfers from or to abroad.

Projections or forecasts of travel receipts are obtained from a well-specified Autoregressive Moving Average (ARMA) models, which accounts for the seasonal pattern in tourist arrivals and travel receipts. Formal econometric tests (using seasonal dummy variables) confirm that tourist arrivals and receipts from travel services exhibit a seasonal pattern.

The latter forecasts serve as the projected tourist arrivals under the counterfactual scenario of absence of conflict.

The absence of data on actual tourist arrivals in H2-2024 complicates the estimation of the losses. To delineate the baseline (i.e., conflict) and counterfactual (i.e., no conflict) scenarios in H2-2024, forecasts of tourist arrivals and travel receipts are produced assuming the pre- and post-conflict trends persist.

Because data on actual tourist arrivals (which embed conflict dynamics) are available only through H1-2024, an estimate of travel services for H1-2024 under the conflict scenario is generated using data on tourist arrivals and the elasticity of travel receipts to tourist arrivals.

In contrast, owing the unavailability of tourist arrival data beyond H1-2024, time series forecasts of travel receipts for the conflict scenario are generated using a well-specified time series model (which accounts for seasonality) for H2-2024 to capture conflict dynamics.

Travel receipts under the counterfactual (i.e., no conflict) scenario are generated for H2-2024 using a time-series forecast of tourist arrivals using data up to 2023Q3, which is a period that precedes the eruption of the conflict (i.e., based on pre-conflict trends), and the elasticity of travel receipts to tourist arrivals.



THE WORLD BANK

1818 H Street, NW
Washington, DC 20433