LEBANON ECONOMIC MONITOR

Lebanon Sinking
(To the Top 3)

Spring 2021

WORLD BANK GROUP
Middle East and North Africa Region

Lebanon Economic Monitor

Lebanon Sinking (To the Top 3)

لبنان يغرق (نحو أسوأ ثلاث أزمات عالمية)

Le Naufrage du Liban (Top 3 des pires crises mondiales)

Spring 2021

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

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ACRONYMS

AER	Average Exchange Rate	LBP	Lebanese Pound
BdL	Banque du Liban	LEM	Lebanon Economic Monitor
BoP	Balance of Payments	MIDAS	Mixed-Data Sampling
CA	Current Account	MoET	Ministry of Economy and Trade
CBP	Central Bank of the Philippines	MTO(s)	Money Transfer Operator(s)
CBV	Central Bank of Venezuela	NGO(s)	Non-governmental Organizations
CD(s)	Certificate of Deposit(s)	NID	National ID
CFF	Compensatory Financing Facility	NIR	Net International Reserve
CPI	Consumer Price Index	NPL(s)	Non-performing Loan(s)
CSI	Crisis Severity Index	NPTP	National Poverty Targeting Program
DBP	Development Bank of the Philippines	NSSF	National Social Security Fund
ECB	European Central Bank	O&M	Operation and Maintenance
EdL	Electricité du Liban	PEP(s)	Politically Exposed Person(s)
EFF	Extended Fund Facility	PISA	Programme for International Student Assessment
EFF	Extended Fund Facility		
EMU	European Monetary Union	PMI	Purchasing Manager's Index
ES	Enterprise Survey	PNB	Philippines National Bank
ESSN	Emergency Crisis and COVID-19 Response Social Safety Net Project	PoB	Port of Beirut
		POS	Point-of-Sale
FCV	Fragility, Conflict, and Violence	Pp	Percentage Points
FI(s)	Financial Institution(s)	PSI	Private Sector Initiative
FSBS	Fund for the Stability of the Banking System	RDNA	Rapid Damage and Needs Assessment
		SBA	Stand-by Arrangement
FX	Foreign Exchange	SDC(s)	Social Development Center(s)
GDP	Gross Domestic Product	SSN	Social Safety Net
GFSM	International Government Accounting Standards	TB(s)	Treasury Bond(s)
		TD(s)	Time Deposit(s)
GNI	Gross National Income (per capita)	UN	United Nations
GNP	Gross National Product	US$	United States Dollar
GOL	Government of Lebanon	WE(s)	Water Establishment(s)
GRM	Grievance Redress Mechanism	WSS	Water Supply and Sanitation
IADB	Inter-American Development Bank	xM 2020	First x months of 2020
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 them in a longer-term and global context and assesses the implications of these developments and other changes in policy 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 prepared by Wissam Harake (Senior Economist), Ibrahim Jamali (Consultant) and Naji Abou Hamde (Economic Analyst) with contributions from Lars Jessen (Lead Debt Specialist), Haocong Ren (Senior Financial Sector Economist), Zeina El Khoury (Private Sector Specialist), Angela Elzir Assy (Labor Market Specialist), Ganesh Kumar Seshan (Senior Economist), Bilal Malaeb (Economist), Fahmina Rahman Dutta (Social Protection Specialist) and Haneen Ismail Sayed (Lead Operations Officer). Special Focus I: FX Subsidy Reform in the Deliberate Depression, has been led by Haneen Ismail Sayed (Lead Operations Officer), and Wissam Harake (Senior Economist). Special Focus II: Public Service Delivery in the Deliberate Depression, has been led by Wissam Harake (Senior Economist), Sameh Mobarak (Senior Energy Specialist), Amal Talbi (Lead Water Resources Management Specialist), Sally Zgheib (Senior Water Supply and Sanitation Specialist), and Nathalie Lahire (Senior Economist). The *Lebanon Economic Monitor* has been completed under the guidance of Christos Kostopoulos (Lead Economist), Eric Le Borgne (Practice Manager) and Saroj Jha (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.

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EXECUTIVE SUMMARY

The Lebanon financial and economic crisis is likely to rank in the top 10, possibly top three, most severe crises episodes globally since the mid-nineteenth century. This is a conclusion of the Spring 2021 Lebanon Economic Monitor (LEM) in which the Lebanon crisis is contrasted with the most severe global crises episodes as observed by Reinhart and Rogoff (2014)[1] over the 1857–2013 period. In fact, Lebanon's GDP plummeted from close to US$ 55 billion in 2018 to an estimated US$ 33 billion in 2020, with US$ GDP/capita falling by around 40 percent. Such a brutal and rapid contraction is usually associated with conflicts or wars. Even prior, the World Bank has long identified Lebanon as a Fragility, Conflict & Violence (FCV) State, and as such, the dire socio-economic conditions risk systemic national failings with regional and potentially global consequences.[2] This illustrates the magnitude of the economic depression that the country is enduring, with sadly no clear turning point on the horizon, given the disastrous deliberate policy inaction.

In the Fall 2020 LEM, Lebanon's economic crisis was termed *The Deliberate Depression.* For over a year, Lebanese authorities countered an assailment of compounded crises—namely, the country's largest peace-time economic and financial crisis, COVID-19 and the Port of Beirut explosion—with deliberately inadequate policy responses. The inadequacy is less due to knowledge gaps and quality advice and more the result of a combination of (i) a lack of political consensus over effective policy initiatives; and (ii) political consensus in defense of a bankrupt economic system, which benefited a few for so long. In the face of these challenges, Lebanon lacks a fully-functioning executive authority and is currently in the process of forming its third Government in a little over a year. This debilitating institutional void has lasted over 8 months so far.

The social impact of the crisis, which is already dire, could rapidly become catastrophic; more than half the population is likely below the national poverty line. Those paid in Lebanese Lira—the bulk of the labor force—are seeing potent purchasing power declines. Phone surveys conducted in the end of 2020 by the World Food Program found that 41 percent of households reported challenges

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[1] Reinhart, Carmen M. and Kenneth S. Rogoff (2014), *Recovery from Financial Crises: Evidence from 100 Episodes,* American Economic Review: Papers & Proceedings 2014, 104(5): 50–55.

[2] In Amin's Maalouf's *Le Naufrage des Civilisations*, translated as *The Wreckage of Civilizations*, the Lebanese author highlights how the failings of the Levant are propagating into a failing of all civilizations. Maalouf, Amin (2019), *Le Naufrage des Civilisations*, French & European Publications, Inc., April 2, 2019.

in accessing food and other basic needs. The share of households having difficulties in accessing health care rose from 25 percent (July-August) to 36 percent (Nov-Dec). The unemployment rate also rose among the respondents, from 28 percent in February (pre-COVID) to nearly 40 percent in Nov-Dec.

Lebanon, with a history of civil war and conflicts, faces realistic threats to its already fragile social peace. As previously argued (World Bank, 2016[3]), the key overarching constraints to development in Lebanon are i) elite capture hidden behind the veil of confessionalism, and ii) conflicts and violence, with these two having a symbiotic relationship: they feed and strive on each other. Demonstrations, while more modest in numbers, have recently grown angrier, erupting in cities across Lebanon to protest against the dire economic conditions; vital routes are being cut off causing significant disruptions to mobility and livelihood; increased crime rates threaten personal security; national fragmentation can allow infiltration of sinister groups with grave security implications. Hence, there is growing wariness of potential triggers to social unrest.

Recent Economic Developments

Monetary and financial turmoil are driving crisis conditions, more palpably through interactions between the exchange rate, narrow money and inflation. Acute exchange market pressures in Lebanese markets are reflected by heavy fluctuations in the US$ banknote exchange rate, which temporarily breached LBP 15,000/US$, before falling back down. This is within the context of a multiple exchange rate system, which includes the official exchange (LBP 1,507.5/US$) as well Banque du Liban's (BdL) platform rate set at LBP 3,900/US$. Overall, the World Bank Average Exchange Rate (AER) depreciated by 129 percent in 2020. Exchange rate pass through effects on prices have resulted in surging inflation, averaging 84.3 percent in 2020. Meanwhile, the stock of currency in circulation increased by 197 percent, even as broad money supply (which includes bank deposits) declined, with the latter weighed down by deleveraging in the financial sector.

Real GDP growth is estimated to have contracted by 20.3 percent in 2020, on the back of a 6.7 percent contraction in 2019. In a large part due to COVID-19, the tourism sector has been particularly hit; tourist arrivals fell by 71.5 percent, (yoy), over the first five months of 2020 (5M-2020). Meanwhile, construction permits and cement deliveries (proxies for the construction and real estate) suffered respective declines of 26.9 percent (yoy) and 44.7 percent (yoy) over the first 10 months of 2020 (10M-2020).

An ostensible improvement in some fiscal indicators (as a percentage of GDP) masks an actual deterioration. Revenues are estimated to have declined sharply as a result of the severe economic contraction, with the ratio to GDP falling further due to an inflation-driven increase in nominal GDP. However, this is more than offset by a larger decline in current expenditures, which benefited from: lower interest payments (due to the Eurobond default and a favorable arrangement with BdL on domestic debt); cuts in transfers; and also a denominator-led GDP effect. Hence, while the 2020 overall fiscal balance is estimated to have improved by 0.7 percentage points (pp) to reach −4.9 percent of GDP, the primary balance deteriorated by 2.3 pp to −2.8 percent of GDP.

The sharp economic contraction implied a commensurate drop in imports, and consequently, an anticipated narrowing of the current account deficit. During 10M-2020, merchandize imports shrank by 45 percent, which drove a 54.8 percent decrease in the trade-in-goods deficit. We estimate that the current account deficit fell by 10 pps to reach 11 percent of GDP in 2020, compared to a medium-term (2013–2019) average of 22.5 percent of GDP. Nonetheless, the sudden stop in capital inflows has implied a steady depletion of foreign exchange (FX) reserves at BdL, which exacerbates constraints on imports.

The burden of the ongoing adjustment/deleveraging in the financial sector is highly regressive, concentrated on smaller depositors, the bulk of the labor force and smaller businesses. De facto lirafication and haircuts on dollar

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[3] World Bank (2016) "Lebanon Systematic Country Diagnostic".

deposits are significant despite BdL's and banks' official commitment to safeguarding deposits. The burden of the ongoing adjustment/deleveraging is regressive and concentrated on the smaller depositors, who lack other source of savings, the local labor force, that is paid in lira, and smaller businesses. The banking sector is advocating for mechanisms that incorporate state owned assets, gold reserves, and public real estate in order to overhaul their impaired balance sheets. This constitutes a *bailout* of the financial sector and is inconsistent with restructuring principles that protect taxpayers and depositors. These principles include *bail in* solutions based on a hierarchy of creditors, starting with banks shareholders. Government can also apply a wealth tax (on financial and real assets) as a tool to progressively restructure the financial sector.

Special Foci

The financial and economic crisis has intensified Lebanon's fragility and fragmentation, increasing the risk to social and civil unrest. The crisis has exacerbated long-term national deficiencies including institutional weaknesses, failed economic and social policy, and dismal public service delivery. In such an environment, there is growing weariness of triggers for social unrest. In this LEM, we highlight two potential economic triggers that are under increased scrutiny, and which can have significant social implications.

The first Special Focus examines Lebanon's FX subsidy for critical and essential imports, which offers a serious political and social challenge. On the one hand, the current FX subsidy is both distortionary, expensive and regressive. It exerts considerable stress on Lebanon's balance of payments. On the other hand, the subsidy prevents the prices of these products from increasing, which would exacerbate inflationary-depreciation pressures, further striking at residents purchasing power.

The second Special Focus discusses the impact that the crises are having on four basic

public services: electricity, water supply, sanitation and education. The Deliberate Depression has further undermined already weak public services via two effects: (i) it has significantly increased poverty rates expanding the demography that is not able to afford private substitutables (the way citizens had previously adapted to abysmal quality of public services), and are thus more dependent on public services; and (ii) threatens financial viability and basic operability of the sector by raising its costs and lowering its revenues. Specifically,

- Severe shortage of foreign currency threatens termination of private sector contracts for power plant maintenance and temporary power generation**.** Meanwhile, Electricité du Liban (EdL) revenues, which are in Lebanese pound, are shrinking because of increasing technical, commercial and collection losses. EdL is likely to increase rolling blackouts to manage its cashflow shortfalls.

- In 2020, the Water Establishments (WEs) witnessed serious depletions in supplies, revenues, and financial and human resources, while affected by an upward spiral in costs. Due to reduced water supply from the WEs in 2020, people have had to rely more on other costlier and less convenient water alternatives, such as water tankers and bottled water, whose prices have surged.

- The breakdown in sanitation services risks intensifying the spread of water-borne diseases, adversely impacting an already vulnerable public health.

- Compounded crises have placed Lebanon's education sector under severe strain. The increase in poverty rates is leading to an exodus of students from private to public schools—this year alone, 54,000 students (11 percent of public sector students)—as well as higher student dropouts, especially from the most marginalized households. Further, the most recent school closures due to the COVID-19 pandemic have effectively cost students a "lost year" of learning.

الموجز

لعلَّ الأزمة الاقتصاديّة والماليّة التي تضرب لبنان من بين الأزمات العشر، وربّما من بين الأزمات الثلاث، الأكثر حدةً عالميًّا منذ أواسط القرن التاسع عشر. إنّها إحدى خلاصات تقرير مرصد الاقتصاد اللبناني لربيع 2021، الذي يقارن أزمة لبنان مع الأزمات العالميّة الأكثر حدةً وفق رينارت Reinhart وروغوف (2014)[4] Rogoff خلال الحقبة 1857–2013. في الواقع، تراجع إجمالي الناتج المحلي في لبنان من حوالي 55 مليار د.أ. في العام 2018 إلى حوالي 33 مليار د.أ. في العام 2020، مع تراجع إجمالي الناتج المحلي للفرد بالدولار الأميركي بنسبة حوالي 40 في المئة. غالبًا ما يُعزا مثل هذا الانقباض القاسي والسريع إلى نزاعات أو حروب. وحتى قبل ذلك، لطالما صنّف البنك الدولي لبنان على أنّه دولة هشاشة، ونزاع، وعنف، وبالتالي، قد تُهدّد الظروف الاقتصاديّة والاجتماعيّة المترديّة بانهيار وطني منهجي تكون له انعكاسات محتملة على المستويَيْن الاقليمي والعالمي[5]، ممّا يُجسّد حجم الكساد الاقتصادي الذي يشهده البلد، من دون بارقة أمل بتغيير تلوح في الأفق، نظراً إلى التقاعس المتعمد عن اتخاذ السياسات الملائمة.

في تقرير مرصد الاقتصاد اللبناني لخريف 2020، وُصفت الأزمة الاقتصاديّة التي يتعرّض لها لبنان بأنّها «الكساد المتعمّد». على مدى أكثر من عام، كانت السلطات اللبنانية تواجه وابل الأزمات المتعاقبة — لا سيّما أكبر أزمة مالية واقتصاديّة يشهدها البلد في زمن السلم، وكوفيد-19، وانفجار مرفأ بيروت — بسياسات غير ملائمة عمداً. ولا تعود هذه الاستجابات غير الملائمة إلى نقص في المعلومات أو إلى توجيهات خاطئة، بل هي نتيجة توليفة من عوامل عدّة، منها(i) غياب الإجماع السياسي بشأن مبادرات سياسات فعّالة؛ و(ii) الاجماع السياسي في الدفاع عن نظام اقتصادي مُفلس، أفاد البعض لفترة طويلة جدًّا. وفي وجه هذه التحديات، يفتقر لبنان إلى سلطة تنفيذية تعمل بشكل كامل وهو في طور تشكيل حكومته الثالثة في أكثر من عام واحد بقليل. ويستمر هذا الفراغ المؤسسي المعوّق من أكثر من 8 أشهر وحتى هذا التاريخ.

قد يُصبح الأثر الاجتماعي للأزمة، الصعب أصلاً، مأساويًّا بسرعة؛ يُرجَّح أن يكون أكثر من نصف السكان دون خط الفقر الوطني. يشهد الذين يتقاضون رواتبهم وأجورهم بالليرة اللبنانية — أي الغالبية

الساحقة للقوى العاملة — تراجعاً بالغاً في قوّتهم الشرائيّة. وقد أظهرت مسوحات أجراها برنامج الأغذية العالمي عبر الهاتف في أواخر 2020 أن 41 في المئة من الأسر يصعب عليها الحصول على المواد الغذائيّة وسدّ حاجاتها الأساسيّة الأخرى. وارتفعت نسبة الأسر التي تواجه صعوبات في الحصول على الرعاية الصحيّة من 25 في المئة (تموز/يوليو-آب/أغسطس) إلى 36 في المئة (تشرين الثاني/نوفمبر — كانون الأول/ديسمبر). كما أن معدّل البطالة ارتفع في صفوف المشمولين بالمسح، فانتقل من 28 في المئة في شباط/فبراير (ما قبل كوفيد) إلى حوالي 40 في المئة في تشرين الثاني/ نوفمبر — كانون الأول/ديسمبر.

يواجه لبنان، وهو ذو تاريخ حافل بالنزاعات والحرب الأهليّة، مخاطر واقعيّة تُهدّد سلمه الاجتماعي الهشّ أصلاً. فوفق تقرير التشخيص المنهجي للبنان (البنك الدولي، 2016[6])، يعتبر العنصران التاليان من القيود الأساسيّة التي تُعيق عملية التنمية في لبنان (i) الحكم الطائفي، أي تولي الحكم من قبل طبقة نخبوية تستخدم ذريعة الطائفية قناعاً لها و(ii) النزاعات والعنف الناجمان جزئياً عن صراعات واسعة النطاق في منطقة الشرق الأوسط، وهما عنصران على علاقة متكافلة مع بعضهما البعض، يتغذيان وينموان من بعضهما البعض. وازدادت حدّة غضب التظاهرات الناشئة في المدن اللبنانيّة احتجاجًا على الظروف الاقتصاديّة المتردية وإن كانت أعداد المتظاهرين أكثر تواضعًا؛ وقُطعت الطرق الحيويّة، ممّا أعاق التنقّلات وكسب لقمة العيش؛ كما أن ارتفاع معدّل الجريمة يُهدّد أمن

[4] Reinhart, Carmen M. and Kenneth S. Rogoff (2014), *Recovery from Financial Crises: Evidence from 100 Episodes,* American Economic Review: Papers & Proceedings 2014, 104(5): 50–55.

[5] في كتاب أمين معلوف *Le Naufrage des Civilisations* الذي تُرجم في الانجليزية إلى *The Wreckage of Civilizations*، يُسلّط الكاتب اللبناني الضوء على فشل الشرق المتفشي الذي يؤدي إلى فشل الحضارات كلّها. Maalouf, Amin (2019), *Le Naufrage des Civilisations*, French & European Publications, Inc., April 2, 2019.

[6] World Bank (2016) "Lebanon Systematic Country Diagnostic". (البنك الدولي (2016) التشخيص المنهجي في لبنان).

الناس الشخصي؛ وقد يسمح التفكّك الوطني باندساس مجموعات ذات نوايا سيئة، ممّا يولّد انعكاسات خطيرة على مستوى الأمن. وبالتالي يزداد القلق، في لبنان، من العوامل التي يمكن أن تؤدي إلى اضطرابات اجتماعية.

التطوّرات الماكرو-اقتصادية والمالية الأخيرة

تقود الاضطرابات الماليّة والنقديّة ظروف الأزمة، و يتّضح ذلك بشكل ملموس من خلال التفاعل بين سعر الصرف، والتضخّم، والكتلة النقديّة بمعناها الضيق. تنعكس الضغوط الحادة لسوق الصرف على الأسواق اللبنانيّة على شكل تقلّبات كبيرة في سعر صرف الدولار الأميركي مقابل الليرة اللبنانيّة، الذي تجاوز بشكل مؤقت 15 ألف ليرة لبنانيّة، قبل أن يتراجع مجدداً. ويندرج ذلك في سياق نظام أسعار صرف متعدّدة تشمل سعر الصرف الرسمي (1 د.أ. = 1507.5 ل.ل.)، بالإضافة إلى سعر صرف منصة مصرف لبنان البالغ 1 د.أ. = 3900 ل.ل.، وبشكل عام، تراجع متوسط سعر الصرف الذي يحتسبه البنك الدولي بنسبة 129 في المئة في العام 2020. وأثّرت تقلّبات سعر الصرف على الأسعار، ممّا أدّى إلى زيادة التضخّم ليبلغ 84.3 في المئة في العام 2020. وفي موازاة ذلك، ازداد مخزون العملة المتداولة بنسبة 197 في المئة، حتى بعد تراجع الكتلة النقديّة بمعناها الواسع (التي تشمل الودائع المصرفيّة)، والتي تأثّرت بدورها بتقليص ميزانية القطاع المصرفي.

يُقدَّر تقلّص نمو إجمالي الناتج المحلي الحقيقي بنسبة 20.3 في المئة في العام 2020، إثر تقلّص بنسبة 6.7 في المئة في العام 2019. وقد تعرّض قطاع السياحة إلى ضربة قويّة بشكل خاص، ناجمة إلى حد بعيد عن كوفيد – 19؛ وتراجع عدد المسافرين الوافدين بنسبة 71.5 في المئة (من سنة لأخرى)، على مدى الأشهر الخمسة الأولى من العام 2020 (5M-2020). وفي موازاة ذلك، شهدت تراخيص البناء وعمليّات تسليم الاسمنت، وهي من مؤشرات أنشطة قطاعي البناء والعقارات، تراجعًا سنويًا قدره 26.9 و44.7 في المئة على التوالي، خلال الأشهر العشرة الأولى من العام 2020 (10M-2020).

في الواقع، يُخفي تحسّن ظاهري في بعض المؤشرات المالية (كنسبة مئويّة من إجمالي الناتج المحلي) تدهورًا فعليًا. يُقدَّر تراجع الايرادات بشكل حاد نتيجة الانقباض الاقتصادي الشديد، مع تراجع النسبة إلى إجمالي الناتج المحلي بشكل أكبر بسبب زيادة إجمالي الناتج المحلي الإسمي الناجمة عن التضخّم. لكن، يُقابل ذلك تراجع أكبر في النفقات الجارية، التي تستفيد ممّا يلي: انخفاض تسديدات الفوائد (بسبب عدم سداد اليوروبوندز وبسبب ترتيب ملائم مع مصرف لبنان بشأن الدين المحلي)؛ والحدّ من التحويلات؛ بالإضافةهنا أيضاً إلى أثر ارتفاع إجمالي الناتج المحلي (الذي يؤدي إلى انخفاض النسبة). وبالتالي، مع تحسّن الميزان المالي الكلي للعام 2020 بقدر 0.7 نقطة مئوية ليبلغ 4.9- في المئة من إجمالي الناتج المحلي، تراجع الرصيد الأولي 2.3 نقطة مئويّة إلى 2.8- في المئة من إجمالي الناتج المحلي.

أدّى الانقباض الاقتصادي الحاد إلى تراجع متناسب في الواردات، وبالتالي، من المنتظر أن يؤدي إلى تقلّص في عجز الحساب الجاري. خلال الأشهر العشرة الأولى من العام 2020، تقلّصت واردات السلع بنسبة 45 في المئة، ممّا ولّد تراجعًا في عجز التجارة في السلع قدره 54.8 في المئة.

يُقدّر أن يكون عجز الحساب الجاري قد تراجع 10 نقاط مئويّة ليبلغ 11 في المئة من إجمالي الناتج المحلي في العام 2020، مقارنةً مع معدّل عجز متوسط الأجل (2013–2019) نسبته 22.5 في المئة من إجمالي الناتج المحلي. ومع ذلك، أدّى التوقّف المفاجئ في التدفقات الرأسماليّة الوافدة إلى تراجع مضطرد لاحتياطي مصرف لبنان من العملات الأجنبية، ممّا يفاقم القيود على الواردات.

يُعتبَر عبء التكييف الجاري/ تقليص ميزانية القطاع المصرفي تراجعيًّا بشكل كبير، يُرِكّز على المودعين الصغار، والغالبيّة الساحقة للقوى العاملة، والمؤسسات الصغيرة. يُعتبَر تصريف الودائع إلى الليرة اللبنانيّة والاقتطاع من الودائع بالدولار الأميركي أمراً واقعاً، بالرغم من الإلتزام الرسمي من قبل المصارف ومصرف لبنان بحماية الودائع. يُعتبَر عبء التكيّف الجاري/ تقليص ميزانية القطاع المصرفي تراجعيًّا ويُرِكّز على المودعين الصغار، الذين يفتقرون إلى مصادر ادخار أخرى، والقوى العاملة المحلية التي تتقاضى أجورها ورواتبها بالليرة اللبنانية، والمؤسسات الصغيرة. يدعو القطاع المصرفي إلى وضع آليّات تشمل أصولاً تملكها الدولة، واحتياطي الذهب، والعقارات العامة من أجل إصلاح ميزانيّاتهم الضعيفة، ممّا يُشكّل عملية إنقاذ من القطاع العام للقطاع المالي، لا تتماشى مع مبادئ إعادة الهيكلة التي تحمي دافعي الضرائب. وتشمل هذه المبادئ حلول إنقاذ داخليّة على أساس هرميّة الدائنين، بدءًا من المساهمين في المصارف. كما يُمكن للحكومة أن تفرض ضريبة على الثروات (على الأصول العقاريّة والأصول الماليّة) كأداة من أجل إعادة هيكلة القطاع المالي بشكل تقدمي.

مجالات التركيز الخاصة

زادت الأزمة المالية والاقتصاديّة من هشاشة لبنان وتفكّكه، مما زاد من خطر الاضطرابات المدنية والاجتماعية. وزادت الأزمة من أوجه الخلل الطويلة الأمد، بما في ذلك مكامن الضعف المؤسسيّة، والسياسة الاجتماعيّة والاقتصاديّة الفاشلة، والخدمات العامة السيئة. وفي ظل هذا السياق، يزداد القلق، في لبنان، من العوامل التي يمكن أن تؤدي إلى اضطرابات اجتماعية. في هذا التقرير، نسلّط الضوء على محرّكين اقتصاديّين محتملَيْن قيد التدقيق المتزايد، يُمكن أن يكون لهما انعكاسات اجتماعيّة ملحوظة. **ينظر مجال التركيز الأول في دعم الصرف الأجنبي في لبنان للواردات الأساسيّة والمهمّة، والذي يشكّل تحديًا اجتماعيًّا وسياسيًّا جدّياً.** من جهة، يُعتبَر دعم الصرف الأجنبي الحالي تشويهيًّا، ومكلفًا، وتراجعيًّا، فهو يشكّل ضغوطًا كبيرة على ميزان المدفوعات في لبنان. ومن جهة أخرى، يحول الدعم دون زيادة أسعار هذه المنتجات، ممّا يزيد من ضغوط التضخّم-انخفاض قيمة العملة، فيحدّ أكثر من القدرة الشرائيّة للمواطنين. **ويتطرّق مجال التركيز الثاني إلى وقع الأزمات على أربع خدمات عامة أساسيّة: الكهرباء، وإمدادات المياه، والصرف الصحي، والتعليم.** فقد أضعف الكساد المتعمّد بشكل أكبر الخدمات العامة الضعيفة أصلاً من خلال أثرَيْن: (i) زيادة معدّلات الفقر فتوسّع بشكل ملحوظ عدد السكان غير القادرين على تكبّد كلفة الخدمات البديلة الخاصة (السبل التي اعتمدها المواطنون في السابق للتكيّف مع نوعيّة الخدمات العامة المتردية)، فباتوا يعتمدون بالتالي بشكل أكبر على الخدمات العامة؛ و(ii)

التكاليف. وبسبب تراجع إمدادات المياه من مؤسسات المياه في العام 2020، كان على المواطنين الاعتماد على بدائل أخرى أكثر كلفةً وأقل ملاءمةً، على غرار صهاريج المياه وقوارير المياه، التي ارتفعت أسعارها. يُهدّد تراجع خدمات الصرف الصحي بزيادة انتشار الأمراض المنقولة في المياه، ممّا يؤثّر سلبًا على الصحة العامة الهشّة أصلاً.

• شكّلت الأزمات المتعاقبة ضغوطًا كبيرة على قطاع التعليم في لبنان. تؤدي زيادة معدّلات الفقر إلى نزوح جماعي للطلاب من المدارس الخاصة إلى المدارس الرسمية — بلغ هذا العام وحده 54000 تلميذ (11 في المئة من تلامذة القطاع العام) – بالإضافة إلى معدّل تسرّب مدرسي أعلى، لا سيّما من الأسر الأكثر تهميشًا. إلى ذلك، خسر التلامذة فعلياً عامًا من التعلّم مع إقفال المدارس أبوابها مؤخرًا بسبب جائحة كوفيد19-.

تهديد الاستمرارية المالية للقطاع وعمله الأساسي من خلال زيادة تكاليفه وخفض إيراداته.
وبشكل خاص،

• يُهدّد الافتقار الحاد للعملات الأجنبيّة بإنهاء عقود القطاع الخاص لصيانة محطات توليد الطاقة الكهربائيّة وتوليد الطاقة المؤقت. وفي الوقت نفسه، تتقلّص إيرادات شركة كهرباء لبنان، التي هي بالليرة اللبنانيّة، بسبب الخسائر الفنية والتجاريّة المتزايدة وتلك المرتبطة بالجباية. ويُتوقَّع أن تزيد مؤسسة كهرباء لبنان من فترات التأنين في التغذية بالتيار الكهربائي لإدارة القصور في تدفقاتها النقديّة.

• في العام 2020، افتقرت مؤسسات المياه إلى الإمدادات والايرادات والموارد البشرية والماليّة بشكل خطر، في ما شهدت زيادة مضطردة في

RÉSUMÉ

La crise économique et financière qui sévit au Liban est probablement l'une des dix, voire l'une des trois pires crises que le monde ait connu depuis le milieu du XIXe siècle. Telle est la conclusion de l'édition Printemps 2021 de l'Observatoire économique du Liban (ou LEM, pour Lebanon Economic Monitor), dans laquelle la crise au Liban est considérée comme l'une des crises mondiales les plus sévères au regard de la liste établie par Reinhart et Rogoff (2014)[7] durant la période 18572013. En effet, le PIB du Liban a chuté de 55 milliards de dollars en 2018 à environ 33 milliards de dollars en 2020, avec une baisse d'environ 40 % du PIB par habitant. Une telle contraction, si brutale et rapide, est d'habitude attribuée à des conflits ou des guerres. La Banque mondiale a longtemps considéré le Liban, et ce, bien avant la crise, comme un pays en situation de fragilité, conflit et violence (FCV). À ce titre, il est possible que les conditions socio-économiques difficiles que connaît le pays risquent d'entraîner une faillite systémique à l'échelle nationale, avec d'éventuelles conséquences mondiales.[8] Ceci illustre la magnitude de la dépression économique que le pays subit, et, malheureusement, le fait qu'aucune perspective de changement ne soit à l'horizon eu égard à l'inaction désastreuse mais néanmoins choisie des politiques.

Dans l'édition Automne 2020 du LEM, la crise économique que traverse le Liban a été qualifié de *Dépression Délibérée*. Pendant plus d'un an, les autorités libanaises ont été assaillies par une série de crises successives — à savoir, la plus grande crise financière et économique du pays en temps de paix, la COVID-19 et l'explosion du Port de Beyrouth — auxquelles ils ont apporté des réponses politiques délibérément inadéquates. Inadéquations qui malheureusement ne proviennent pas d'un manque d'informations ou de mauvaises directives mais d'une combinaison (i) d'un manque de consensus politique à l'égard d'initiatives de politiques effectives ; et (ii) d'un consensus politique qui défend un système économique en faillite — un système qui a profité à certains pendant longtemps. Face à ces défis, le pays est actuellement doté d'un pouvoir exécutif qui n'est pas pleinement fonctionnel, attendant la formation de son troisième gouvernement en un peu plus d'un an, et est paralysé par un vide institutionnel qui dure depuis plus de 8 mois.

L'impact social de la crise, déjà désastreux, peut rapidement devenir catastrophique; plus de la moitié de la population serait en-dessous du

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[7] Reinhart, Carmen M. and Kenneth S. Rogoff (2014), *Recovery from Financial Crises: Evidence from 100 Episodes,* American Economic Review: Papers & Proceedings 2014, 104(5): 50–55.

[8] Dans l'ouvrage d'Amin Maalouf (2019), *Le Naufrage des Civilisations*, l'Académicien et auteur libanais montre comment les échecs du Levant se transforment en un échec de toutes les civilisations.

seuil national de pauvreté. Ceux qui sont payés en livres libanaises — soit la majorité de la main-d'œuvre — ont vu et voient leur pouvoir d'achat se rétrécir comme une peau de chagrin. Selon des sondages téléphoniques menés fin 2020 par le Programme alimentaire mondial (PAM), 41 **%** des ménages ont rapporté des difficultés à accéder à la nourriture et à d'autres besoins fondamentaux. La part des ménages connaissant des difficultés à accéder aux services de santé est passée de 25 % en juillet-août à 36 % en novembre-décembre. Le taux de chômage a également augmenté parmi les répondants, passant de 28 % en février (avant la COVID) à environ 40 **%** en novembre-décembre.

Le Liban, historiquement touché par les **conflits et la guerre civile, est confronté à des menaces réalistes qui mettent en danger sa paix sociale déjà fragile**. Comme il a été mis en évidence par le passé (Banque mondiale, 2016[9]), les principales contraintes au développement au Liban sont i) l'accaparement des ressources par l'élite, sous couvert de confessionnalisme et ii) les conflits et la violence — ces deux facteurs entretenant une relation symbiotique, l'un se nourrissant de l'autre pour se développer mutuellement. La colère des manifestations, bien que plus modestes en nombre, est récemment montée d'un cran, émergeant dans des villes à travers le Liban pour protester contre les conditions économiques exsangues. De ce fait, l'accès à des routes vitales est coupé, entraînant des interruptions prolongées qui entravent la mobilité et réduisent plus encore les moyens de subsistance ; l'augmentation des taux de criminalité menace la sécurité des personnes **;** et la fragmentation nationale peut permettre l'infiltration de groupes menaçants, ce qui aurait des implications graves sur la sécurité du pays. Les politiciens-timoniers du Liban, bloquant la barre du pays, le rapprochent ainsi inexorablement de récifs meurtriers et d'un naufrage tragique.

Les récents développements économiques

Les turbulences monétaires et financières, et plus concrètement le taux de change, l'inflation **et l'augmentation rapide de la masse monétaire, sont des conditions génératrices de crises.** Les sévères pressions du marché de change sur les marchés libanais sont illustrées par de lourdes fluctuations du taux de change de la livre face au dollar américain, qui a temporairement dépassé LBP 15 000/US$, avant de baisser à nouveau. Ceci s'inscrit dans le cadre d'un système à taux de change multiples, qui comprend le taux de change officiel à LBP 1 507,5/US$, ainsi que celui de la plateforme de la Banque du Liban (BdL) à LBP 3 900/US$. En général, le taux de change effectif moyen calculé par la Banque mondiale (AER) a baissé de 129 % en 2020. L'impact des fluctuations des taux de change sur les prix a provoqué une recrudescence de l'inflation, enregistrant une moyenne de 84,3 % en 2020. En parallèle, le stock de monnaie en circulation a augmenté de 197 %, même si la masse monétaire au sens large (qui comprend les dépôts bancaires) s'est réduite en raison du désendettement du secteur financier.

La croissance du PIB réel a connu une contraction de 20,3 % en 2020, aggravant celle déjà importante de 6.7 % observée en 2019. Le secteur du tourisme a été particulièrement touché, en grande partie en raison de la COVID-19 ; les arrivées de touristes ont baissé de 71,5 %, (d'une année sur l'autre), durant les cinq premiers mois de 2020 (5M-2020). Dans le même temps, les permis de construction et les livraisons de ciment (moyens intermédiaires pour la construction et l'immobilier) ont baissé de 26,9 % (d'une année sur l'autre) et de 44,7 % (d'une année sur l'autre) durant les dix premiers mois de 2020 (10M-2020).

Une amélioration apparente de certains indicateurs fiscaux (en pourcentage du PIB) masque une détérioration effective et notoire. Les revenus ont baissé de manière significative en raison d'une sévère contraction économique, le ratio au PIB se détériorant davantage à cause d'une augmentation du PIB nominal due à l'inflation galopante. Toutefois, cette situation est largement compensée par une baisse plus importante des

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[9]   World Bank (2016) "Lebanon Systematic Country Diagnostic".

dépenses courantes, ayant bénéficié des éléments suivants : des paiements d'intérêts inférieurs (en raison du défaut de paiement des Eurobonds et d'un arrangement favorable, bien qu'illusoire au niveau du secteur publique consolidé, avec la BdL concernant la dette intérieure) ; des baisses de transferts ; et d'un PIB sur la base d'un dénominateur. Ainsi, alors que le solde budgétaire global de 2020 a progressé de 0,7 point de pourcentage (pp) pour atteindre −4,9 % du PIB, le solde primaire a régressé de 2,3 pp, atteignant −2.8 % du PIB.

La contraction économique accrue signifie une baisse conséquente des importations, et donc, une réduction anticipée du déficit du compte courant**.** Durant les dix premiers mois de 2020 (10M-2020), les importations de marchandises ont régressé de 45 %, provoquant une baisse de 54,8 % du déficit lié aux échanges de biens. Nous estimons que le déficit du compte courant a baissé de 10 points de pourcentage pour atteindre 11 % du PIB en 2020, à comparer avec la moyenne à moyen terme (2013–2019) de 22.5 % du PIB. Toutefois, l'arrêt soudain et soutenu des flux de capitaux entrants signifie un épuisement continu des réserves de change (FX) à la BdL, accentuant par là-même les contraintes sur les importations.

Le fardeau de l'ajustement en cours/du désendettement dans le secteur financier est particulièrement régressif, concentré sur de petits déposants, la plus grande majorité de la maind'œuvre, et des entreprises de taille plus modeste. De facto, la « lirafication » et les « haircuts » (les « ponctions ») sur les dépôts en dollars sont importants, malgré l'engagement officiel de la Bdl et des banques à sauvegarder les dépôts. Le fardeau de l'ajustement en cours/du désendettement dans le secteur financier est particulièrement régressif et concentré sur de petits déposants qui n'ont pas d'autres sources d'épargne, une maind'œuvre locale rémunérée en livres libanaises et des entreprises de taille plus modeste. Le secteur bancaire appelle à la mise en place de mécanismes qui tiennent compte des biens de l'État, des réserves en or et des actifs immobiliers publics afin de rétablir l'équilibre de ses bilans déficients. Il s'agit d'un *renflouement* du secteur financier qui ne s'inscrit pas dans le cadre des principes de restructuration visant à protéger les contribuables et les déposants. Ces principes comprennent des solutions *de cautionnement* basées sur une hiérarchie de créditeurs, à commencer par les actionnaires des banques. Le gouvernement peut également imposer un impôt sur la fortune (actifs financiers et biens immobiliers) comme moyen de restructurer de manière progressive le secteur financier.

Les champs d'intérêt particuliers

La crise économique et financière a accentué la fragilité et la fragmentation du Liban, augmentant ainsi le risque de mécontentement social et civil. La crise a exacerbé les déficiences nationales à long terme, y compris les fragilités institutionnelles, la politique socioéconomique tenue en échec et la mauvaise prestation des services publics. Dans un tel contexte, le pays connaît une lassitude grandissante face à d'éventuels facteurs susceptibles de déclencher un mécontentement social. Dans cette édition du LEM, nous mettons l'accent sur deux éventuels éléments déclencheurs qui sont de plus en plus l'objet d'une attention particulière, et qui auraient des implications sociales de grande envergure.

Le premier champ d'intérêt particulier concerne la bonification des réserves étrangères au Liban pour les importations essentielles et critiques, ce qui constitue un véritable défi sociopolitique. D'une part, en plus d'être onéreuse et régressive, la bonification des réserves étrangères a présentement un effet de distorsion et exerce en outre des pressions considérables sur la balance des paiements du Liban. D'autre part, elle empêche une augmentation du prix de ces produits, ce qui accentuerait les pressions générées par l'inflation et la dépréciation et porterait un coup au pouvoir d'achat de la population.

Le deuxième champ d'intérêt particulier porte sur l'impact que les crises ont sur quatre services publics de base : l'électricité, l'eau, les services sanitaires et l'éducation. La Dépression Délibérée a davantage fragilisé les services publics déjà vulnérables de deux façons : (i) elle a augmenté de manière significative les taux de pauvreté,

élargissant ainsi la portion de la population n'ayant pas les moyens de se payer des biens et services privés de substitution (ce qui était la manière dont la population s'était auparavant adaptée à la prestation de services publics de mauvaise qualité) et étant, par conséquent, davantage dépendante des services publics ; et (ii) elle menace la viabilité financière et l'opérabilité fondamentale du secteur en augmentant ses coûts et en baissant ses revenus. L'on retient plus particulièrement les éléments suivants :

- Une sévère pénurie de devises étrangères menace la résiliation des contrats du secteur privé pour l'entretien des centrales électriques et la génération provisoire d'électricité. Dans le même temps, les revenus d'Électricité du Liban (EdL), qui sont en livres libanaises, ont été réduits considérablement en raison des pertes techniques et commerciales et du manque de paiements collectés. Il se pourrait donc qu'EdL augmente ses coupures de courant rotatives afin de pouvoir gérer son manque de flux de trésorerie.
- En 2020, les Offices des Eaux ont connu une grave pénurie en matière d'approvisionnement en eau, de revenus et de ressources financières et humaines, qui est venue s'ajouter à la flambée des coûts. En 2020, en raison de cet approvisionnement limité, la population a été obligée de recourir à d'autres alternatives plus onéreuses et moins pratiques, telles que les citernes d'eau et l'eau en bouteille, dont les prix se sont envolés.
- La dégradation des services d'assainissement risque d'intensifier la propagation de maladies transmises par l'eau, ce qui affectera de manière négative la santé publique déjà vulnérable.
- Les crises successives auxquelles le Liban a été confronté ont exercé de sévères pressions sur le secteur de l'éducation. En raison des taux de pauvreté élevés, les élèves ont abandonné les écoles privées au profit des écoles publiques — cette année seulement, 54 000 élèves (11 % des élèves du secteur public). À noter également : un taux d'abandon scolaire plus élevé, particulièrement au sein des ménages les plus marginalisés. En outre, la récente fermeture des écoles en raison de la COVID-19 a fait perdre aux élèves une année d'apprentissage.

THE POLICY CONTEXT

Lebanon faces a dangerous depletion of resources, including human capital since brain drain has become an increasingly desperate option. Over a year into the financial crisis, Lebanon has yet to identify, least of all embark upon, a credible path toward economic and financial recovery. In fact, Lebanon lacks a fully-functioning executive authority and is currently in the process of forming its third Government in a little over a year. Meanwhile, social discontent has spilled over to street action even under COVID-19 conditions; internal political discord and fragmentation continues; and geopolitical tensions complicate solutions. In consequence, highly skilled labor is increasingly likely to take up potential opportunities abroad, constituting a permanent social and economic loss for the country.

Lebanese authorities and the IMF began discussions in May 2020. The discussions eventually stalled as differences and inconsistencies emerged within the Lebanon team regarding the Government's financial recovery program. IMF discussions await the formation of new Government.

The burden of the ongoing adjustment/ deleveraging in the financial sector is highly regressive, concentrated on smaller depositors, **the local labor force and smaller businesses.** De facto Lirafication and haircuts on dollar deposits are ongoing despite BdL's and banks' official commitment to safeguarding deposits. The burden of the ongoing adjustment/deleveraging is regressive and concentrated on the smaller depositors who lack other source of savings, the local labor force that is paid in LBP, and smaller businesses. The banking sector is advocating for mechanisms that incorporate state-owned assets, gold reserves, and public real estate in order to overhaul their impaired balance sheets. This constitutes a *bailout* of the financial sector and is inconsistent with the restructuring principles that protect taxpayers. These principles include *bail in* solutions based on a hierarchy of creditors, starting with banks' shareholders. Government can also apply a wealth tax (on financial and real assets) as a tool to progressively restructure the financial sector.

Lebanon urgently needs to adopt and implement a credible, comprehensive and coordinated macro-financial stability strategy, within a medium-term macro-fiscal framework. This strategy would be based on: (i) a debt restructuring program that would achieve short-term fiscal space

and medium-term debt sustainability; (ii) comprehensively restructuring the financial sector in order to regain solvency of the banking sector; (iii) adopting a new monetary policy framework that would regain confidence and stability in the exchange rate; (iv) a phased fiscal adjustment aimed at regaining confidence in fiscal policy; (v) growth enhancing reforms; and (vi) enhanced social protection.

RECENT MACRO-FINANCIAL DEVELOPMENTS

Output and Demand

The compounded crises, namely, the financial crisis, COVID-19 and the Port of Beirut (PoB) explosion, have had staggered impacts on output and with differentiated magnitudes. Due to insufficient high frequency data, precise identification of each of those impacts is a challenging task**.** In order to draw empirical conclusions, we resort to a combination of methodologies and models. To gauge the impact of financial crisis along with COVID-19 effects, we use Mixed-Data Sampling (MIDAS) methods to assess the state of the economic cycle using available high frequency measures of economic activity (See Annex A). The World Bank had earlier estimated the economic impact of the PoB explosion through a Rapid Damage and Needs Assessment (RDNA).[10,11]

      Real GDP is estimated to have contracted by 20.3 percent in 2020 (Figure 1).[12] High frequency indicators support a substantial contraction in economic activity. BLOM's monthly Purchasing Manager's Index (PMI), which captures private sector activity, averaged 41.1 over 2020—PMI values below 50 represent a contraction in economic activity. In fact, this

is the lowest PMI recorded since it was first published in 2013 (see Box 1 for the impact on firms and labor market). Meanwhile, the real estate sector has been subject to two offsetting factors; on the one hand, construction permits and cement deliveries—considered to be indicators of future and ongoing construction, respectively—suffered respective declines of 26.9 percent (yoy) and 44.7 percent (yoy) over 10M-2020. On the other hand, throughout 2020 real estate sales thrived as some depositors sought means to utilize their otherwise untransferable bank deposits.[13]

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[10] World Bank (2020), *Beirut Rapid Damage and Needs Assessment*, August 2020.

[11] According to the RDNA, the disaster event is estimated to cause (i) up to 0.4 and 0.6 percentage point (pp) declines in the growth rate of real GDP in 2020 and 2021, respectively, due to losses in the stock of physical capital; plus potentially (ii) import constraints that could subtract an additional of 0.4 and 1.3 pps from growth in 2020 and 2021, respectively.

[12] This represents a slight downward revision from the Fall 2020 LEM which projected a 19.2 percent contraction in real GDP growth for 2020.

[13] The financial sector facilitated real estate purchases using pre-October 2019 dollar deposits under conditions of capital controls (and therefore, lack of alternatives to get those deposits out), leading to an increase in such purchases.

Real GDP Growth (%)

Sources: CAS and WB staff calculations.

Real GDP Components
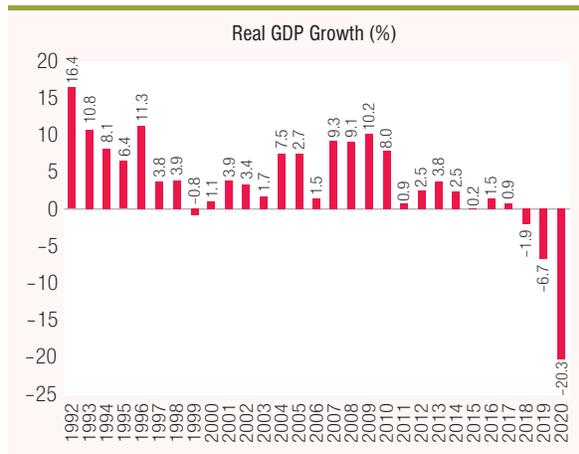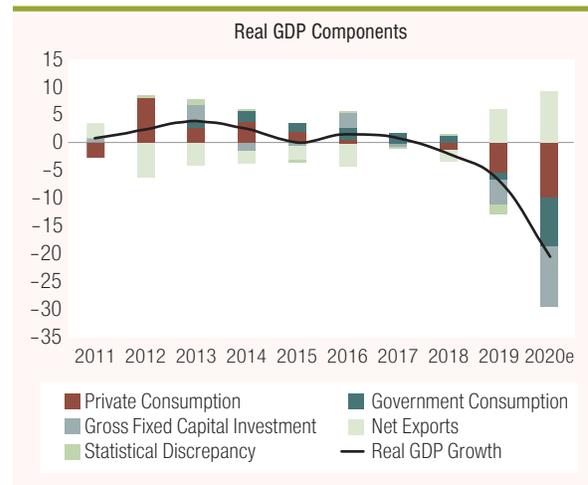
Sources: CAS and WB staff calculations.

Real estate registration fees increased by 104.8 percent in 2020. The retail sector suffered sizable losses, due to a combination of the financial crisis and the COVID-19 lockdown measures. BTA Fransabank retail trade index (in real terms) declined by 73.1 percent over the first nine months of 2020 (9M-2020).

On the demand side, net exports was the sole contributor to growth in 2020, for the second year in a row (Figure 2). According to Custom's data, the merchandise trade deficit was reduced by 54.8 percent (yoy) over the first 11 months of 2020 (11M-2020), benefitting from a 45.4 percent (yoy) retraction in imports and despite a 4.2 percent (yoy) decrease in exports. The improving merchandise trade balance has been partially offset by a deterioration in the trade in services balance, as a result of COVID-19's substantial impact on the tourist sector; tourist arrivals decreased by 71.5 percent (yoy) in the first five months of 2020, and hotel occupancy rate (published by Ernst & Young) averaged a mere 16.6 percent over 9M-2020. Similarly, private consumption, which averaged 92.3 percent of GDP over 2015–2018, is estimated to have taken a severe blow in 2020; Byblos Bank/AUB's consumer confidence index declined by 65.1 percent in 9M-2020, compared to the same period in 2019.

Fiscal Developments

An ostensible improvement in fiscal indicators (as a percentage of GDP) masks an actual deterioration. While both revenue and expenditure sharply contracted as a ratio of GDP due to the crisis, the net impact on the overall fiscal balance was positive. Revenues are estimated to have reached 11.5 percent of GDP in 2020, down by a staggering 9.1 pp of GDP from the previous year. This deterioration was the result of a two-pronged development. First, depressed economic activity induced significant reductions in tax and non-tax revenues in nominal terms. Second, a substantial increase in nominal GDP—as a sharp increase in the GDP deflator more than offset the contraction in real economic activity—created a denominator effect, adding to the sharp decline of revenues as a percent of GDP. Similarly, expenditures are estimated to have fallen to 16.4 percent of GDP in 2020, down by a mammoth 14.8 pp of GDP compared to 2019. This fall is primarily attributed to a decrease in current expenditures, which benefited from: lower debt-servicing costs due to the default on foreign debt; a favorable arrangement with BdL on its holding of Treasury Bonds (TBs); lower transfers; and a denominator-led GDP effect. As a result, overall fiscal

Impact on Firms

The World Bank conducts Enterprise Surveys regularly in active member countries. It conducted one such survey in Lebanon in 2019/2020; this happened to be a pre-crisis survey, as the country would be subsequently hit by compounded crises—the financial crisis, COVID-19 and the August 4th explosion at the Port of Beirut (PoB). To assess the impact on firms from these crises, a follow up survey was conducted in Lebanon in November 2020.

From the surveys, we find that almost one out of five firms originally surveyed are confirmed or assumed permanently closed,[c] manufacturing firms that remain open are operating at 35 percent of capacity, and almost half of the firms have been affected by the PoB explosion. As illustrated by Figure 3, 16.6 percent of firms surveyed are confirmed or assumed permanently closed, while 72 percent have been temporarily closed at some point since the beginning of the pandemic due to Covid-19, with a 10 week average closure period. Further, 46 percent of all surveyed firms—both in Beirut and elsewhere—have been affected by the August 4 explosion either directly or indirectly. In fact, 22 percent of firms had to close temporarily because of the explosion and 17 percent experienced interruption of their supply chain.

Four out of five firms say their sales declined significantly together with demand. Since the beginning of the financial crisis (October 2019), 79 percent of firms surveyed reduced sales (nominal) by an average of 69 percent, with small firms bearing a greater impact. In reflection, firms reported a 74 percent drop in (real) demand for their products and services. The lack of demand is affecting the manufacturing sector the most severely; 81 percent of surveyed manufacturing firms reported a drop in sales that is equivalent to 70 percent on average. Exporters were also hit hard. One out of four firms reported an average 70 percent drop in exports. However, 20 firms were able to increase their exports; half of these firms were in the manufacturing sector, mainly food and machinery, but also in retail and ICT. This increase could be linked to the improved competitiveness resulting from the severe unofficial depreciation of the currency, or the drop in domestic demand due to the crisis, forcing firms to look for customers overseas.

More than half of firms surveyed are experiencing liquidity challenges. Since the beginning of the financial crisis, 55 percent of firms experienced a decline in their cashflow and around 75 percent of firms decreased sales and purchases on credit. Only 13 percent of firms reported relying on banks or financial institutions to finance their liquidity shortfalls. Instead, 28 percent of firms are financing their needs through equity, and 8 percent through delayed payments.[d]

FIGURE 3 • Firm Status

Source: 2021 Follow up to the Enterprise Survey.

The future looks bleak and uncertain. One out of four firms does not think recovery is possible. Twenty-four percent of firms expect to fall (further) into arrears and default on liabilities in the next 3 months, projecting their survival at less than 7 months or 27 weeks, given current costs. In sum, and according to firms reported expectations, one out of four firms will have to exit by June 2021.

COVID-19 adaptation is relatively low, with few firms ramping up online operations. Around 6 percent of firms have either started or increased their online activities, while 8 percent increased online delivery. A relatively higher share of firms (18 percent) have started to increase or has already increased remote work. There is a significant gap between small and large firms, with the latter showing more capacity to adapt.

Firms surveyed rank credit guarantees, tax deferrals and exemptions for social security contributions as the most helpful policy potential responses. But preferences vary by firm characteristics and by gender ownership. When asked "What would be the most effective policy to help firms cope with the crisis?" 30 percent of firms indicated credit guarantees, 18 percent pointed to tax deferrals and 16 percent of firms expressed a preference for exemptions to National Social Security Fund (NSSF) contributions. Small firms preferred credit guarantees, with tax deferrals in second place, while large firms preferred NSSF exemptions at a slightly higher rate than tax deferrals. Meanwhile, 34 percent of male owned firms ranked credit guarantees as more effective, while 43 percent of female owned firms ranked NSSF exemptions as their top choice.

Impact on Jobs

The multiple crises exacerbated unemployment. One in five workers lost their jobs since October 2019, while 61 percent of firms surveyed decreased the number of permanent workers by 43 percent on average. Medium-size and large firms laid-off a larger number of workers: 76 percent of large firms surveyed downsized by an average of 37 percent, while 70 percent of medium firms downsized by 43 percent. That smaller firms shrunk relatively less could be due to the different nature of the relationship between managers and workers, or the fact that small firms may have less flexibility in scaling back production. These numbers cover only formal firms. The impact is expected to be worse amongst informal firms and micro-sized formal firms, which are not included in the survey.

Only 16 percent of workers in the survey sample are women; in large firms, the female share of workers is only 10 percent (Table 1). The crisis appears to have hit female employees relatively less than male employees. The net job loss was 2 percentage points (pp) lower for women than men on average (5 pp less in the case of small firms, but 1 pp more in large firms). Although the crises can impact women's access to economic opportunities in different ways, the pandemic-related school closures are likely to have made it particularly difficult for women to juggle work and care responsibilities. In addition, the firm survey shows that 10 percent of business affected by the PoB explosion were female-owned, out of which more than half (54 percent) were of small size and 29 percent were medium sized. This loss of women-led businesses diminishes future employment opportunities for women. According to a study conducted by Stand for Women, half the businesses that closed will not be able to reopen without some form of assistance.[e]

TABLE 1 • Average Change in Full-Time Employees by Gender for All Firms Surveyed

Size (in full-time employees)	Number of firms	Average size	Average percentage of females to total full-time employees	Average percentage change in full-time employees	
				Male	Female
5–19	219	8.4	16%	–25%	–20%
20–99	123	37.1	20%	–30%	–27%
100 or more	37	171.3	10%	–22%	–23%
All firms	379	24.8	16%	–27%	–25%

Relatively few firms surveyed have resorted to other labor adjustment measures, such as reducing salaries, benefits, or working hours. Only, 13 percent of firms have decreased salaries by around 45 percent, while 29 percent of firms increased salaries of their employees by around 40 percent. Note that these nominal increases were in fact negative in real terms, as inflation reached triple digits during this period. Additionally, according to the survey, 23 percent of firms have decreased benefits to their workers, by 79 percent on average, while 41 percent of firms have decreased working hours by 36 percent on average (the other 59 percent of firms reported no change to workers' hours).

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deficit is estimated to have shrunk to 4.9 percent of GDP, a narrowing of 5.6 pp of GDP from 2019, and compared to a medium-term average of 8.6 percent (Figure 4). However, the primary balance is estimated to have worsened in 2020, reaching –2.8 percent of GDP, compared to –0.5 percent in 2019, and a medium-term average of 0.5 percent. This widening is surprising for countries that are in sovereign default as financing shortages usually forces them to run a primary balance. In the case of Lebanon, BdL is providing the required financing for the government, notwithstanding its own financial difficulties.

Fiscal data available over the first eight months of 2020 confirm fiscal distress, despite the apparent improvement in the overall balance. Revenues were down by 20.2 percent (yoy) over 8M-2020, with across the board decreases in tax and non-tax revenues. VAT and custom revenues were highly affected by the contraction in economic activity, registering respective decreases of 49.7 percent (yoy) and 34.5 percent (yoy); telecom revenues were also down by 56.5 percent (yoy) in 8M-2020. Meanwhile, total expenditures declined by 18.4 percent (yoy), over the same period. This was partly a result of a 58.9 percent (yoy) decrease in interest payments driven by (i) a 87.9 percent (yoy) decline in foreign debt interest payments, an implication of the Eurobond default; and (ii) a 41.3 percent (yoy) decrease in domestic debt interest payments due to a preferential agreement between BdL and Ministry of Finance.[14] Decreases of 37.1 and 39 percent (yoy) in transfers to EdL,[15] and municipalities, respectively, also contributed to the total decline in expenditures. Hence, while the overall fiscal deficit narrowed by 13.1 percent over 8M-2020, the primary balance deteriorated by 409 percent, flipping from a surplus of LBP 555 billion to LBP –1,713 billion.

High inflation rates drive a sharp fiscal adjustment. For nominally fixed fiscal items, more typically expenditure items, high inflation induces not only a reduction of the ratio to GDP, but also a reduction in real terms. For fiscal items that are indexed to inflation, more typically revenue items, high inflation will induce a nominal increase in these items (in principal maintaining real value), thereby partially offsetting the denominator-led GDP effect. Hence,

a large part of the macro adjustment, even if not by design from policy makers, is de facto taking place through (1) an inflation tax on the revenue side (for items other than those where the tax is set in fixed Lira terms such as most fees);[16] and (2) a real cut on the expenditure side. Both are blunt instruments, but with high inflation they generate a huge and fast adjustment. Hence, as is illustrated by the 2021 Budget proposal (Box 2), keeping the overall deficit at the same nominal number implies a sharp consolidation.

Public debt ratios, which were already notoriously unsustainable, are further aggravated by the economic crisis. Debt-to-GDP is estimated to have reached 174 percent by the end of 2020, increasing by 3 pp from the 2019 ratio. The sharp depreciation in the local currency has implied a significantly lower dollar value for domestic debt in 2020, lowering the dollar value for total debt (the numerator in the debt-to-GDP ratio); this is, however, more than offset by a significantly lower denominator, GDP in US$, due also to the currency depreciation, leaving a slightly larger debt-to-GDP ratio.[17] The expected worsening of the exchange in 2021 will further exacerbate this dynamic (Figure 5). So, whereas the surge in inflation

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[14] The agreement entails non-payment of coupon obligations on Treasury bonds held by BdL.

[15] This is driven by a combination of lower oil prices, falling demand due to economic crisis, and increased power cuts as tool for savings by EdL.

[16] This effect on the revenue side in Lebanon, however, is weakened by a combination of (i) a large chunk of the tax base is on imported goods, which for tax reasons are still valued at the official, thereby generating artificially lower revenues; (ii) a collapse in compliance; and (iii) the Tanzi effect—the reduction in the volume of tax collection and a deterioration of real tax proceeds being collected resulting from high inflation in a country.
Tanzi, Vito (1977), *Inflation, Lags in Collection, and the Real Value of Tax Revenue*, Staff Papers, vol. 24, March 1977, IMF, pp. 154–167.

[17] Taken at the official exchange rate, the share of foreign currency-denominated debt to the total outstanding stock of debt was 36 percent by end-2020 (amounting to 42 percent of GDP), mostly held by domestic banks; for illustration, if one were to use instead a simulated exchange rate of LBP 3,555/US$, foreign currency-denominated debt would surge to 57 percent of the total outstanding stock of debt (amounting to 100 percent of GDP).

BOX 2: LEBANON' 2021 BUDGET DRAFT PROPOSAL[a]

The 2021 budget draft proposal targets an overall fiscal deficit equivalent to 2.4 percent of GDP, and a primary deficit of 0.8 percent of GDP.[b] This marks a consolidation when compared to 2020 estimates for the overall and primary deficits of 4.9 and 2.8 percent of GDP, respectively (Table 2). Nominally, total revenues and expenditures, and thus the overall fiscal balance, in Budget 2021 are largely unvaried from those in Budget 2020; only the primary balance deteriorates, signaling the re-allocation of savings from interest payments to primary spending.

In the 2021 draft, total revenues are projected to continue contracting to 7.3 percent of GDP, compared to 11.9 percent in 2020. The change is mainly due to a denominator-led effect, resulting from a rise in nominal GDP; in fact, revenues in both 2020 and 2021 budgets are almost unchanged (LBP 14,176 billion in 2020 and LBP 14,140 billion in 2021): the carry-over of the depressed economic activity in 2020 and the continued sharp fall in 2021 are dragging down revenue collection, notwithstanding the inflation-creep "tax" that is common in rapid and high inflation environments.

Tax revenues represent the main component of total revenues, budgeted to reach 5.4 percent of GDP in 2021, compared to 8.4 percent of GDP in 2020 budget; in nominal terms the 2021 budget marks a nominal increase in tax revenues—LBP 10,493 billion compared to LBP 9,966 billion, which is, however, well below the projected 100 percent in inflation for 2021, so tax collection is falling in real terms.

The budget draft proposes new measures, including a newly introduced "national solidarity tax" and an adjustment to tax on interest profits. The "national solidarity tax" imposes a (i) 1 percent tax on deposits between US$1 million and US$20 million; (ii) 1.5 percent on deposits greater than US$20 million but less than US$50 million; and (iii) 2 percent on deposits greater than US$50 million. This tax applies to equivalent deposits in LBP, calculated at the official exchange rate of LBP 1,507.5/US$, as well as to deposits in other foreign currencies.

TABLE 2 • Summary of Fiscal Accounts Showing Actual Numbers, WB Estimates and Government Budgets

	2019	2020	2021	2020	2021
Central Government Finance (in percent of GDP)	Actual	WB estimates		Budget	Budget draft
Revenue (including grants)	20.6	11.5	6.9	11.3	6.3
o/w. tax revenues	15.5	8.1	4.9	8.4	4.9
Total expenditure and net lending	31.2	16.4	12.2	15.4	8.5
Current	29.9	15.2	10.9	14.9	8.2
o/w interest payment	10.0	2.1	1.4	4.0	1.4
Capital & net lending (excluding foreign financed)	1.3	1.2	1.3	0.4	0.3
Overall balance (deficit (–))	–10.5	–4.9	–5.3	–4.1	–2.2
Primary balance (deficit (–))	–0.5	–2.8	–3.9	–0.1	–0.7
(in LBP bln)					
Revenue (including grants)	16,678	13,706	14,750	13,396	13,572
o/w. tax revenues	12,533	9,593	10,500	9,966	10,493
Total expenditure and net lending	25,180	19,492	26,132	18,232	18,259
Current	24,152	18,090	23,356	17,738	17,524
o/w interest payment	8,067	2,504	2,949	4,695	3,106
Capital & net lending (excluding foreign financed)	1,028	1,402	2,776	493	735
Overall balance (deficit (–))	–8,502	–5,786	–11,382	–4,836	–4,687
Primary balance (deficit (–))	–435	–3,282	–8,433	–141	–1,581

World Bank estimates suggests that, as of December 2020, this tax can generate revenues in the amount of around LBP 165 billion on LBP deposits, and a US$750 billion on dollar deposits.

Another measure is a tax on interest income paid on bank deposits, certificates of deposit and treasury bills, which currently stands at 10 percent. The adjustment proposed imposes a 30 percent tax on the part of interest rates that exceeds 3 percent and 5 percent on US$ and LBP accounts, respectively. This effectively targets the financial sector's interest earned from government bonds. Bank customers' deposits will largely be exempt since interest rates on US$ and LBP deposits have generally fallen below these thresholds.

Expenditures in 2021 budget draft are also projected to drop, to 9.4 percent of GDP, compared to an estimated 16.4 percent of GDP in 2020. In nominal terms, expenditures would rise by a mere 0.2 percent compared to the 2020 budget, but would fall by 84.1 percent in real terms (when considering the official aggregate Consumer Price Index). Sharp nominal cuts in spending (33.8 percent) arise in debt service thanks to the Eurobond default and favorable arrangement with BdL. Capital expenditures are projected at 0.4 percent of GDP, marking a 49 percent increase in nominal terms, from those in the 2020 budget.

Notable new expenditure items include: (1) the rescheduling arrears due to the National Social Security Fund (NSSF) to be paid in equal installments in Treasury Bonds over the next 20 years, with the first such payment due in September 2021; (2) in a bid to encourage employment of Lebanese in firms, the Government will pay, on their behalf, their due contributions to NSSF for a period of two years, as long as (i) they are hired before December 31, 2021; (ii) they were either unemployed or entering the job market for the first time; and (iii) each employee's salary does not exceed LBP 18 million per year; (3) the amount of bank deposit guaranteed by the National Deposit Guarantee Institution increases to LBP 300 million, from a previous LBP 75 million; and (4) an obligation for banks to pay new foreign currency deposits in the currency of the deposit, upon the request of the involved person, in a bid to attract new deposits in foreign currencies. Relatedly, new deposits in FX will be exempt from tax on interest income, in hope of attracting FX deposits to the banking sector.

Irrespective of new expenditure items, the proposed 2021 budget allocations to primary expenditures constitute a decrease of around 12 percent compared to what are estimated for 2020. We note that our projections suggest the persistence of exceptionally high inflation rates in 2021. This predisposition can either (i) degrade the proposed budget's creditability, due to expected social pressures and real costs resulting from the high inflationary environment; or, if forced through, (ii) further entrench the severe decline in purchasing power for another year.

[a] The budget draft proposal has yet to be discussed by Cabinet and will need to be ratified by Parliament. Hence, measures and numbers in the budget draft are subject to revisions by Cabinet and Parliament before the budget is passed as a law.
[b] It is important to note that these numbers exclude a transfer to EdL in the amount of LBP 1,500 billion (0.7 percent of GDP), since this transfer is considered by the Ministry of Finance as a treasury advance, and is therefore excluded from Central Government fiscal balance. Since EdL has no capacity and poor prospects of ever repaying this and previous Treasury advances, under international government accounting standards (GFSM), they should be recorded as transfers.

is rapidly eroding the real value of domestic debt, the sharp depreciation of the currency continues to make Lebanon's sovereign debt burden unsustainable.

The External Sector

As foreign financing of the current account (CA) deficit came to a sudden stop in late 2019, a massive contraction of the CA took place in 2020 driven by a sharp contraction in imports. Following the de facto introduction of capital controls, the sovereign default, capital inflows into Lebanon stopped. While BdL made use of its limited foreign exchange reserves in 2020, a forced and massive adjustment/re-sizing of the previously massive

current account deficit took place. Specifically, over 11M-2020, a 44 percent decline in merchandize imports more than offset a 5 percent drop in exports, shrinking the trade in goods deficit by a drastic 54.8 percent in one year. Net remittances is estimated to have increased from 6.1 percent of GDP in 2019 to 9.7 percent of GDP in 2020. The increase is a result of (i) a sharp decline in US$ GDP (a denominator effect); (ii) large decreases in remittances outflows, as foreign workers in Lebanon suffer from the economic contraction; and (iii) some remittances inflows incentivized by the well-documented "insurance"[18]

[18] The "insurance" behavior suggests that diaspora increases remittances back home in case of natural disasters.

FIGURE 4 • Large Shortfalls in Revenues Will Induce a Significant Deterioration in the Fiscal Position

Fiscal Aggregates (% of GDP)

— Overall Fiscal Balance
--- Primary Fiscal Balance, Excluding Interest Payments
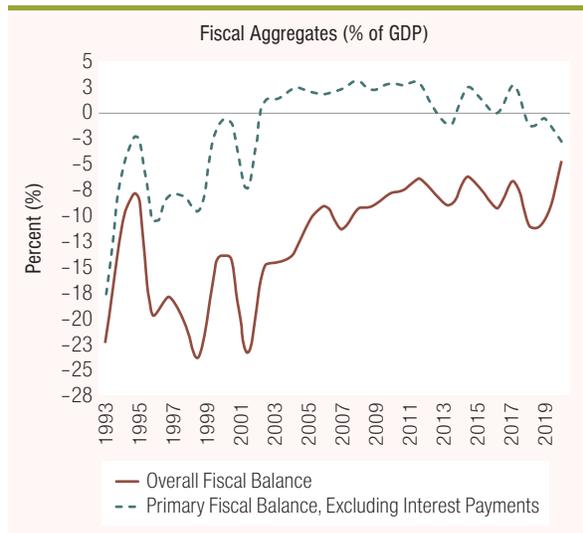
Sources: Lebanese authorities and WB staff calculations.

FIGURE 5 • Valuation Effects from Exchange Rate Depreciations Will Pressure the Debt-to-GDP Ratio

Gross Public Debt

■ External Public Debt (US$ bln)   ■ Domestic Public Debt (US$ bln)
— External Public Debt, at an Illustrative Exchange Rate, as a Percentage of GDP (rhs, %)   — Gross Public Debt (US$ bln)
--- Gross Public Debt as Percentage of GDP (rhs, %)
— External Public Debt, at Official Rate, as a Percentage of GDP (rhs, %)
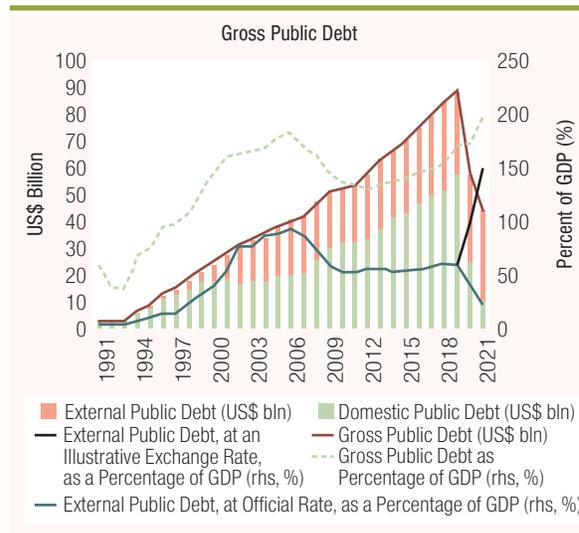
Sources: Lebanese authorities and WB staff calculations.

and other countercyclical[19] behaviors observed in countries with large diasporas. Nominally, however, remittances inflows are estimated to have been negatively impacted by an impaired banking sector—the traditional conduit for remittances—and the COVID-19 global impact. Overall, we expect the current account deficit in 2020 to contract, falling by almost 10 pps to reach 11 percent of GDP, compared to a medium-term (2013–2019) average of 22.5 percent of GDP.

The sudden stop in capital inflows, coupled with a smaller but still large current account deficit, has steadily depleted BdL's foreign exchange (FX) reserves (Figure 6). By January 2021, gross FX reserves at BdL (excluding gold reserves) reached $23.5 billion, declining by $13.8 billion since end-2019. BdL's gross position includes US$5 billion in Lebanese Eurobonds and an unpublished amount lent out to banks since October 2019. Much of the remainder is required reserves on banks' customer FX deposits, which is estimated at US$16.7 billion. Critically, BdL's gross position differs widely from its net reserves (i.e., gross FX reserves at the central bank net of FX liabilities to others); contrary to other central banks, BdL does not publish net reserves, which are estimated to be significantly negative.

A high import ratio for the consumption basket, along with the shortage of dollars in the market suggest an implicit tradeoff between (i) importation of goods and services and (ii) BdL's stock of foreign exchange reserves. This compelled authorities to prioritize imports. First, and early on in the crisis, BdL identified a list of highly critical goods (denoted as C1 goods)—namely, fuel, medicine and wheat—to be backed by its stock of foreign exchange reserves at the official exchange rate.[20] The Government followed suit in July 2020 with a list of other critical goods, issued by the Ministry of Economy and Trade (MoET), which BdL agreed to back up at the platform exchange rate (LL 3,900

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[19] During economic hardships in the home country, expatriates can also boost transfers back home in support of family.

[20] BdL set up a mechanism via commercial banks whereby importers of highly critical goods can exchange LBP for dollars at the official exchange rate for 85 to 90 percent of the cost of their imports, while sourcing the remaining 15 to 10 percent from the market at the US$ banknote rate.

FIGURE 6 • A Steady Depletion in the Gross Foreign Exchange Position at BdL

Gross Reserves at BdL
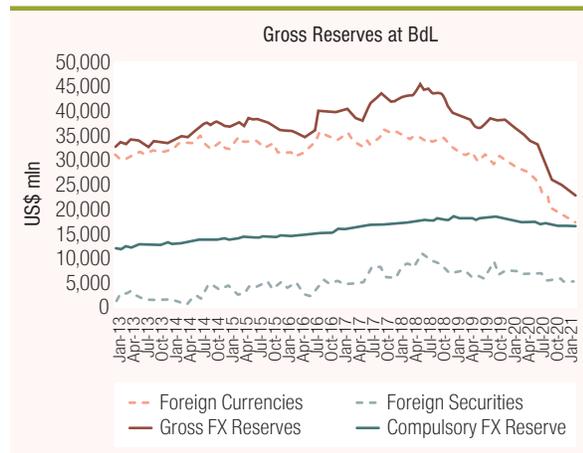
Sources: BdL and WB staff calculations.
Note: Compulsory FX reserves are World Bank estimates based on published data, and a 15 percent required reserve ratio on FX deposits in commercial banks.

FIGURE 7 • Ratios of C1, C2b, Luxury and other Imports Were Stable until the Period Leading to the Crisis...

Critical and Essential Imports
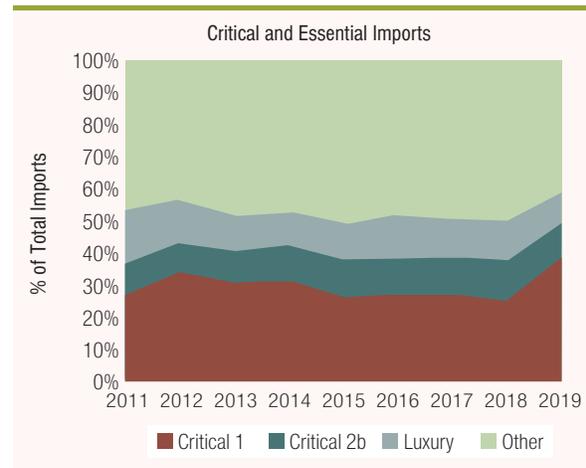
Sources: Customs, MOET, BdL and WB staff calculations.

per US$). This list was updated in November 2020 to include almost half the number of items that were in the original list. Hereafter, the original list will be called C2a while the latest will be called C2b.

An examination of historical and recent trends for C1 and C2b imports are revealing. The shares of C1, C2b, luxury and other imports to total imports are presented annually from 2011 to 2019 and monthly over 2019–20 in Figures 7 and 8, respectively. Figure 7 illustrates relative stability in the respective shares until 2019. Meanwhile, as foreign exchange constraints became binding, the ratios of C1 imports, and to a lesser extent C2a and C2b imports, rose at the expense of those for luxury and other goods (Figure 8). The average monthly values over the January 2019 to October 2020 period for C2a and C2b are US$180 and US$161 million, indicating unsubstantial savings by the second MoET list.

Importers from across the economy compete for access to these FX-backed facilities. However, less transparent demand is also well-documented in countries with capital controls and multiple exchange rate systems; specifically, corruption and misclassification of imports to benefit from cheap foreign exchange. As importers adapt to capital controls and more depreciated black-market rates, this incentive will grow.

FIGURE 8 • ...when Ratios of C1 and C2b Imports Rose at the Expense of those for Luxury and Other Goods.

Critical and Essential Imports
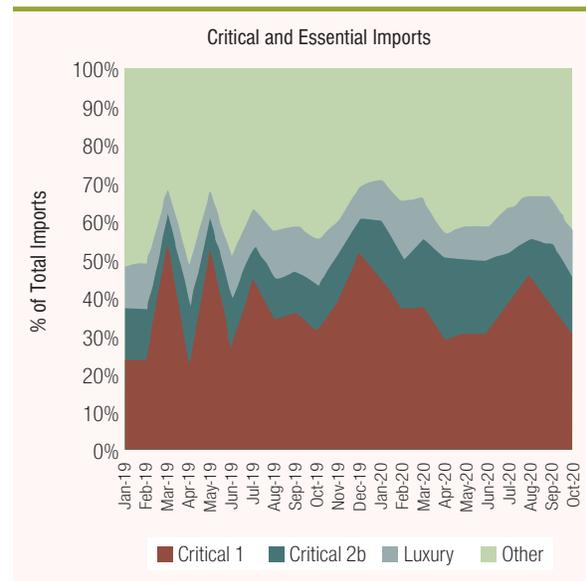
Sources: CAS and WB staff calculations.

Money and Banking

Monetary and financial turmoil are driving crisis conditions, specifically through interactions between the exchange rate, narrow money and

inflation. Acute exchange market pressures in Lebanese markets are reflected by heavy fluctuations in the US$ banknote exchange rate,[21] which breached LL 15,000/US$, before falling back down. This is within the context of a multiple exchange rate system, which includes the official exchange (LBP 1,507.5/US$) as well BdL's platform rate set at LBP 3,900/US$. Overall, the World Bank calculated Average Exchange Rate (AER)[22] depreciated by 129 percent in 2020 (Figure 9).

Limited economic utility for electronic dollars,[23] **along with scarcity of dollar banknotes, and minimum incentives to save in LBP, all rendered the economy heavily cash-based in local currency.** In 2020, the stock of currency in circulation increased by 197 percent (yoy), even as M2 increased by a mere 6.3 percent, while M3 declined by 1.4 percent. The latter two money supply measures reflect the deleveraging that is going in the financial sector (see below).

Exchange rate pass through effects on prices have resulted in surging inflation, hitting the poorest and most vulnerable the most. The 12-month inflation rate has risen steadily and sharply from 10 percent in January 2020, to 89.7 percent in June 2020, 120 percent in August 2020, and most recently, to 157.9 percent in March 2021. Inflation is a highly regressive tax, disproportionally affecting the poor and vulnerable (Box 3), and more generally, people living on fixed income like pensioners. This is especially so in Lebanon's case where basic items of the consumption basket are primary drivers of overall inflation. In fact, the main contributors of inflation are food and non-alcoholic beverages, followed by clothing and footwear, and then furnishing and household equipment (Figure 10); prices for these basic consumption items have surged by 254.3, 289.8 and 389.7 percent, respectively, in 2020.

The severe restrictions on capital outflows have given the monetary authorities room to lower interest rates. From October 2019 to December 2020, BdL lowered interest rates on banks' LBP and dollar deposits by 639 and 567 basis points (bps), respectively. Banks' lending rates in LBP and US$ have mirrored this effect, falling by 342 and 332 bps, respectively over the same period.

As inflation has surged during that same period, real interest rates in the country are highly negative across the board.

Since the eruption of the financial crisis, BdL has been almost an exclusive policy maker, with the exception of a brief period in which Government defaulted on its Eurobond obligations and unsuccessfully proposed its Financial Recovery Plan. The Fall 2020 LEM listed in detail the slew of BdL circulars, which formalized BdL's crisis management strategy. The main BdL policy initiatives/updates since then include (i) a new financial operation; (ii) an announcement by BdL to allow commercial banks to conduct currency exchanges at the market rate; and (iii) the expiration of a deadline for commercial banks to meet Circular 154 provisions.

In March 2021, BdL announced a new financial operation. Details of this operation and an illustrative example are presented in Box 4. In this most recent operation, BdL offers banks FX in exchange for LBP, increasing its liabilities in FX and

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[21] The US$ banknote market has become a main supply channel for dollars for both real and financial activity, as commercial banks heavily restricted withdrawals and transfers of customers' dollar deposits.

[22] The AER is derived by applying consumption-based weights on the official, the platform and the US$ banknote exchange rates. For a detailed derivation please refer to: World Bank (2020), *The Lebanon Economic Monitor: The Deliberate Depression*, Fall 2020. Since then, we make adjusted the AER per the following:
We account for a reduced MoET list of subsidized goods starting in November 2020.
Beginning in August 2020, 75 percent of the non-imported services is linked to the official exchange rate (compared to 100 percent prior), while 25 percent is linked to the platform rate. The reason being is that, around that time, certain prominent hospitals and universities announced that they will start billing according to the BdL platform rate.

[23] This refers to dollar deposits from prior October 2019, which are subject to strict capital controls and can generally be withdrawn only in LBP at the platform rate (LBP 3,900/US$), a significant haircut compared to the value of the dollar being traded in the parallel banknote market.

FIGURE 9 • A Sharp Depreciation in the Exchange Rate along with Surging Inflation and Narrow Money

Exchange Rate-Currency in Circulation-Inflation
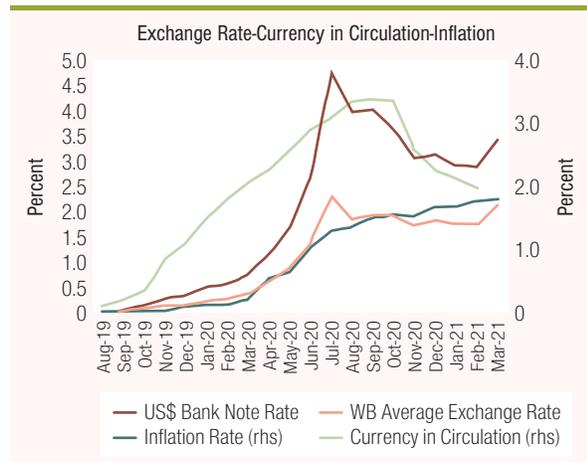
Sources: CAS, BdL and WB staff calculations.

FIGURE 10 • Inflation in Basic Items is a Key Driver of Overall Inflation, Hurting the Poor and the Middle Class

Contributions to Overall Inflation in 2020
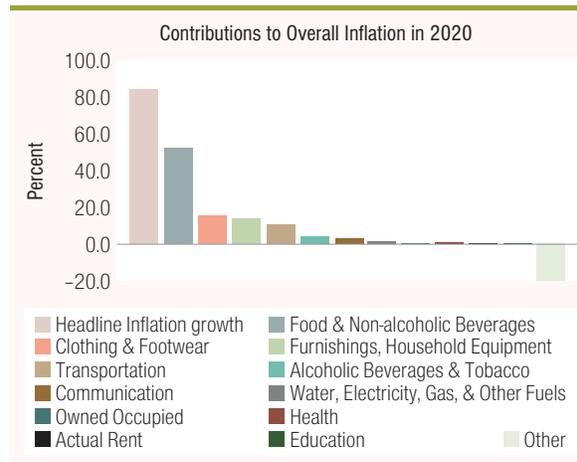
Sources: CAS and WB staff calculations.

BOX 3: IMPACT OF CRISES ON POVERTY[a]

The multiplicity of crises affecting Lebanon is likely to have an escalating impact on poverty. After remaining in the single digits for over a decade, average annual inflation ballooned to 84.3 percent in 2020, while average food inflation alone grew by a record 254 percent over 2020. The annual rates do not fully reflect the rapid rise in monthly inflation wherein the year-on-year inflation rate reached 146 percent in December 2020 with a corresponding food inflation rate of over 400 percent. The growth in food inflation is particularly concerning, as food consumption forms a larger proportion of the expenses incurred by poorer households (Figure 11).

The deteriorating purchasing power is causing households to struggle in making ends meet. Phone surveys conducted during November and December 2020 found that 41 percent of households reported challenges in accessing food and other basic needs. The share of households facing difficulties in accessing health care was at 36 percent, up from 25 percent in July-August 2020. Unemployment rate also rose among the respondents, from 28 percent in February 2020 (pre-COVID) to nearly 40 percent in the Nov-Dec period.

FIGURE 11 • Food Expenditure Shares by Deciles for Lebanese Nationals

Source: Staff calculation using HBS 2012.

The absence of timely and relevant data makes it very difficult to reasonably predict the state of poverty in the country. The last household budget survey was completed in 2011–2012 under conditions very different from the state of the country today. The pandemic has further heightened the vulnerability of the poor whose living, working and health conditions place them at greater risk compared to wealthier segments of the population. Under highly inflationary conditions, poorer households have limited means of preserving their purchasing power and are likely to resort to a variety of last-resort coping strategies, including ceasing their medications, borrowing at extortionary rates and selling of assets to simply put food on the table. Tentative projections using the older data suggest that well over half the population is likely to be under the national poverty line.

The economic crisis and resulting rising in poverty raise an urgent need for social assistance. High levels of poverty can have a long-lasting impact on Lebanon's human development and increases vulnerabilities across the lifecycle. Adequate social assistance will therefore be critical both in the short term to provide emergency relief, and in the medium-long term to improve resilience to shocks among vulnerable Lebanese.

[a] This box has been prepared by Ganesh Kumar Seshan (Senior Economist, EMNPV), Bilal Malaeb (Economist, EMNPV), Fahmina Rahman Dutta (Social Protection Specialist, HMNSP) and Haneen Ismail Sayed (Lead Operations Officer, HMNSP), under the guidance of Johannes G. Hoogeveen (Practice Manager, EMNPV).

BOX 4: THE MOST RECENT FINANCIAL OPERATION BY BDL WITH COMMERCIAL BANKS

The most recent financial operation employed by BdL involves the following steps:

1. Banks discount medium- to long-term LBP Time Deposits (TDs) and/or Certificates of Deposits (CDs) at a discount rate of yield plus up to 1 percent.

2. With the proceeds from the above operation, banks buy US$ at LBP 1514/US$ from BdL and deposit this amount at their US$ current account with BdL, receiving zero interest rate.

3. Banks are also required to unwind LBP financial engineering structures at least equivalent to the US$ amount bought (at least 1 to 1 ratio). The unwinding process consists of discounting at par LBP TDs as well as their linked LBP Repos.

4. Banks would sign an undertaking to sell back to BdL the amount US$ bought at the electronic platform rate upon the first demand from BdL, through discounting US$ TDs and CDs.

5. The amount of US$ the bank is committed to sell back to BdL will be reduced by the amount of US$ the bank sells to BdL under Circular 151, from January 2021 until the call back date (as per Central Decision Council amendment).

For illustrative purposes, we present a simplified example.

Steps 1–3 are Spot Transactions

Suppose step 1 involves discounting LBP 1,514,000 in face value divided evenly between TDs and CDs. Long term average interest rates for LBP TDs and CDs are around 3.5 and 8.5 percent, respectively. Hence the average yield for step 1 is 6 percent (= 0.5*3.5 + 0.5*8.5). Moreover, we assume the average maturity for these TDs and CDs is 10 years. Hence, the present value for this operation is calculated by discounting (i) coupon payments, which we are assuming annual; and (ii) the face value payment at maturity, such that:

$$\sum_{n=1}^{10} \frac{6\% * (1,514,000)}{(1+6\%)^n} + \frac{1,514,000}{(1+6\%)^n} = LBP\ 1,514,000 = US\$\ 1000\ (at\ LBP\ 1,514/US\$)$$

Hence, banks use the proceeds to purchase US$1,000 from BdL, which is deposited at a non-yielding current account with the central bank.

Further, per step 3, banks unwind LBP 1,514,000 of financial engineering TDs and repos by discounting at par. These TDs were created as part of BdL's financial engineering operations in which BdL lent banks LBP at 2 percent annual rates on the condition they were placed as TDs with BdL earning 10.5 percent annually. Hence, the net return on these TDs for banks was 8.5 percent annually. Hence, as earlier, we discount (i) the annual net return on these TDs; and (ii) the repayment of loan principal at maturity; this generates a present value of LBP 1,514,000.

Steps 4 and 5 are Future Transactions

At future dates, banks are obliged to sell back US$ 1000 minus whatever dollars they sell under Circular 151, herein denoted by X. The dollar value is exchanged to LBP at the platform rate of the time, denoted by E, and which is currently at LBP 3,900/US$.

The combination of steps constitutes a call option for BdL to buy back the US dollars, albeit, with undefined terms, due to uncertainty over key parameters, such as X, E, and time to expiration of the call option. Hence, for simplification purposes in this illustrative example, we assume away the accounting and pricing implication of the call option for BdL, and symmetrically for Banks.

Hence, according to the numbers used in this illustrative example, a balance sheet analysis suggests (with spot transactions in light green background and future transactions in white):

BdL		Banks	
Assets	Liabilities	Assets	Liabilities
	LBP –1,514,000		LBP –1,514,000
	US$ +1000		US$ +1000
LBP –1,514,000	LBP –1,514,000	LBP –1,514,000	LBP –1,514,000
	US$ –(1000-X)		US$ –(1000-X)
	LBP +[($1000-$X)*E]		LBP +[($1000-$X)*E]

For BdL:

At spot

- BdL's liabilities are lower by LBP 3,028,000 (=1,514,000+1,514,000) but higher by US$1000.

- BdL's assets are lower by LBP 1,514,000

- Net impact on BdL's capital would thus be

  - Positive (i.e., capital increases) if the exchange rate is lower than LBP 1,514/US$

  - Negative (i.e., capital decreases) if the exchange rate is higher than LBP 1,514/US$

Over time

- BdL's liabilities are lower by LBP [1,514,000+1,514,000-($1000-$X)*E] but higher by US$X.

- BdL's assets are lower by LBP 1,514,000

- Net impact on BdL's capital would thus be

  - Positive (ie. capital increases) if the exchange rate is lower than
    LBP $\frac{(1,514,000)-(1000-X)*E}{X}$ per US$

  - Negative (ie. capital decreases) if the exchange rate is more than
    LBP $\frac{(1,514,000)-(1000-X)*E}{X}$ per US$

For Banks:

At spot

- Bank's assets are lower by LBP 3,028,000 but higher by US$1000.

- Banks' liabilities are lower by LBP 1,514,000

- Net impact on banks' capital would thus be

  - Negative (i.e., capital decreases) if the exchange rate is lower than LBP 1,514/US$

  - Positive (i.e., capital increases) if the exchange rate is greater than LBP 1,514/US$

Over time

- Banks' assets are lower by LBP [1,514,000+1,514,000-($1000-$X)*E] but higher by US$X.

- Banks' liabilities are lower by LBP 1,514,000

- Net impact on Banks' capital would thus be

  - Negative (ie. capital decreases) if the exchange rate is lower than
  - LBP $\frac{(1,514,000)-(1000-X)*E}{X}$ per US$

  - Positive (ie. capital increases) if the exchange rate is more than
  - LBP $\frac{(1,514,000)-(1000-X)*E}{X}$ per US$

From an income perspective, and according to the numbers used in this illustrative example, in the absence of this operation, banks (BdL) would be earning (paying) a return of

- an average of 6 percent from LBP TDs and CDs;

- an average of 8.5 percent from LBP TDs and repos;

for a total of 14.5 percent on LBP instruments. Meanwhile, in this operation

- 14.5 percent earnings on LBP instruments for banks are eliminated; hence BdL saves 14.5 percent;

- BdL does not pay interest on Banks' dollar deposits;

Overall, from an income perspective, and according to the numbers used in this illustrative example, BdL saves (banks lose) 14.5 percent annually.

decreasing it in LBP, with the exchange occurring at the official exchange rate. It then compels banks to sell this FX back to BdL (whether directly or via the ongoing Lirafication scheme[24]) at the platform rate, which is currently set at LBP 3,900/US$. With the caveat that a comprehensive assessment of this operation is more accurate from a hindsight perspective, as it is able to better capture interactions and incentives that might not be clear at this point, we present some preliminary observations:

- As a spot transaction, the operation will cancel out LBP assets and liabilities that resulted from BdL's previous financial operations.[25]
- As a spot transaction, BdL will incur an FX liability to banks and hence worsen its net international reserve (NIR) position. Since the FX offered by BdL to banks is not real liquidity, or "fresh dollars," its use is limited to closing banks' FX positions with BdL (i.e., banks' deleveraging schemes such as Lirafication).
- As a spot transaction, this operation will worsen (improve) BdL's (banks') capital position.
- Over time, all things equal, this operation will interact with Circular 151, with a likelihood that, on the net, BdL will increase its FX liabilities. Commercial banks' deleveraging, as incentivized by Circular 151,[26] would be occurring irrespective of this operation and will not be further incentivized by it. Hence Step 5 in Box 4. The most recent financial operation by BdL with commercial banks[27] suggests that this operation would prevent a larger overall reduction to BdL FX liabilities that would have occurred in the absence of this operation.
- Over time, and after banks have sold back this FX liquidity to BdL, BdL would have replaced the LBP liability with currency in circulation.

Also in March 2021, a Baabda Presidential Palace announcement stated that BdL will start allowing commercial banks to conduct currency transactions similar to legal exchange dealers, at a rate to be set by the Central Bank's electronic platform. While information on this has been scarce, notable factors include:

- This would be based on the current "Sayrafa" platform, which is now set at LBP 3,900/US$.[28] Indeed, after the Baabda Palace announcement, BdL sent a "Request" to banks and exchange dealers to register on Sayrafa.
- This is not meant to completely replace the parallel market.
- It is not clear how close the Sayrafa rate would be to US$ banknote rate; or how responsive it would be to changes in the banknote rate.[29]
- Transactions would be restricted to exchange of currency notes only (LBP and US$).
- On the demand side (of FX): the announced intention is to allow access to only those engaged in "legitimate economic transactions", (i.e., traders/industrialists/businesses, for trade and business activities).

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[24] BdL has regulated that dollar deposits that existed prior to October 2019 can be withdrawn only in LBP at the platform rate, thereby effecting Lirafication and a haircut (up to 70 percent) on these deposits. More formally, Circular 151, as part of a sequence of circulars (148, 151, 549, 565), allowed the withdrawal of pre-crisis deposits at exchange rates that are higher than the official rate, but lower than the US$ banknote rate. This rate eventually settled at the platform rate, which is currently set at LBP 3,900/US$.

[25] In previous financial engineering schemes, BdL incurred LBP liabilities, which were offered as an incentive to commercial banks to purchase Eurobonds from BdL, allowing BdL to raise its gross foreign exchange reserves by tapping into commercial banks' foreign assets.

[26] These deleveraging schemes have resulted in reductions in customers FX deposits with banks, which effected commensurate reductions in banks' FX deposits with BdL, and hence, reductions in BdL's FX liabilities, and improvements in BdL's NIR.

[27] Step 5 states: the amount of US$ the bank is committed to sell back to BdL will be reduced by the amount of US$ the bank sells on an annual basis to BdL under Circular 151.

[28] In fact, the Sayrafa platform was initially set up by Circular 149 (April 3, 2020), in which BdL announced a special unit comprising BdL, banks and exchange bureaus that exchanges foreign currencies. The Sayrafa was intended as electronic board that publishes exchange rates.

[29] Minister of Finance, in an interview to a TV channel, mentioned the rate LL10,000/US$.

- On the supply of FX: the sources for US$ banknotes to be exchanged through this platform are not clear. Options or combinations thereof include:
  - Commercial banks' own FX liquidity.
  - A new set-up where exporters are incentivized to repatriate FX dollars they have been depositing in foreign banks.
  - BdL's own FX reserves.

Ultimately, if BdL wants to control/influence the US$ banknote rate, then it has to find a sufficient supply of FX to inject at a rate lower than the banknote market rate, so as to attract buyers of dollars. Essentially, this would act as a more traditional FX intervention in the market in defense of the exchange rate. In such a case, it can be used as a monetary tool to mop up currency in circulation from the market, as more orthodox monetary tools are ineffective.[30] However, even if currency in circulation is reduced, this operation would be inconsistent with other policies (Lirafication and monetization of the deficit), making the overall monetary stance of BdL unclear. This can weaken the impact of a reduction in currency in circulation on inflation. A larger question would be, in absence of a more comprehensive and sustainable solution, would BdL/banks spend from their very valuable (i.e., limited and dwindling) FX resources?

Officially, BdL did not extend the deadline for Lebanese commercial banks to meet new parameters set by BdL via Circular 154; that deadline was February 28, 2021. Key stipulations of Circular 154 include: raising bank capital by 20 percent; banks to place funds in correspondent banks amounting to a minimum of 3 percent of customers' FX deposits; banks to convince customers to repatriate 15 percent of deposit outflows above US$500,000 since end-2017; banks' shareholders and politically exposed persons (PEPs) to repatriate 30 percent of deposit outflows above US$500,000 since end-2017. BdL and the Banking Control Commission are reported to be currently undertaking a bank by bank examination of compliance. There is a lack of clarity on follow up and next steps, and there have been no subsequent initiatives since the passing of the deadline.

FIGURE 12 • Heavy Deleveraging of Assets (Private Loans) and Liabilities (Private Deposits) in the Financial Sector
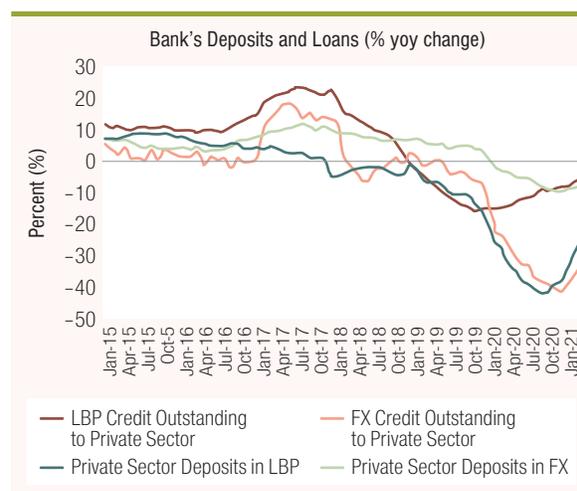
Sources: CAS and WB staff calculations.

Conditions in the financial sector continue to deteriorate, while a consensus among key stakeholders on the burden-sharing of losses has proven to be elusive, and is further complicated by the lack of progress in government formation. Customer deposits at commercial banks declined by US$19.8 billion (or 12.6 percent) in 2020, further deepening the liquidity shortage. Liquidity needs in the banking system have been met mainly through deleveraging and reduction in net foreign assets. Deleveraging had resulted in banks' domestic credit portfolio shrinking by US$12.1 billion (or 27.5 percent) during the same period (Figure 12), mainly in foreign currency loans, although it partially reflected customers settling loans backed by real estate collateral, using deposits locked up in bank accounts.

Lending from BdL has allowed Lebanese commercial banks to pay off liabilities to

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[30] In more conventional monetary and financial conditions, increasing policy rates can be used to effect monetary tightening. However, this is no longer an option as the banking system is dysfunctional and the monetary transmission channel impaired. In addition, under capital controls, monetary authority has more flexibility in not increasing interest rates as capital is captive even with hugely negative real interest rates.

correspondent banks in order to retain linkages to the global financial system. As of December 2020, commercial banks' placements in and liabilities for non-resident financial institutions (FIs) amounted to US$4.7 and US$6.6 billion, respectively, compared to US$6.8 and US$8.8 billion in December 2019. Foreign correspondent banks have significantly tightened conditions and reduced lines to Lebanese banks. As a condition on continuing to transact via correspondent banks, commercial banks have had to pay down liabilities to these banks, partially financed by lending from BdL. This allowed a marginal improvement in the net position of commercial banks at non-resident FIs, which nonetheless remained negative at –US$1.8 billion in end-2020, compared to –US$2.1 billion in end-2019.

Large losses associated with the sovereign exposures of the banking sector remain unresolved. Exposures to the sovereign amount to 70 percent of total banking assets or roughly 250 percent of 2019 GDP. These include US$110 billion in BdL instruments, US$10 billion in Lebanese government Eurobonds and US$11 billion in domestic government securities at the official exchange rate.

The credit portfolio of the banking sector has substantially deteriorated during recent months. The non-performing loan (NPL) ratio—that is, gross NPLs including unearned interests as a percentage to total loans—stood at 33.0 percent (37.7 percent for FX loans) as of end-2020, compared to 13.3 percent at end-June 2019 before the crisis and

FIGURE 13 • A Steady and Sharp Deterioration in Credit Performance as Measured by NPL Ratio for Banks
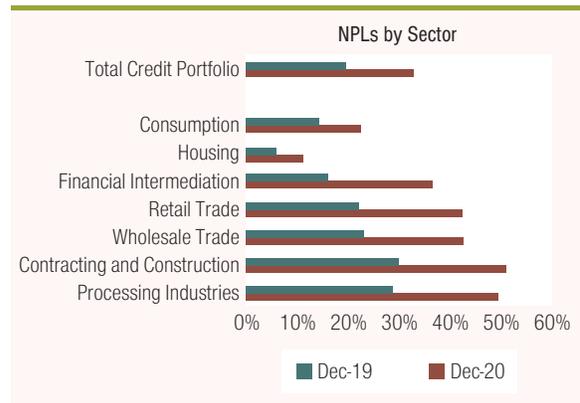
Sources: BdL and WB staff calculations.

19.6 percent a year earlier. NPL ratio for construction, processing industries and wholesale and retail trade reached 51 percent, 50 percent and 43 percent, respectively (Figure 13). Provisioning coverage was at just over 50 percent as of end-2020. Continued deterioration in the quality of the remaining credit portfolio (US$40 billion at the official exchange rate and 61 percent denominated in US$) would be expected, given the lack of progress in government formation and necessary restructuring and reform. Losses arising from the rapid deterioration of assets quality, although paling in comparison to the losses from sovereign exposures, will need to be addressed in a comprehensive balance sheet cleanup.

3

GLOBAL CRISES COMPARATORS: LOOKING FOR THE MINIMUM

We continue to monitor the Lebanon financial crisis in the context of Global Crisis Comparators.[31] In this LEM, we compare the Lebanon crisis with the most severe global crises episodes as observed by Reinhart and Rogoff (2014), henceforth referred to as R&R.[32] Based on the most extensive financial crises database available,[33] R&R calculate a crisis severity index (CSI) for a sample of 100 crisis episodes over the 1857–2013 period. The CSI is computed based on (i) the depth of the crisis episode—the peak-to-trough decline in real GDP per capita, and (ii) its duration—the number of years it takes to reach the prior peak in real per capita income. Specifically, for each crisis episode:

CSI = −1*(peak-to-trough percentage change) + number of years from peak to recovery to prior peak

R&R's 25 most severe crises and associated results are presented in Table 3. Some notable findings include:

- A typical recurring pattern across time and space in these cycles is one in which economic activity reaches a peak either the year before the onset of crisis or the year of the financial crisis. There are cases where the downturns start earlier but these are less frequent.
- A substantial number of these crises are not "pure" banking crises in that these unfold alongside a currency crash and often involve a sovereign default as well.

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[31] The Fall 2020 LEM, entitled The Deliberate Depression, compares Lebanon's macroeconomic fundamentals in the lead-up to the crisis to two groups of global crises comparators: the Asian crisis countries of 1997–98, and a more eclectic set of crises that occurred in the 2000's [Argentina (2001), Greece (2008), Ireland (2008), Iceland (2008) and Cyprus (2012)]. We conclude that, leading up to the crisis point, Lebanon's macroeconomic fundamentals were weak compared to these global crises comparators, suggesting that the adjustment process will be more painful and will take longer, even with optimal policy measures in place.

[32] Reinhart, Carmen M. and Kenneth S. Rogoff (2014), Recovery from Financial Crises: Evidence from 100 Episodes, American Economic Review: Papers & Proceedings 2014, 104(5): 50–55.

[33] Reinhart, Carmen M., and Kenneth S. Rogoff (2009), This Time Is Different: Eight Centuries of Financial Folly. Princeton: Princeton University Press.

TABLE 3 • Crisis Severity: Percent Decline in Per Capita GDP, Duration of Contraction, and Years to Full Recovery in 25 of the Worst Systemic Banking Crises, 1857–2013 (Reinhart and Rogoff, 2014)

Rank	Year	Country	Peak to Trough % change	Peak to Trough # years	Peak to Recovery # years	CSI	Double Dip Yes or No
1	1926	Chile	−46.6	3	16	62.6	Y
2	1931	Spain (civil war)	−34.6	9	26	60.6	Y
3	1983	Peru	−32	11	25	57	Y
4	1931	Uruguay	−36.1	3	17	53.1	Y
5	1893	Australia	−28	8	20	48	Y
6	1929	Mexico	−31.1	6	16	47.1	Y
7	1921	Italy	−25.5	3	21	46.5	Y
8	1890	Brazil	−21.7	4	21	42.7	Y
9	1923	Canada	−30.1	4	10	40.1	N
10	1890	Uruguay	−21	2	19	40	Y
11	1981	Philippines	−18.8	3	21	39.8	Y
12	1980/1985	Argentina	−21.8	11	18	39.8	Y
13	1929	India	−8.2	9	31	39.2	Y
14	1929/1933	US	−28.6	4	10	38.6	Y
15	1994	Venezuela	−24.2	11	14	38.2	Y
16	1939	Netherlands	−16	6	21	37	Y
17	2009	Greece	−24	6	12	36	Y[a]
18	1931/1934	Argentina	−19.4	3	15	34.4	Y
19	1931	Poland	−24.9	4	9	33.9	N
20	1929/1931	Austria	−23.4	4	10	33.4	N
21	1981	Mexico	−14.1	7	17	31.1	Y
22	1920	UK	−18.7	3	11	29.7	Y
23	2001	Argentina	−20.9	4	8	28.9	N
24	1980	Chile	−18.9	2	8	26.9	N
25	2002	Uruguay	−18.9	4	8	26.9	N
	Average		*−24.3*	*5*	*16*	*40.5*	

[a] This is listed as N in Reinhart and Rogoff (2014), since until its publication, Greece had not yet experienced its double dip which subsequently occurred in 2016.

- Out of the 100 episodes, 63 were in advanced economies and 37 in emerging economies.
- While emerging market peak-to-trough average output declines are about 5 percent larger than those in the advanced economies, they are not statistically significantly more protracted.
- A double dip[34] is observed for 45 percent of the whole sample and two-thirds of the most severe crises.

Lebanon's real GDP per capita has been on a continuous decline since the onset of the Syria war in 2011, with a much sharper drop commencing in 2018 (Figure 14). Prior to 2018, Lebanon's per capita GDP declined as a direct consequence of the war in

[34] A double dip is when the post-trough, but pre-recovery growth is interrupted with a real GDP contraction.

neighboring Syria; both real economic activity slowed appreciably,[35] and population increased significantly due to the refugee influx.[36] R&R calculations of crisis depth and duration, and hence, the CSI, depend on the identification of peak year—the year in which the per capita real GDP reached a pre-crisis peak. However, due to the impact of the Syrian crisis, and in order to more accurately gauge the depth and duration of the Lebanon financial crisis, it would be unbalanced to identify the peak year in Lebanon by the pre-crisis peak in real GDP per capita as in R&R. Instead for the Lebanon episode, we identify the peak year by the pre-crisis peak in real GDP, which is 2017.

The Lebanon financial crisis is likely to rank in the top 10, possibly three, most severe crises episodes globally since 1900. In order to compute a CSI for the Lebanon financial crisis, we make assumptions commensurate to (relatively) good and bad case scenarios. In the good case scenario, we assume: (i) real GDP per capita trough occurs in 2021 at the World Bank projected growth rate (–9.5 percent), inducing an overall –35.1 percent peak (2017) to trough (2021) change in real GDP per capita; and that (ii) it takes 12 years for Lebanon to recover to 2017 real income per capita levels, the average crisis duration of those cases ranking 16–25 in Table 3. The good case CSI would be 47.1, ranking the Lebanon episode 6th after Australia (1893) and aligned with Mexico (1929) in Table 3. In the bad case scenario, we assume: (i) real GDP trough occurs in 2022 at an additional 5 percent annual contraction in real GDP, resulting in an overall –38.6 percent peak (2017) to trough (2022) change in real GDP per capita; and that (ii) it takes 19 years for Lebanon to recover to 2017 real GDP levels, the average crisis duration of the top 10 cases in R&R. Bad case CSI would be 57.6, ranking the Lebanon financial crisis third after Chile (1926) and the Spanish civil war.

We also cross-compare key macroeconomic indicators for Lebanon with those for R&R's relatively more recent episodes. Specifically, we compare Lebanon to the following R&R episodes, henceforth referred to as G8: Chile (1980), Argentina (1980), Philippines (1981), Mexico (1981), Venezuela (1994), Argentina (2001), Uruguay (2002) and Greece (2009). A summary of crisis events is presented in

FIGURE 14 • Lebanon's Real GDP is a More Accurate Reference Point for the Start of the Financial Crisis than Real GDP/capita
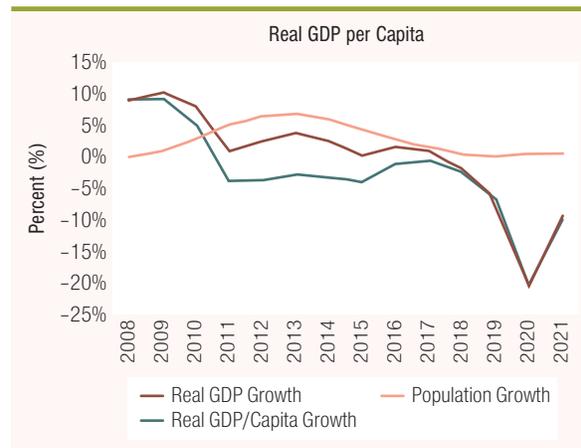
Sources: CAS and WB staff calculations.

Annex C for each of these episodes. To the extent data is available, we plot each macroeconomic indicator for the G8 plus Lebanon over the years leading to the crisis point and observe dynamics in years that follow.[37]

Per Capita Output

While Lebanon's real GDP per capita has faltered since 2011, 2018 marks the beginning of a much sharper decline. Only Argentina (01) and Uruguay (02) share Lebanon's consistent negative growth in

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[35] Annual real GDP growth fell from a pre-Syria war average of 4–5 percent to 1.8 percent over the 2011–2017 period.

[36] Total population expanded by 27.3 percent from 2010 to 2017.

[37] In these charts, the indicator is plotted from 3 years prior to crisis year (t–3), to 5 (or 6) years post-crisis (t+5 or t+6), of course going through crisis year (t). In such a way, even when crisis years differ (say 2009 for Greece and 2001 for Argentina), plotting in reference to a crisis point rather than the calendar year superimposes the same indicator for Lebanon with global crises comparators on one chart. This allows us to cross-compare how the macro indicator developed as the crisis is approached, and how it evolved afterwards.

FIGURE 15 • Real GDP Per Capita for G8 Plus Lebanon

Real GDP per Capita Growth
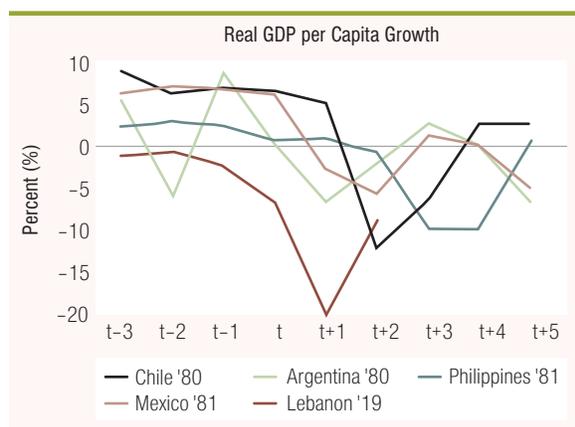
Sources: WDI, CAS and WB staff calculations.

FIGURE 16 • Real GDP Per Capita for G8 Plus Lebanon

Real GDP per Capita Growth
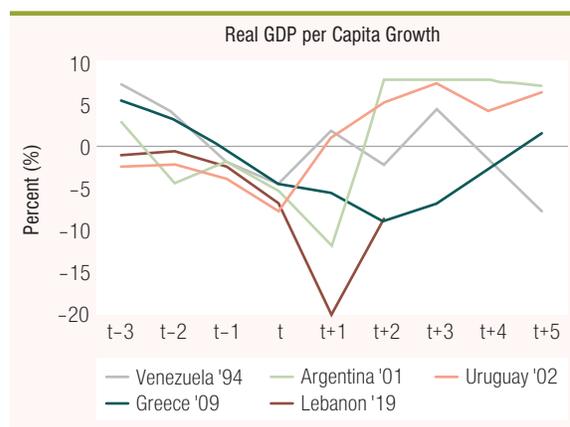
Sources: WDI, CAS and WB staff calculations.

per capita real GDP in the period leading to the crisis point (Figures 15 and 16). While the contraction in real GDP commenced in 2018, it accelerated sharply in 2020. However, Lebanon stands out in magnitude of the contraction at time t and t+1. Further, the protracted nature of the crises in the G8 countries is reflected in the difficulty for these economies to regain growth in their per capita GDP. Only Argentina (01) and Uruguay (02) amongst the G8 were able to regain consistent per capita growth by t+2.

The contraction in Lebanon's real GDP per capita is already worse than any of the G8's Peak to Trough changes. The contraction in Lebanon's real GDP per capita from its level in peak year 2017 had already reached an estimated 27.9 percent by 2020, and is projected to be 35.1 percent by 2021. This is significantly larger than G8 Peak to Trough changes in per capita GDP: –24.2 percent for Venezuela (94); –24 percent for Greece (09); –21.8 percent for Argentina (80); –20.9 percent for Argentina (01); –18.9 percent for each of Chile (81) and Uruguay (02); –18.8 percent for Philippines (81); and –14.1 percent for Mexico (81) (Table 3).

Depreciation-Inflation

A potent depreciation-inflation dynamic is a key driver of macroeconomic instability for half of the G8 episodes, a characteristic also shared

by the Lebanon financial crisis. To the extent data allows, we examine the trajectories of both the exchange rate and inflation in G8 plus Lebanon. Crisis-related currency depreciations were most severe in Argentina (80) (Figure 17), and to a lesser extent in Mexico (81), Venezuela (94) and Argentina (01) (Figure 18). Exchange rate depreciation in Lebanon has so far been comparable to the latter three. Loss in value for local currencies was relatively moderate in Chile (80) and the Philippines (81), and mild in Uruguay (02). Meanwhile, Greece (09) had successfully retained membership of the Euro monetary area.

Inflation in Lebanon, long subdued since the early nineties in reflection of exchange rate stability,[38] **has come to resemble the worst of G8 episodes.** Exchange rate pass-through effects on prices have implied a correlation between currency depreciations and inflation rates. Due to data limitations, we examine inflation in a subsample of the G8 episodes, namely, Chile (80), Philippines (81), Mexico (81), Uruguay (02) and Greece (09). Among this subsample, inflation was most severe in Mexico (81), relatively moderate in Chile (80) and Philippines (81), and mild in Uruguay (02) and Greece (09). This

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[38] This is the case since the last exchange rate collapse, which saw the currency depreciate by over 400 percent from January 1990 until Fall of 1992.

FIGURE 17 • CPI Indices for G8 Plus Lebanon

Exchange Rates

FIGURE 18 • Overall Fiscal Balance for G8 Plus Lebanon
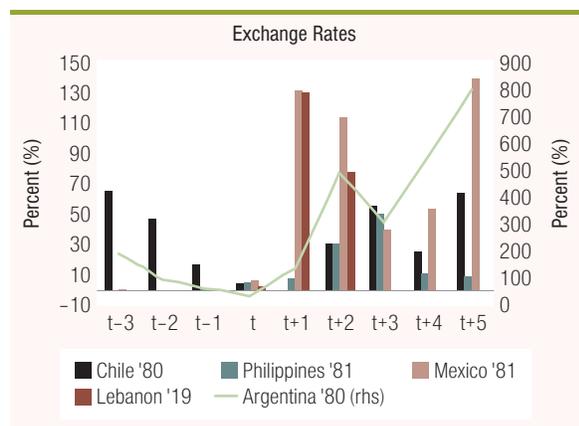
Exchange Rates

correlates to the extent of exchange rate volatility in each of these episodes. Notably, at time t, Lebanon's inflation rate is even starker than that of Mexico (81) (Figure 19); specifically, Lebanon's inflation rate in t+1 (2020) was 84.3 percent, while in Mexico (81) it was 58.9 percent.[39] Even though official inflation data for Argentina (01) is lacking, the failure of the currency board rendered inflation a main vulnerability in the post-crisis period.

Fiscal

Lebanon's overall fiscal balance stands out as a main vulnerability in the lead-up to the crisis, comparable to Greece's fiscal position on the eve of its crisis. Due to data limitations, we examine the overall fiscal balance for a subsample of the G8 episodes, namely, Chile (80), Mexico (81), Argentina (01), Uruguay (02) and Greece (09). From this subsample, only Chile (80) enjoyed fiscal surpluses in the lead to the crisis point. Meanwhile, Mexico (81), Argentina (01) and Uruguay (02) entered the crisis with a modest deficit position, whereas Greece (09)'s fiscal deficit was in double digits (as a percentage of GDP), as was Lebanon's.[40]

An ostensible improvement in Lebanon's fiscal indicators (as a percentage of GDP) masks an actual deterioration. There were variations in the fiscal performances of the G8 subsample as they

FIGURE 19 • CPI Indices for G8 Plus Lebanon
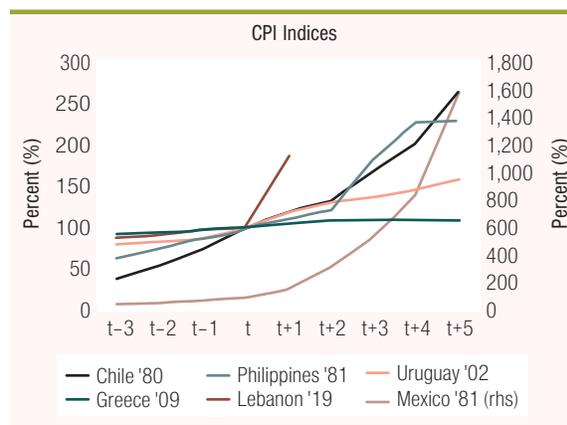
CPI Indices

emerged from their crises. The overall fiscal balance for each of Chile (80) and Mexico (81) deteriorated by around 10 pp of GDP (Figure 20). For the former,

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[39] In the period leading up to the crisis, Mexico's inflation rate fluctuated between 17.5 to 29.1 percent annually, while Lebanon's hovered between a minor deflation and a moderate 6.1 percent.

[40] A noteworthy event in the Greek episode is that data revision by the authorities on October 2009, which entailed a sizeable increase in the projected fiscal deficit from 4 to 12.5 percent of GDP, constituted a trigger to the Greek crisis. The data revision came amidst concerns raised by Eurostat—the statistical office of the European Commission—regarding the quality of Greece's fiscal data on five occasions over the period 2005–2009.

FIGURE 20 • Overall Fiscal Balance for G8 Plus
Lebanon

FIGURE 21 • Gross Debt for G8 Plus Lebanon

Sources: WDI, CAS and WB staff calculations.
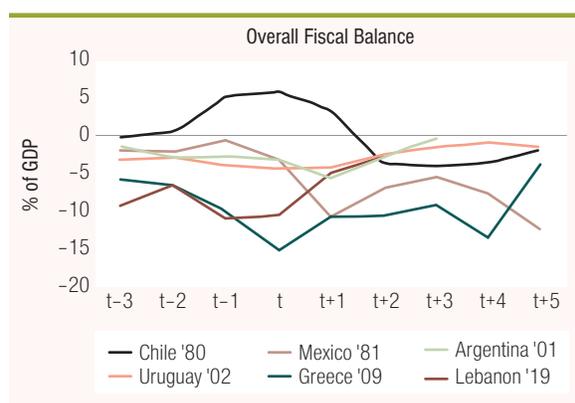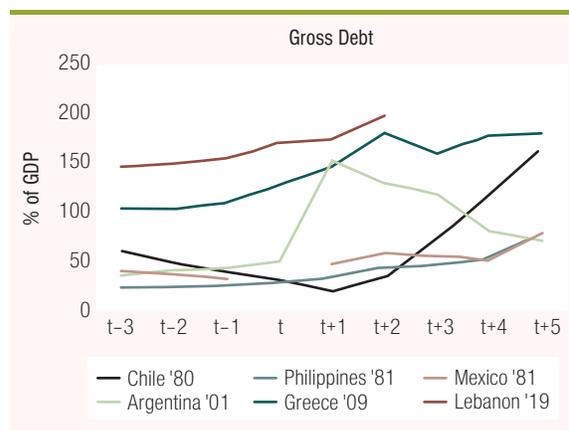
Sources: WEO and WB staff calculations.

this reflected a similar deterioration in the primary balance, driven by larger primary expenditures (from 23.5 percent of GDP in t–1 to 31.1 percent in t+2). In the Mexico (81) case, however, the primary balance first deteriorated significantly (by about 6 pp of GDP from t to t+1) but eventually improved into a surplus. Interest payments, on the other hand, surged from 1.6 percent of GDP at t–1, to 8.5 percent at t+2. Meanwhile, the overall fiscal positions for Argentina (01) and Uruguay (02) each improved by around 3 pp of GDP from t to t+3. In both cases, this reflected commensurate improvements in the primary balance. While an improvement in Lebanon's overall fiscal balance seems to resemble that of Argentina (01) and Uruguay (02), it masks an actual deterioration. This deterioration is partially driven by crashing revenues and despite significantly lower interest payments as a result of the Eurobond default and non-payments on coupon rates for Eurobonds and TBs held by the central bank.

Debt

Public debt in Lebanon has consistently been one of the highest globally (as a ratio of GDP), and as a result, a key source of macroeconomic instability, comparable to only Greece among the G8 episodes. Due to data limitations, we examine the central Government gross debt (as a ratio of GDP) for a subsample of the G8 episodes, namely, Chile (80), Philippines (81), Mexico (81), Argentina (01) and Greece (09). Leading to the crisis year, the public debt-to-GDP ratio was below 60 percent for the G8 subsample (Figure 21), with the exception of Greece.[41] However, in all cases, the debt-to-GDP ratio deteriorated in varying degrees, even for Greece, which benefitted from a large haircut on its public debt.

External Position

A deteriorating current account balance in the lead to crises is a recurring feature in emerging economies, and we see evidence of this in the G8 countries (Figure 22). A worsening of the external position raises risk exposures to external shocks and increases dependence on more volatile portfolio financing. The current account balance for large commodity exporters, in this case Chile and Venezuela, would be highly dependent on international commodity prices and are more exposed to commodity price shocks. While commodities are also important exports for Argentina, Uruguay and Mexico, it is so to a much lesser extent; for these countries, consumption and investment are significant

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[41] The 60 percent of GDP is the debt ceiling identified by the Maastricht Treaty, which set macroeconomic targets for countries to qualify for the Euro membership.

FIGURE 22 • Current Account Balance for G8 Plus Lebanon

Current Account Balance
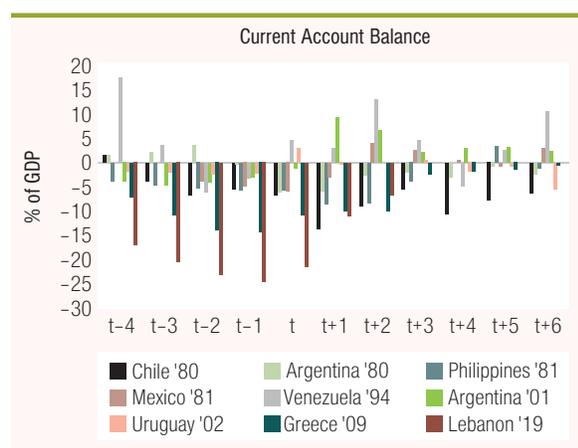
Sources: WDI and WB staff calculations.

drivers for current account balance through imports. It is noteworthy that of the G8 countries, only Argentina (01) and Uruguay (02) did not experience a worsening of the current account balance up to the crisis point.

A clear implication of the crises in most G8 countries is a sharp correction in the external position. Only Chile (81) deviates as prices of minerals, oils and metal were falling in 4 of the 5 post crisis years.[42] For Mexico (81), the Philippines (81), Venezuela (94) and Argentina (01), the correction in the current account balance occurred as a result of depreciations in the exchange rates, which increased the competitiveness of their economies. Mild depreciation in Uruguay (02) corresponds to mild post-crisis correction in the current account balance. Noteworthy, Argentina (80) currency collapse corresponded to only a minor post-crisis improvement in

the current account balance. This channel, however, was not available for Greece, as its strategic objective was to remain in the Eurozone. Instead, the correction in the Greek external position occurred as a result of an internal adjustment mechanism, typically more painful and prolonged.

Overall

Lebanon's financial crisis stands out as a particularly arduous episode even when compared to some of the most severe crises observed since 1900. In estimating the R&R CSI for the Lebanon financial crisis, we make reasonable assumptions on its depth and duration. The results suggest that the Lebanon crisis is likely to be of the 10, possibly three, most severe global crises episodes, as observed and examined by Reinhart and Rogoff (2014) over a period surpassing a century and half. This is further confirmed when we compare select macroeconomic indicators for Lebanon with those for R&R's relatively more recent crises.

As such, we expect the adjustment process to be more painful and to take longer, even with optimal policy measures in place. As it currently stands, however, the absence of a comprehensive and consistent adjustment strategy can only make this more difficult.

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[42] According to UNCTAD, Free Market Commodity Price Indices, the annual percentage change in the price for minerals, oils and metal, was –15.6, –12.2, 7.9, –8.1, –4.6 percent from 1981 to 1985, respectively.

OUTLOOK AND RISKS

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Subject to extraordinarily high uncertainty, we project real GDP to contract by a further 9.5 percent in 2021. Our projections (Table 4) assume that COVID-19 conditions carry through 2021, while macro policy responses remain inadequate. We also assume a minimum level of stability on the political and security scenes, but refrain from assuming runaway inflation-depreciation, which is a realistic scenario. For more empirical discussion on our projection, please refer to Annex A.

As mentioned earlier, monetary and financial turmoil are driving crisis conditions, more acutely through interactions between the exchange rate, narrow money and inflation. The unusual centrality of this dynamic on the macro framework is an important caveat regarding our macroeconomic outlook for 2021. In an attempt to pin down the framework and help narrow the confidence intervals for our outlook, we undertake crisis-specific econometric estimations; specifically, we assess the response of inflation to changes in currency in circulation using multivariate time series models. The results, which are presented in Annex B, suggest that a 1 percent shock to currency in circulation generates a response of 0.80 pp increase in the inflation rate over a twelve-month horizon. Hence, policy with implications on narrow money supply, such as

Lirafication and monetization of the fiscal deficit, will continue to be critical to the inflationary environment. Assuming that in 2021, the Lebanese pound suffers a comparable depreciation in the US$ banknote market as it did in 2020, we expect inflation to remain highly elevated in 2021, possibly surpassing 2020 rates.

On the fiscal front, a continued collapse in revenues is expected to lead a deterioration in Lebanon's fiscal position compared to 2020. On revenues, we assume marginal nominal increases compared to 2020, as the economic contraction is expected to be less severe and high inflation boosts collection in nominal (but not real) terms. Very high inflation rates will drive a denominator-led shrinking of the revenues-to-GDP ratio by a projected 4.6 pps, to reach almost 7 percent, compared to a medium-term average of 20.7 percent. On expenditures, and despite proposed 2021 Budget numbers, we factor a 30 percent increase in nominal primary spending, due again to inflationary pressures. As a ratio of GDP, however, primary current expenditures are also projected to decline due to the same denominator-led effect. Based on this, the overall and primary balances are expected to deteriorate in 2021.[43]

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[43] That suggests that BdL will have to keep financing the deficit which will accelerate its FX reserve losses. Hence,

Lebanon's recession is likely to be arduous and prolonged given the lack of policymaking leadership and reforms. Lebanon's GDP/capita has fallen by around 40 percent over the 2018–2020 period and is expected to decline further. Hence, Lebanon's World Bank income classification is likely to be downgraded from an upper-middle income economy, which should enjoy a GNI per capita of between U$4,046 and US$12,535, to a lower-middle income status.[44]

Lebanon faces realistic threats to its already fragile social peace. Angry demonstrations have been erupting in cities across Lebanon, protesting the depreciation of the local currency and the associated very high inflation rates, as well as general economic and political conditions. While numbers have not been large, these demonstrations have been spread across the country, and have cut off important roads and highways, thereby causing significant disruptions. A more recent phenomena has involved scuffles in supermarkets and angry protests outside over access to subsidized products. This is even occurring in high end supermarkets. Further, the volatile situation allows for parasitic groups that can be of a more sinister nature to usurp legitimate popular discontent creating grave security implications. This is in addition to Lebanon's long-term sectarian fragmentation. Hence, there is growing wariness of potential triggers to social unrest. In this LEM, we highlight two potential economic triggers.

The FX Subsidy[45]

The first Special Focus of the LEM examines Lebanon's FX subsidy for critical and essential imports, which offers a serious political and social challenge. On the one hand, the current FX subsidy is both distortionary, expensive, and regressive. Its elimination and possible replacement with a more effective and efficient pro-poor (targeted) program would improve Lebanon's balance of payments, meaningfully extend the time-till-exhaustion of remaining BdL reserves, and help cushion the impact on Lebanon's poor and middle class. On the other hand, the subsidy prevents, in the very short-term, the prices of these products from increasing, which would exacerbate inflationary-depreciation pressures.

Therefore, the removal of the subsidy will have significant social implications due to direct and indirect effects on residents' purchasing power. Further, Lebanon's political economy suggests that, much like solutions (or lack thereof) to other burdens and deficiencies, there is a high likelihood of suboptimality. Possible scenarios and associated social implications include:

a. An orderly FX subsidy removal. This would involve effectual political and security coordination, along with its replacement with a more effective and efficient pro-poor (targeted) program. In this case, social implications can be mitigated.

b. Non-coordinated FX subsidy removal. This can involve BdL unilaterally halting the subsidy, with minimal political and security coordination. In this case, BdL will carry the political cost, and can involve increased demonstrations targeting BdL. The political class can pass on the blame and feel somewhat relieved, but to many, the obvious responsibility of the political class will remain.

c. Disorderly FX subsidy removal due to depletion of FX reserves at BdL. This traverses subsidy management to constitute a balance of payments crisis within a balance of payments crisis—the complete depletion of FX resources in an economy that has been trying to ration these resources to pay for critical needs. It can trigger an inflationary-depreciation spiral and cause import shortages. Naturally, there are definite significant social and possible security implications.

Large Scale Interruptions to Vital Public Services

The second Special Focus of the LEM discusses the impact that the crises are having on four basic

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the fiscal trajectory is contingent on BdL having sufficient reserves to continue to finance the government.

[44] Latest available Gross National Income per capita for Lebanon is for 2019 US$7,380.

[45] For a more detailed analysis on the FX subsidy, please refer to: World Bank (2020), Lebanon Subsidy Reform Note, December 2020.

TABLE 4 • Selected Macroeconomic Indicators for Lebanon; 2016-2021

	2013	2014	2015	2016	2017	2018	2019 Est.	2020	2021
									Proj.
Real sector	(annual percentage change, unless otherwise specified)								
Real GDP	3.8	2.5	0.2	1.5	0.9	–1.9–	6.7	–20.3	–9.5
Real GDP per capita[1]	–2.8	–3.2	–3.9	–1.2	–0.6	–2.5	–6.8	–20.7	–10.0
Agriculture (share of GDP)	3.9	4.4	3.8	4.0	4.5	4.4	5.0	5.0	6.0
Industry (share of GDP)	14.2	13.4	12.7	12.8	12.3	12.0	10.6	13.5	13.5
Services (share of GDP)	70.9	71.3	72.0	71.5	71.6	72.2	74.3	77.6	78.3
Net indirect taxes (share of GDP)	11.0	10.9	11.5	11.7	11.6	11.4	10.1	3.9	2.2
Money and prices									
CPI Inflation (p.a)	2.7	1.2	–3.7	–0.8	4.5	6.1	2.9	84.3	100.0
Money[2]	9.0	6.0	5.1	7.3	4.2	3.0	–6.7	198.0	125.0
Investment & saving	(percent of GDP, unless otherwise specified)								
Gross capital formation	27.6	24.9	22.2	22.7	21.4	20.8	18.5	10.0	8.1
o/w private	25.8	23.4	20.8	21.3	19.9	19.1	17.2	8.8	6.8
Gross national savings	2.1	–1.3	5.1	2.2	–1.5	–3.5	–2.7	–1.0	–1.1
o/w private	–1.8	–3.9	1.0	–1.0	–4.8	–5.3	7.9	2.7	2.9
Central government finance	(percent of GDP, unless otherwise specified)								
Revenue (including grants)	20.1	22.6	19.2	19.4	21.9	21.0	20.6	11.5	6.9
o/w. tax revenues	14.3	14.3	13.7	13.7	15.5	15.4	15.5	8.1	4.9
Total expenditure and net lending	29.0	28.9	26.9	28.6	28.6	32.0	31.2	16.4	12.2
Current	27.3	27.3	25.5	27.3	27.1	30.3	29.9	15.2	10.9
o/w interest payment	8.1	8.7	8.9	9.3	9.4	9.8	10.0	2.1	1.4
Capital & net lending (excluding foreign financed)	1.8	1.5	1.4	1.4	1.5	1.7	1.3	1.2	1.3
Overall balance (deficit (-)	–9.0	–6.3	–7.7	–9.3–	6.7	–11.0	–10.5	–4.9	–5.3
Primary balance (deficit (-)	–0.9	2.4	1.2	0.0	2.7	–1.2	–0.5	–2.8–	3.9
External sector	(percent of GDP, unless otherwise specified)								
Current account balance	–25.6	–26.2	–17.0	–20.5	–22.9	–24.4	–21.2	–11.0	–9.2
Trade balance	–28.4	–29.9	–22.9–	23.6	–24.7	–24.8	–24.9	–17.9	–21.9
o/w export (GNFS)	44.5	40.0	39.7	37.3	36.0	35.7	35.4	26.9	41.9
Exports of goods	11.0	9.5	8.0	7.7	7.6	7.0	9.3	12.1	18.7
Exports of services	33.5	30.6	31.7	29.6	28.4	28.7	26.1	14.8	23.3
o/w import (GNFS)	73.0	69.9	62.6	60.9	60.8	60.5	60.3	44.8	63.8
Imports of goods	45.3	42.5	35.2	35.0	34.7	34.4	35.0	27.5	39.2
Imports of services	27.7	27.4	27.4	25.9	26.1	26.1	25.2	17.3	24.6

(continued on next page)

	2013	2014	2015	2016	2017	2018	2019 Est.	2020	2021
									Proj.
Net private current transfers:	3.4	4.9	6.8	4.8	2.3	2.5	5.6	9.6	16.7
Net remittances	5.0	5.8	7.2	6.6	5.2	4.2	6.1	9.7	16.5
Net income receipts	−0.6	−1.2	−0.9	−1.7	−0.5	−2.1	−1.9	−2.7	−4.1
Capital accounts	0	0	0	0	0	0	0	0	0
Gross reserves (months of imports GNFS)[c,d]	11.7	13.1	13.8	15.2	15.6	14.3	14.3	19.8	10.6
Total public debt									
Total debt stock (in million US$)	63,490	66,564	70,325	74,900	79,530	85,139	88,900	58,082	43,958
Debt-to-GDP ratio (percent)	135.3	138.3	140.8	146.3	149.7	154.9	171.0	174.0	197.2
Memorandum items:									
GDP (in million US$)	46,909	48,134	49,939	51,205	53,141	54,961	51,992	33,383	22,297

Source: Government data, and World Bank staff estimates and projections.

[a] Population figures, which include Syrian refugees registered with the UNHCR, are taken from the United Nations Population Division.

[b] Prior to 2020 this is M3, including non-resident deposits; 2020 and after, this is M0 (currency in circulation).

[c] Gross Reserves (months of imports GNFS) = (Imports of Goods & Services / Gross Res. excl. Gold)*12.

[d] Total Imports using the BOP data from the Quarterly Bulletin of BDL.

public services: electricity, water supply, sanitation and education. While Lebanon's public service delivery has long been notoriously deficient relative to its upper middle-income status, long established mitigation measures and private substitutables have traditionally filled the gap, particularly for those with economic means. The Deliberate Depression has further undermined this set up via two effects: (i) it has significantly increased poverty rates, expanding the demographic that is not able to afford these private substitutables, and are thus more dependent on public services; and (ii) it threatens financial viability and basic operability of the sector by raising its costs and lowering its revenues.

SPECIAL FOCUS I:
FX SUBSIDY REFORM IN THE DELIBERATE DEPRESSION

The real question regarding BdL's FX subsidy for imports of critical and essential goods, is when and how to remove it, not whether. This note shows that the sooner the subsidy is replaced with a cheaper and more effective compensation scheme, the better for the economy and for people's welfare. This is because the current FX subsidy is both distortionary, expensive (costing an estimated US$287m/month), and regressive (i.e., benefits predominantly wealthier consumers). Its elimination and possible replacement with a more effective and efficient pro-poor (targeted) program would improve Lebanon's balance of payments, meaningfully extend the time-till-exhaustion of remaining BdL reserves, and help cushion the impact on Lebanon's poor and middle class. This note suggests a broad-based cash transfer program as one such option, which should be in place prior to subsidy removal. However, while the removal of the FX subsidy would be welcome, it is a mere short-term patch as only a comprehensive reform package that is consistent with a credible macroeconomic framework can prevent the country from running out of reserves and being forced into a disorderly and highly disruptive exchange rate adjustment.

Background

Policymakers in Lebanon are considering a shift away from the FX subsidy for imports of critical and essential goods, towards direct transfers to households. The decision to remove the FX subsidy for imports of critical goods and essential food and other items (henceforth referred to as essential items) should be based on the most efficient and cost-effective use of pro-poor public spending. The subsidy concerns import of critical goods—energy, medicine, wheat—and essential items (as identified by the MoET. The estimated cost of the subsidy amounts to a monthly average of US$287 million (Table 5).[46] Maintaining the current subsidy scheme accelerates the steady depletion of FX reserves at BdL and reduces the time available to undertake reforms to avoid a forced and disorderly adjustment of the exchange rate. On the other hand, the subsidy prevents, in the very short-term, the prices of these

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[46] This is distinguishable from the total value of the subsidy, which amounts to an estimated US$437 million per month.

products from increasing, which would exacerbate inflationary-depreciation pressures. The question policymakers ought to consider is: can a cheaper and more effective compensation scheme be immediately implemented to both protect poor and vulnerable households, and gain some time to protect the official exchange rate until a comprehensive set of policy reforms that are consistent with a stable macroeconomic framework can be introduced?

Macroeconomic Considerations

As it stands, half of the cost of the FX subsidy is directed toward energy items, which are regressive in nature. Higher-income earners are more likely to consume more fuel, and thus profit more from the subsidy. The gains associated by implicitly subsidizing road transport are not distributed fairly; by income, the poorest 20 percent of the population receives only 6 percent of the subsidy, while the richest 20 percent receives 55 percent.[47] Finally, low fuel prices encourage over-consumption, adding to negative environmental

and health externalities—namely, local air pollution, congestion, accidents and roadway wear and tear. Hence, there is a socio-economic benefit in replacing the regressive portion of the subsidy with a targeted, and therefore cheaper, transfer program.

Inflation is a highly regressive tax, disproportionally affecting the poor and vulnerable, and more generally, people living on fixed incomes, such as pensioners. This is especially so in Lebanon's case where key basic items of the consumption basket are primary drivers of overall inflation, which has reached 145.8 percent in 2020. In fact, the average yoy inflation rate over 2020 for food and non-alcoholic beverages was 254.3 percent, while that for clothing and footwear was 289.8 percent, and 386.7 percent for furnishings and household equipment.

Lebanon's sudden stop in capital inflows has implied a steady depletion of FX reserves at BdL, notwithstanding the introduction of informal capital controls (Figure 23). As of end-February

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[47] UNDP, 2015, "Fossil Fuel Subsidies in Lebanon: Fiscal, Equity, Economic and Environmental Impacts."

TABLE 5 • Cost of FX Import Subsidy and Impact of its Removal

| Product | Estimated 2020 consumption[a] ($, mlns) | Subsidized exchange Rate1 (LL/S) | % subsidized[a] (%) | Subsidy in value[b] ($, mlns) | BoP Impact due to Estimated Reduction in Demand[d] | | |
					Cost of subsidy[c] ($, mlns)	High elasticity ($, mlns)	Low elasticity ($, mlns)	Low elasticity-high passthrough ($, mlns)
Fuel EdL	1,000	1,515	90%	900	661	NA	NA	NA
Gaz (LPG)	110	1,515	90%	99	73	80	39	66
Mazout	1,195	1,515	90%	1,076	790	867	418	717
Other fuel	1,070	1,515	90%	963	707	776	375	642
Medication/supplies	1,300	1,515	85%	1,105	811	1,067	455	780
Wheat	150	1,515	90%	135	99	57	57	96
Essential items	960	3,900	100%	960	303	367	367	612
Total	**5,785**	**1,911**	**91%**	**5,238**	**3,444**	**3,213**	**1,710**	**2,913**

[a] Source: Ministry of Economy and Trade (MoET).
[b] Calculated as: (estimated 2020 consumption) * (the subsidized exchange rate).
[c] Calculated as: [(the average black market exchange rate–the subsidized exchange rate)/ (the average black market exchange rate)] * (subsidy in value).
[d] Calculated as: (estimated 2020 consumption) * (percentage change in demand per selected scenario per product) Average black market exchange rate in 2020 is assumed at 5,700 LL/US$.

Gross reserves at BdL

- - Foreign currencies   - - Foreign securities   — Gross FX reserves   — Compulsory FX reserve
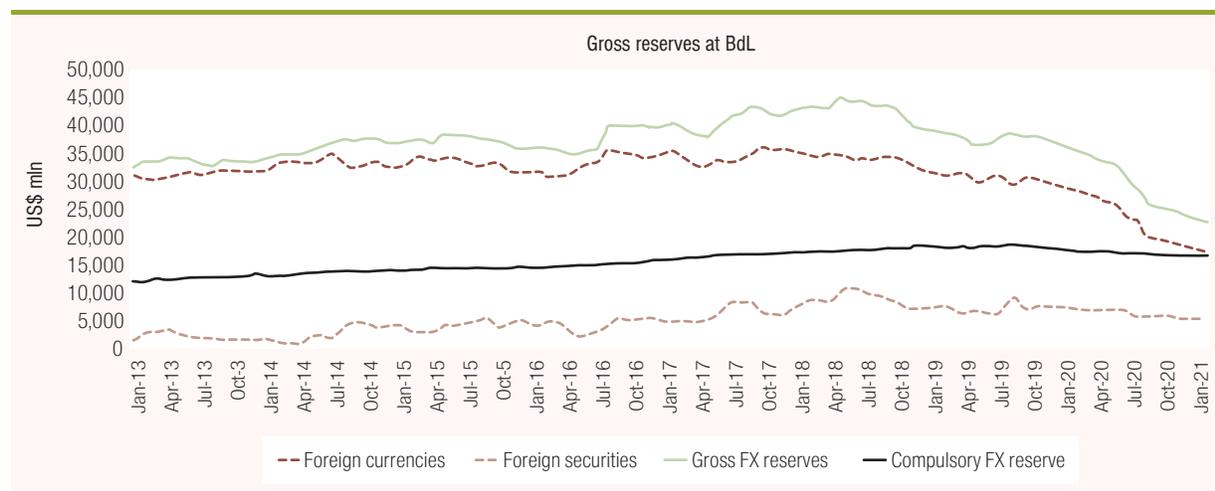
Sources: WB staff calculations based on WDI data.

2021, BdL's gross foreign asset position reached US$22.9 billion, declining by US$14.4 billion since end-2019, and by US$1.2 billion from end-2020. The gross position, however, differs widely from its net reserves (i.e., FX reserves at the central bank net of FX liabilities to others).[48] BdL's gross position includes US$5 billion in Lebanese Eurobonds, an unpublished amount lent out to banks since October 2019, and required reserves on banks' customer FX deposits (estimated at US$16.7 billion).

BdL officials have warned that falling FX reserves will force the central bank to halt its support for imports of critical goods and essential items at lower exchange rates. The officials indicated that in the next few months BdL's FX reserves will drop to the level of the Required Reserves on banks' customer FX deposits**.** Should BdL abandon its support for imports of critical goods and essential items (i.e., including energy products, medicine and food essentials), importers will be forced to fully revert to the US$ banknote market rate[49] for the needed hard currency. New imports would thus be priced at the going US$ banknote market rate, exacerbating inflationary pressures and potentially stoking an inflationary-depreciation spiral. In fact, in anticipation of higher prices, importers, retailers and customers are already hoarding critical and essential goods, bringing forward price and volume implications.

Demand effects resulting from the removal of subsidies are a key factor for an impact on the balance of payments (BoP). In principal, the absence of demand effects, dragged by the fall in income and increase in prices, would leave the BoP unchanged by the removal of subsidy. To estimate the impact on demand, we use country specific, product-based, income and prices elasticities of demand as presented in Seale *et al* (2003).[50] Notably, the study finds that energy products and medical care are generally elastic for most countries, including in Lebanon; that is, if consumers' incomes decline by half, or if product prices increase by 50 percent, then demand for these products declines by half or more. Meanwhile, demand for food items are relatively inelastic; that is, if consumers' incomes decline by half, or if product prices increase by 50 percent, then demand for these products declines by less

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[48] BdL, contrary to other central banks, does not publish net reserves.

[49] This refers to the street market access to dollar banknotes, which has depreciated the Lira by up to 90 percent.

[50] James Seale, Anita Regmi, and Jason Bernstein (2003), International Evidence on Food Consumption Patterns, United States Department of Agriculture, Electronic Report from the Economic Research Service.

than half.[51] We shall preclude from our simulations EdL due to the company's obvious deficiencies, specifically the severe and chronic shortages in power supply and tariff regulations that distort the impact on demand. Further, there is uncertainty regarding the elasticities for these consumption goods in the Lebanese economy. Specifically, other literature suggest that energy products and medical care are inelastic goods.[52] For robustness, we also re-run simulations based on relative in-elasticities of energy products and medical care.[53] We shall henceforth refer to simulations based on Seale *et al* (2003) as *High Elasticity Scenario*, and those that assume the inelasticity of energy products and medical care as the *Low Elasticity Scenario*. We proceed by (i) assuming that income contracts by 20 percent across all scenarios; and (ii) simulating two scenarios for product price increases: a 50 percent increase in prices of energy products, medicine and food items, and a 100 percent increase (dubbed the *High Passthrough*). Hence, we present three scenarios:

1. *High Elasticity Scenario*: a high elasticity scenario that assumes a 20 percent contraction in income and a 50 percent increase in prices of energy products, medicine and food items;
2. *Low Elasticity Scenario*: a low elasticity scenario that assumes a 20 percent contraction in income and a 50 percent increase in prices of energy products, medicine and food items;
3. *Low Elasticity-High Passthrough Scenario*: a low elasticity scenario that assumes a 20 percent contraction in income and a 100 percent increase in prices of energy products, medicine and food items.[54]

Removal of subsidies on imports of critical goods and essential items can lead to some BoP relief. The sharp declines in consumption of the subsidized products translate into BoP relief; all three scenarios suggest improvements to the BoP, ranging from US$1.7 to US$3.2 billion depending on the scenario (Table 5).

Based on the above, the removal of subsidy can meaningfully extend the time-till-exhaustion of remaining BdL reserves, thus delaying a forced

and disorderly exchange rate adjustment. The sudden stop in capital inflows has induced a more direct trade-off between the stock of FX reserves at BdL and the import bill. As a result, the BoP relief shown will reflect on the foreign exchange reserves at BdL. *We stress that the improvement in the BoP position and the extension of reserves are temporary and come at the expense of worsening economic activity and declining standard of living*.

As a result of subsidy removal, inflationary pressures would materialize via direct and iterative effects. Through the direct effect, the inflation rate would increase as prices for critical goods and essential items reflect the higher US$ banknote exchange rate.[55],[56] Additionally, an iterative effect arises from an increased demand for dollars in the dollar-note market, which further depreciates the currency, fueling inflation. With surging inflation, demand for narrow money increases. Meeting this

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[51] According to Seale et al. (2003), income elasticities of demand for Lebanon are 0.632 for food, beverage and tobacco, 1.2 for gross rent, fuel and power, and 1.357 for medical care. The authors also present price elasticities of demand for Lebanon, which are –0.511 for food, beverage and tobacco, –0.971 for gross rent, fuel and power, and –1.098 for medical care.

[52] Accurate elasticities can be derived from more recent and comprehensive Lebanese household surveys which are not available.

[53] Toward that end, we assume income (price) elasticities of demand for Lebanon to be 0.5 (–0.5) for gross rent, fuel and power and 0.5 (–0.5) for medical care.

[54] Here we omit a *High Elasticity-High Passthrough* scenario that assumes a 20 percent contraction in income and a 100 percent increase in prices of energy products, medicine and food items. The reason is that when price elasticity of demand is at or lower than –1, a 100 percent increase in prices would wipe out demand, which is not a realistic outcome.

[55] We note that energy products are final and intermediate goods, and changes to their prices impose economy-wide effects.

[56] While this will naturally reflect on volumes imported—since consumers will cut down on purchases, and there will be some substitutional effects for food products that can be manufactured locally (a process likely ongoing)—being critical goods, they will still be demanded in substantial volumes.
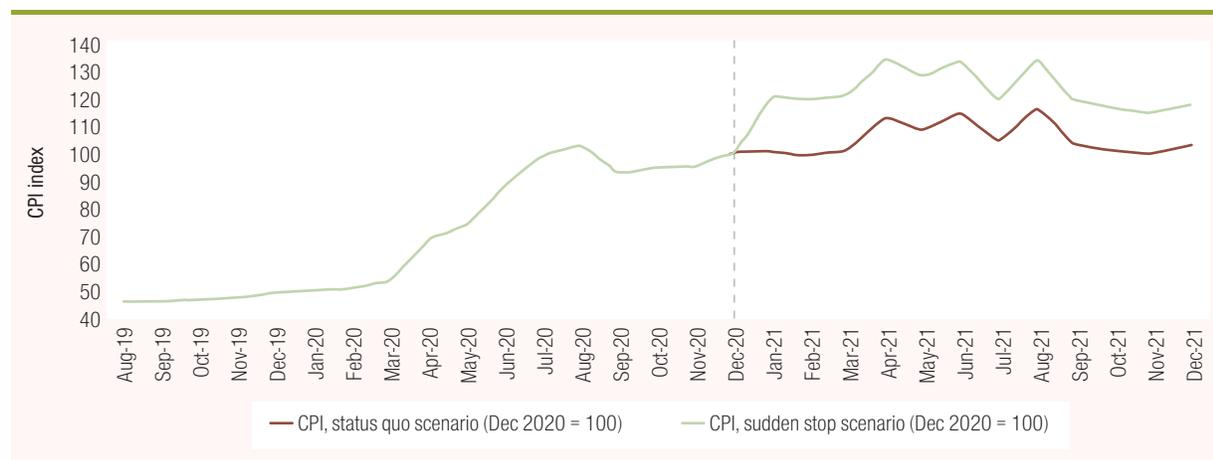
Sources: WB staff calculations based on WDI data.

demand with a corresponding increase in money supply—BdL's current response—would lead to exacerbated pressures on the exchange rate. Moreover, under panic conditions, inflation and exchange rates are key observables that drive sentiment, and their deterioration re-enforces the inflationary-depreciation cycle.[57]

Removing the subsidy is estimated to increase inflation through the direct effect by 24 percentage points (Figure 24).[58] This inflationary impact is frontloaded, hitting hardest the first months and diminishing over the course of the year. We caveat that this does not account for the impact on inflationary expectations and other related iterative effects, which are likely to be forceful dynamics. The inflation results are generated from an estimated AER[59] and an exchange rate pass-through effect on prices of about 50 percent[60] applied to the following two scenarios: (1) a hypothetical continuation of the FX subsidy through 2021, which we will refer to as the *Status Quo Scenario*;[61] and (2) a full termination of the FX subsidy on January 2021, dubbed the *Sudden Stop Scenario*.[62]

The Government of Lebanon (GOL) needs to prioritize a comprehensive, consistent and credible macroeconomic stabilization plan, the fiscal part of which should include a social safety net (SSN) component. Given Lebanon's rapidly and continuously deteriorating macroeconomic

[57] There are also stock implications, whereby high inflation imposes a wealth effect via transfers from creditors to debtors; ceteris paribus borrowers would owe less—and hence, creditors would receive less—in real terms than what was determined at the time the contract was signed. Consequently, public debt denominated in local currency would be worth less in real terms, providing a fiscal benefit.

[58] We note that this estimation does not take into consideration the iterative effects, which can potentially drive an inflation-depreciation spiral.

[59] The AER is calculated using consumption-based weights applied on multiple exchange rates, specifically, the official exchange rate, the platform rate at BdL and the US$ banknote rate. For further details on the AER, please refer to: The Lebanon Economic Monitor, Fall 2020, The Deliberate Depression.

[60] The exchange rate pass-through rate on inflation is calculated by first dividing the inflation rate by the AER depreciation rate for the same month and multiplying by 100. This generates a series of pass-through rates for the time period August 2019 to September 2020, which we averaged out. The estimated exchange rate pass-through rate will likely change as more actual data are populated.

[61] This scenario is used for illustrative purposes and is not a likely option. Sharply falling FX reserves at the central bank precludes the option of continued support for the full list of critical goods and essential items.

[62] The Sudden Stop Scenario assumes (i) the subsidy is eliminated on January 2021; and (ii) the US$ banknote exchange rate deteriorates to LL 10,000 per US$ by January 2021, stabilizing thereafter.

conditions, a social safety net by itself will be insufficient, and indeed, as shown above, can trigger additional macroeconomic risks. Lebanon needs to incorporate a SSN into a macroeconomic stabilization strategy that prioritizes the arrest of hyperinflation, currency depreciation and proliferation of multiple exchange rates. This strategy would be based on: (i) a debt restructuring that would achieve short-term fiscal space and medium-term debt sustainability; (ii) comprehensively restructuring the financial sector in order to regain solvency of the banking sector; (iii) creating a new monetary policy framework that would regain confidence and stability in the exchange rate; (iv) a phased fiscal adjustment aimed at regaining confidence in fiscal policy; (v) growth enhancing reforms; and (vi) enhanced social protection.

Design of a Broad-Coverage Subsidy Reform Compensation Scheme[63]

Governments often use generalized subsidies as a tool to lower the cost of living for poor households and to shield households from price fluctuations— Lebanon is not alone in this approach. However, subsidies are a blunt and inefficient instrument, and some are regressive, benefiting the rich more than the poor. International experience shows that a shift from generalized subsidies to direct support to the poor could result in an improvement in public welfare.[64]

The subsidy reform being considered by the GOL aims to replace implicit FX subsidies for fuel, medicines, wheat and essential items with direct cash transfers to Lebanese resident households.[65] The direct cash transfers should offer some compensation to households to purchase items at market prices (which will increase following the withdrawal of subsidies as discussed previously) and should not be restricted in their use (allowing greater autonomy and a dignified freedom of choice on the best use of assistance while offering compensation for the anticipated increase in prices).

As the withdrawal of FX subsidies will result in a considerable price shock[66] that will be felt by large sections of the population, the compensation program proposed is of a 'broad coverage' nature.[67] In year 1, the broad-coverage subsidy reform compensation scheme (Broad Coverage-Cash Transfer [BC-CT]) could aim to cover approximately 80 percent of the Lebanese population. To ensure progressive coverage, the BC-CT will seek to exclude the top 20 percent of the population as they are better able to absorb the price increases and can afford to pay for the currently subsidized items at market price. The broad coverage approach would involve identifying and excluding the top 20 percent of the population (in terms of income/economic wellbeing) and covering the remaining 80 percent of the population. Unlike traditional poverty-targeted programs that seek to identify the poor (bottom 10–40 percent, depending on the country), in this case, the identification of the richest 20 percent would be based on affluence tests (i.e., markers of affluence to identify the ineligible) such as asset filters, dwelling ownership and characteristics, and formal incomes. Preliminary analysis undertaken by the World Bank points to the potential use of indicators such as number of rooms/bathrooms per household member, dwelling area per household member, and thresholds for wages and other formal income for such an affluence test. Implementing such an approach would require careful integration of data across multiple databases to ensure reliability and automation of eligibility decisions. In subsequent years, as the

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[63] The proposal in this section reflects the recommendations of the World Bank and not necessarily what GOL will adopt.

[64] Ruslan Yemtsov and Amr Moubarak "Assessing the readiness of Social Safety Nets to Mitigate the Impact of Reform"; World Bank Good Practice Note 5.

[65] This section refers to the GoL subsidy reform proposal as presented by the Minister of Economy and Trade in April 2021 and published on the MoET website. As of the publication of this note, the GOL has not reached a decision on what kind of scheme will replace the generalized subsidies scheme.

[66] Especially as higher fuel prices will lead to increases in prices of several other goods and services.

[67] Covering the majority of Lebanese households though not attempting universal coverage.

population adjusts to the new (market) prices for the currently subsidized items and as economic recovery begins, the coverage of this compensation program may be progressively reduced, along with the level of benefits (per adult and per child) to ensure a smooth phasing out of the compensation program that dovetails with more sustainable and assured financing for a targeted safety net program that covers around 30 percent of the population over time.

We specifically (and demonstratively) analyze one proposal of a benefits scheme under which Lebanese adults (age 23 and above) receive US$50 per month in year 1 of the compensation program, US$40 in years 2 and 3, and US$30 in years 4 and 5. Children get half this amount. The coverage progressively declines from 85 percent of the Lebanese population in the first six months, to 75 percent in the next six. Over the next 4 years, coverage declines to 70 percent, 60 percent, 45 percent and 30 percent of the population, respectively (Figure 25.)

The scheme described represents compensation equivalent to 41 percent of the average Lebanese household's monthly consumption expenditure in Year 1, 28 percent in years 2 and 3, and 21 percent in years 4 and 5, reflecting a substantial level of support to recipient households (compared to most unconditional cash transfer programs in upper-middle income countries that provide 22 percent of beneficiary welfare).[68]

One option we model is a phased approach to subsidy removal: Phase 1 is removal of FX subsidy for the MOET essential items and fuel (except for EdL) to take place in January 2021. Phase 2 is removal of fuel subsidy for EdL along with a reform of EdL's pricing reform to take place on Jan 2022. Phase 3 is removal of medication subject to broad medical coverage for Lebanese citizens to take place in January 2023.

Figure 26 shows the required outlay of the program and the resulting savings against Phase 1 of the removal of subsidies. The budgetary outlays start at US$1.5 billion in year 1 (80 percent coverage) and decline to US$311 million in year 5 (30 percent coverage); equivalent to an average annual expenditure of around US$779

FIGURE 25 • Proposed Monthly Benefit Amount (US$), and Coverage (%), by Year
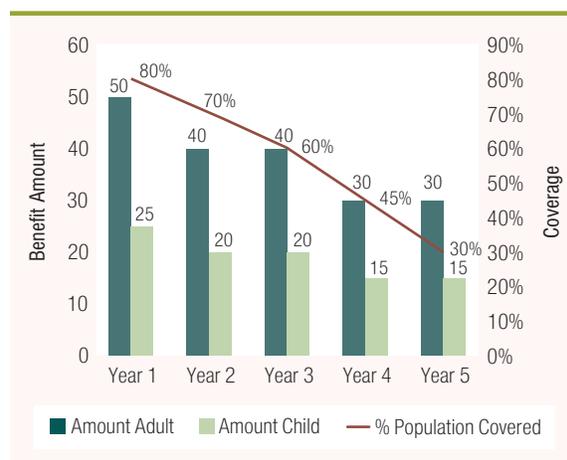
FIGURE 26 • Compensation Program Outlay and Net Savings from Phase I Subsidy Withdrawal, US$ mn
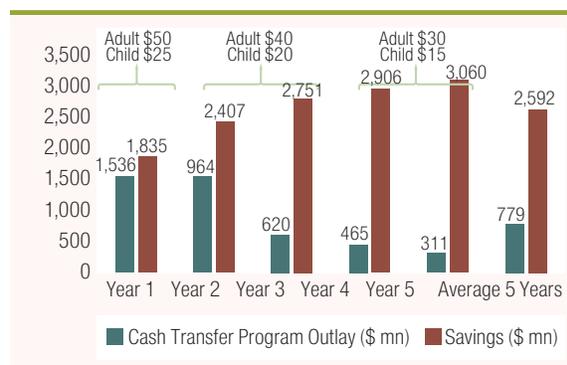
million. The removal of phase I subsidies and the introduction of the cash transfer compensation as described will result in a net savings of an average annual value of around US$2.6 billion over the 5-year period.[69]

BC-CT financing options and associated risks necessitate a credible medium-term macroeconomic framework. In principle, financing options for the BC-CT include: (i) money printing by

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[68] World Bank (2018) The State of Social Safety Nets 2018. Washington DC: The World Bank.

[69] These savings do not account for administrative costs of implementing the compensation program.

the central bank (i.e., monetization); (ii) budgetary allocations; and (iii) international assistance.[70] In light of BC-CT's large financing needs, monetization risks significantly exacerbate current macroeconomic conditions, further entrenching macroeconomic instability. This option will lead to further deterioration in monetary conditions, potentially stoking the afore described inflationary-depreciation effects. Alternatively, fiscal financing via additional (unfunded) budgetary allocations would not be qualitatively different from the monetization option; currently, the fiscal deficit is *de facto* monetized. The previous two options are also likely to preclude effective international assistance (option iii), which can only be as part of a credible medium-term macroeconomic framework. As mentioned above, this framework should include: (a) a debt restructuring program that would achieve short-term fiscal space and medium-term debt sustainability; (b) comprehensivly restructuring the financial sector in order to regain solvency of the banking sector; (c) creating a new monetary policy framework that would regain confidence and stability in the exchange rate; (d) a phased fiscal adjustment aimed at regaining confidence in fiscal policy; (e) growth enhancing reforms; and (f) enhanced social protection (i.e., the BC-CT program).

Implementing a Broad-Coverage Subsidy Reform Compensation Scheme

Delivering a broad-coverage cash transfer (BC-CT) scheme requires careful design, transparent implementation, and adequate financing. It involves the following broad steps: (i) consultations and communications; (ii) identification and beneficiary selection; (iii) payment of benefits; and (iv) monitoring and grievance redress mechanism (GRM).

Consultations & communication

A well-prepared communication and out-reach campaign must precede and accompany the subsidy reform program. International experience demonstrates that well-planned and consistent

communication is critical for successful subsidy reforms. In Jordan, for example, a widely cast and well-designed communication strategy played a crucial role in addressing uncertainties and managing expectations during the 2008 and 2011/12 subsidy reforms. Making an effective use of available channels to project transparency, clarity on the role of the program, public information on objectives, operational rules, and results are necessary to tackle information asymmetries and concerns of different stakeholders. Bringing in different stakeholders in the design of the program would enrich the scheme and its acceptability. Reforms can succeed only if an informed public accepts and supports the reform's rationale. Clearly communicating who will be impacted, and how, is vital to generate public buy-in.

Identification and Beneficiary Selection

The BC-CT scheme would aim to cover the Lebanese population residing in Lebanon only (which refers to individuals who spend at least 183 days in the country). The program is proposed to involve a simple mobile-based registration (self-declared information) to be completed by the applicant. No household visits will be undertaken. The program will require ownership of a National ID[71] (NID). Individuals who do not have a NID will be required to obtain an NID before registering. The program should provide two different registration options: (i) online through citizen interface (for individuals who can access the internet[72]) or (ii) physical visit to one of the registration sites which could include the LibanPost, and the Social Development Centers (SDCs), or the

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[70] For illustrative purposes here, we assume each of these options are utilized exclusively, when in practice there are financing modalities that use combinations thereof.

[71] Initial assessment indicates that 78 percent of the Lebanese population have NIDs, World Bank Technical Mission for a Digital Transformation Project, ID4D, Sept 2019.

[72] Share of population who uses internet is 75.9 percent (penetration rate), Internet usage, Broadband and Telecommunications report by Internet World Stats, 2016.

use of registration trucks. Each entry point will use the same "basic delivery system" accessible through a mobile compatible citizen interface. A selfie-based registration will be utilized for onboarding to the program.[73] During the registration, additional information will be requested to exclude well-off segments of the population.

The exclusion criteria will be based on a phased approach whereby in Phase I basic demographics and information on income and assets will be collected for immediate exclusion. Households who pass the eligibility for Phase I will be onboarded and start receiving the benefits based on their preferred payment modality (see payment section). Phase II exclusion will be a recurrent process and will commence 3 months after the onboarding. Detailed demographics, information on employment, the value of assets and ownership, etc. will be collected at Phase II for exclusion purposes. The program should construct interlinkages with other governmental databases at Phase II depending on technical availability and IT infrastructure. A call center and a back-office team need to be developed to perform random spot checks (up to 3–5 percent of beneficiaries) to decrease potential fraud and/or under/misreporting (which would be communicated via a set of outreach and communication activities). The back-office team will also manage the program's GRM to ensure fairness, transparency, objectiveness, and accessibility.

Payments Mechanism

Upon registering for the program, applicants will be able to choose their preferred payment modality among the options currently available in the Lebanese market, receiving funds: (i) on an individually or jointly held bank account (58 percent of Lebanese residents being banked);[74] (ii) on a physical or virtual banking card, with funds redeemed at automated teller machines (ATMs), or digitally spent for purchases on point-of-sale (POS) devices; or (iii) in LBP physical notes, with funds redeemed through money transfer operators (MTO) agents and/or LibanPost offices. Other payment modalities, including mobile wallets, can be added once available in the market. The GOL will send the payment orders

to the financial institution(s) based on the applicant's preferred payment choice. Giving recipients the choice of the financial service provider often improves customer experience by incentivizing providers to offer the best services, while allowing governments to cut on costs and avoid lengthy procurement processes.[75] For recipients opting to receive physical notes, identification information, including biometrics where possible, will be used for authentication at disbursement time, hereby ensuring that the applicant and whomever is redeeming the funds are the same person.

It is important to note that the payment mechanism depends on whether GOL opts for a restricted or an unrestricted use of funds. The above applies to an unrestricted use of funds, whereby recipients can spend the funds without any condition, be it digitally or in physical notes. It is not possible to use transfer to bank accounts as a payment modality if funds are restricted in their use.

Monitoring & GRM

An effective GRM and an effective monitoring system is critical for the success of any social safety net program and for establishing channels of trust with the communities. A back-office team needs to be put in place to manage appeals, complaints, data updates, etc. through a GRM module.

Complementarities Between the BC-CT Program and Other SSN Programs

The main targeted SSN program in Lebanon is the National Poverty Targeting Program (NPTP) which is being scaled up. The scale up will be financed

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[73] For each HH member, a photo of the NID and a selfie will be taken to create a user profile in the system. Please note that this option is only valid for polycarbonate type of IDs .

[74] Financial Inclusion Demand Side Survey Report, BDL, 2018.

[75] The Future of G2P Payments: Expanding Customer Choice, CGAP, 2019.

through a US$246 million World Bank supported Emergency Crisis and COVID-19 Response Social Safety Net Project (ESSN) and support from donors. The ESSN aims to provide cash transfers and access to social services to 147,000 extreme poor and vulnerable Lebanese households (approximately 20 percent of the population), as well as top-up cash to 87,000 children ages 13–18 who are at risk of dropping out from school. In addition, funding from donor partners will support an additional 50,000 households reaching a total of 200,000 of the poorest households—i.e., 27 percent of the Lebanese population.

While the BC-CT and the ESSN have similarities and can both be considered types of SSN programs, they have different (albeit related) objectives and could be run in parallel. The BC-CT is a compensation for subsidy reform aimed at the general public and likely will be temporary and time-bound. The NPTP/ESSN is a long-term sustained SSN program aimed at protecting extreme poor households facing multiple shocks. The two programs, which can carefully be run in parallel, are complementary to each other with gradual dovetailing over the next 4–5 years, especially as the necessary delivery systems are developed. The BC-CT program is likely to be financed by GOL and will entail a gradual reduction in coverage over 5 years. By year 5, the level of coverage would be in line with a sustainable GOL-financed social safety net program as the current crisis subsides. The 4–5-year horizon will also enable a smooth (rather than abrupt) reduction of coverage, as well as the establishment of a fully functional SSN delivery system (including social registry, GRM, and payments system). The proposed timeframe is also suitable for the transition to a new macroeconomic framework, allowing it to settle in and support an adequate and robust social safety net.

SPECIAL FOCUS II: PUBLIC SERVICE DELIVERY IN THE DELIBERATE DEPRESSION[76]

Lebanon is enduring a severe and prolonged economic depression. These conditions transverse the financial and economic spheres to directly impact the wellbeing of residents. Critical to this wellbeing is delivery of essential public services. A sharp deterioration in basic services would have long-term implications, incurring permanent damage to human capital, which should be a matter of grave concern. Mass migration, loss of learning, poor health outcomes, and lack of adequate safety nets, among other consequences, would lead to a human capital catastrophe, from which recovery would be very difficult. Perhaps this dimension of the Lebanese crisis makes the Lebanon episode unique compared to other crises comparators presented in the report.

Lebanon's public service delivery has long been notoriously deficient relative to its upper middle-income status. Nonetheless, long-established mitigation measures and private substitutables have traditionally filled the gap, particularly for those with economic means. The Deliberate Depression has further undermined this set up via two effects: (i) it has significantly increased poverty rates, expanding the demographic that is not able to afford these private substitutables, and are therefore more dependent on public services; and (ii) it threatens financial viability and basic operability of the public services sector by raising its costs and lowering its revenues. In this Special Focus, we shed light on 4 basic public services: electricity, water supply, sanitation and education.

The Electricity Sector

The electricity sector has been suffering for decades from a financial deficit that required constant annual budgetary transfers of US$1–2 billion to EdL. Using simple back-of-the-envelope calculations, these cumulative deficits amount to around US$40 billion as of 2020, a considerable share of public debt.

While EdL's generation production has already fallen significantly by 19 percent (yoy) over the first 11 months of 2020, more rolling blackouts are expected, starting in April, if extra-budgetary allocations of 1,500 billion LBP ($996 million at the official rate) for EdL to purchase fuel are not approved by parliament. This reinforces existing socio-economic inequalities. Meanwhile, EdL revenues, which are in Lebanese pounds, are shrinking because of increasing technical, commercial and collection losses that exacerbate the impact of the related non-cost recovery tariffs that have remained unchanged since 1994. This financial drain in 2020—collection losses of 20 percent and decline of EdL cashflow of 50 percent compared to 2019—is expected to get worse. EdL is likely to increase rolling blackouts to manage its cashflow shortfalls.

The fragile condition of EdL is exacerbated by a severe shortage of foreign currency needed for maintenance of power plants and purchase of temporary generation. There are already accrued arrears to the power barges, operations and maintenance contractors, and distribution service providers, estimated to be US$320 million at the end of 2020. Many of these private sector contractors have threatened termination of their contracts unless paid. Suspension of operations of these contractors will dramatically affect electricity production; 15 percent is generated from the Karadeniz barges and 40 percent from Deir Amar and Zahrani power plants operated and maintained by PrimeSouth. Moreover, contracts for the barges and distribution service providers end in September and December 2021, respectively, without clarity on the plan going forward.

To manage decreasing supplies from EdL over the past year, consumers have been forced to increase their dependence on expensive and highly polluting private diesel generators, which have an estimated cost of up to US¢30/kWh. This is expected to intensify as EdL's increases its dependence on rolling blackouts as a cash management tool. To make matters worse, as the economic crisis continues to deteriorate and the BdL's foreign currency reserves become increasingly depleted, the Government is seriously considering lifting diesel subsidies, which would significantly increase the cost

A SECTOR IN CRISIS:	
Annual budget transfers	US$1–2 billion
Accumulated budget transfers as of 2020	US$40 billion, almost half of the national debt
Generation decline	19% year-on-year over the first 11 months of 2020
Collection losses increase over 2020	20%
EdL cashflow decline	50% compared to 2019
EdL accrued arrears to private sector power barges, operation and maintenance contractors, and distribution service providers	$320 million at the end of 2020
Private diesel generators	Cost of up to US¢30/kWh, 13,200 labor force

of private generators. As such, consumers may start cutting back on using private generators because of economic pressures, which may affect this industry's estimated 13,200 labor force.

Urgent action to address these issues is needed to avoid the sector's complete collapse in the immediate future. In the short-term, there is a need to address EdL's cash shortfall to avoid increased blackouts.

Water and Sanitation

The WEs have witnessed serious depletions in supplies, revenues, and financial and human resources. At the same time, WEs are affected by an upward spiral in costs in the aftermath of the economic crisis (since October 2019), the ongoing COVID-19 pandemic (since March 2020), and the Beirut Port explosion (August 4, 2020). Further, the water supply and sanitation (WSS) service delivery has suffered from weakened institutions, limited mobility (due to COVID-19 lockdown), lack of funds, limited human resources, and reduced subsidies due to the economic crisis. The WEs are struggling to sustain their level of services by increasingly depending on their own funds and the short-term support available from humanitarian actors (UN and NGOs) that help maintain the pumping systems and purchases of chlorine for water treatment

plants. Moreover, due to ongoing water shortages and intermittent water supply from the WEs—with hours of supply further reduced in 2020—people have had to rely more on other costlier water alternatives such as water tankers and bottled water. The cost of these alternatives is increasing. For example, since 2020, the cost of supply from water tankers increased by about 35 percent, while prices of bottled water almost doubled.

More specifically, WEs are facing the following challenges:

- *Lack of coverage for operation and maintenance (O&M) costs further exacerbated by poor and falling collection rates.* Even prior to the economic crisis, the applicable yearly flat fee (approximately LBP 295,000) already failed to cover the full cost of O&M. The crisis further exacerbated the situation, leading to a 20 percent fall in collection in 2020 compared to 2019.[77]
- *Increase in service delivery costs.* Financial crisis conditions—including FX shortages and sharp depreciation of the local currency—along with an inefficient FX subsidy on fuel imports compounded by rising global oil prices, have led to fuel supply shortages in the country. All this has resulted in an increase in the service delivery costs.
- *Poor incentives for staff.* Staff are paid in LBP. As such, very high inflation rates have resulted in sharp declines in their real wages. In addition, the WEs have struggled to pay salaries and statutory commitments to retirees resulting in an adverse impact on staff morale.
- *Delays in implementing ongoing work paid in US$.* The WEs are facing challenges and delays in paying contractors in US$, which are needed to import the necessary goods and equipment, thus delaying or blocking the work.
- *Limited availability of stock of materials.* The available stock of material and equipment at WEs is limited and will not sustain beyond the next few months. The need to import replenishments necessitates access to FX.

Should the situation continue to deteriorate, these challenges will seriously impair

the delivery of WSS services through delays in addressing breakages and repairing leaks and assets, possibly leading to the non-operation of treatment plants. WEs might start diverting funds from resource monitoring to other immediate O&M needs. Consequently, there is a risk of intensified spread of water-borne diseases, adversely impacting an already vulnerable public health system. Thus, there is urgent need for the following:

- *Reliable electricity supply is one of the main limiting factors in ensuring operational continuity of WSS service delivery.* WEs require electricity to produce, treat and distribute water supply and continue treating wastewater. Thus, the Government of Lebanon should prioritize power supply to WEs during this crisis despite delayed payments to avoid shutting-off of the pumping stations and treatment plants.
- *Maintaining the WSS services at a minimum operating capacity to safeguard public health.* The ongoing humanitarian support can include contracting out emergency rehabilitation of WSS systems to construction firms (where and when possible) and providing spare parts (e.g., pumps, motors, pipes, valves, fittings, repair clamps, transformers) and consumables (e.g., chemicals for water treatment and disinfection, fuel, lubricants).
- *Continue sustaining the flow of funds to procure the spare parts and consumables.* Standby financing mechanisms from the Government are needed to sustain the flow of spare parts and consumables to WEs, to maintain personnel (e.g., operators and technicians) and must be equipped and able to meet the capital costs of system repairs and rehabilitation.

Education

In 2021, Lebanon's education sector has to respond to five major crises, rather than just

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[77] This is according to unaudited 2020 accounts for the Beqaa Water Establishment (BWE).

one—the Syrian crisis, economic collapse, political instability, the COVID-19 pandemic, and the PoB explosion—putting severe strain on an already struggling education system. Pre-COVID-19 learning levels were already comparatively low, with only 6.3 years of learning taking place, once schooling is adjusted for actual learning.[78] The most recent school closures due to the COVID-19 pandemic—with schools closed over 75 percent of the school year between January 2020 and February 2021[79]—will likely lead to a further and significant decrease in learning. *Effectively, students are facing a "lost year" of learning*.

Impact on access to education

The many crises severely impacted demand for education and student retention, especially as many parents can no longer afford private education for their children. School completion rates in primary (78 percent) and lower secondary education (59 percent) have already been declining over the last years,[80] with completion rates being significantly lower among poorer students.[81] The burden of education in Lebanon, which enrolled about 1.2 million students in 2019/2020, falls on parents' shoulders, who pay a combined US$1.5 billion annually, with the government paying an additional US$1.2 billion (World Bank 2017).[82]

This school year alone, 54,000 students (11 percent of public sector students) transitioned from private to the public schools, putting additional strain on a public education sector, which already faced severe constraints in terms of available school infrastructure, education quality and service delivery.[83] It is estimated that through this shift, the private sector is losing at least 8 percent of its financing, either through per-student tuition or direct subsidies that are linked to enrollment.

The contraction in the economy and increase in poverty rates will likely lead to more parents shifting their children to public schools in the coming years, as well as higher student drop-outs, especially from the most marginalized households. These large-scale shifts will change the setup of the Lebanese education sector fundamentally, necessitating re-evaluation of education sector

financing.[84] Expected austerity measures implemented by local universities, will lead to a further decline in higher education quality, likely exacerbating a brain drain as youth graduates seek employability abroad, particularly in critical sectors such as medicine.

Impact on learning

The recent Programme for International Student Assessment (PISA) (OECD 2019) and Trends in International Mathematics and Science Study (TIMSS) (IEA 2020) show Lebanon as one of the lowest ranked countries in the region in terms of student learning outcomes. Time trends show that learning outcomes have consistently declined over the last decade, pointing at systematic issues with quality of education. While quality of education is low overall, learning outcomes are highly unequal across the country. The differences in the quality of individual schools are very large—more than in other countries—and disproportionately affect students in public schools and those from lower socio-economic backgrounds. The prolonged school closures and interrupted education service delivery will have long lasting negative effects on learning for *all children*, exacerbating inequalities and impacting the most marginalized.

Impact on equity in education

The prolonged school closures have disproportionately affected the most marginalized

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78 World Bank Human Capital Index (2020). Learning-adjusted years of schooling.

79 This amounts to 154 days of full closure according to World Bank & UNICEF 2021.

80 Abdul-Hamid and Yassine 2020

81 Only half of 18-year-olds from the lowest economic quantiles completed school prior to the economic crisis in the country (CAS 2020).

82 Households private expenses comprise fees for private schools or out-of-pocket expenses in public schools, such as transportation costs and textbooks.

83 Most public schools are located in the poorest areas, where demand is greatest.

84 World Bank. 2020. "Emergency Social Safety Net Project Appraisal Document."

students, who had little access to continued learning. Since February 2020, schools were mostly closed and remote learning the default for most months. Remote learning requires availability of IT and other resources. About 60 percent of students either do not have a computer or have to share it with at least 3 other family members. Recent estimates show that only about 50 percent of students are connected to online learning.[85] Inequities in the education system have been further exposed with the pandemic—from access to broadband and computers needed for online education, to resourceful home environments needed to support learning, up to the misalignment between resources provided by the education sector and education needs.

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[85] Gajderowicz, Tomasz, and Maciej Jakubowski. Forthcoming. "PISA In-Depth Analysis of Results for Jordan and Lebanon (draft)." Washington, DC: World Bank.

ANNEX

Forecasts of Lebanon's Real GDP Growth using MIDAS Regressions: An Update for 2020 and 2021

Introduction

The forecasts of Lebanon's real GDP growth for the year 2020 and 2021 are updated based on the new incoming data for the high frequency indicators. The data on the high frequency indicators are available for the first eleven months of 2020 at the time of writing.[86] The data for real GDP growth are available until 2019.

In forecasting growth in 2020 and 2021, we make a distinction between the utility of financial versus real economy indicators. Financial indicators are likely to better first capture financial crisis dynamics, making them more relevant leading indicators for 2020 than real economy indicators. However, over the course of 2020, the financial sector became increasingly inoperative and segmented from both the local and global economy. Meanwhile, real indicators increasingly capture the extent of the economic crisis and become more relevant leading indicators for 2021.

Forecasting Real GDP Growth for 2020

The high frequency indicators used to nowcast and forecast Lebanon's real GDP growth in 2020 are: annual growth rates in claims of the commercial banking sector on resident customers, outstanding lines of credit for imports, non-resident deposits and resident deposits (Figure 27). That is, in the MIDAS setup, our vector of high frequency indicators is, $x_t^H = (cl, lc, nr, r)$, where cl, lc, nr and r denote, respectively, annual growth rates in claims of the commercial banking sector on resident customers, outstanding lines of credit for imports, non-resident deposits and resident deposits. We also aggregate the information from the four high frequency indicators using principal components analysis. More specifically, we extract the first principal component from the four indicators and use it to forecast real GDP growth for 2020. The MIDAS model, which uses the first principal component of the four indicators,

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[86] In the previous update to the MIDAS forecasting exercise, the data on the high frequency indicators were available until May 2020.
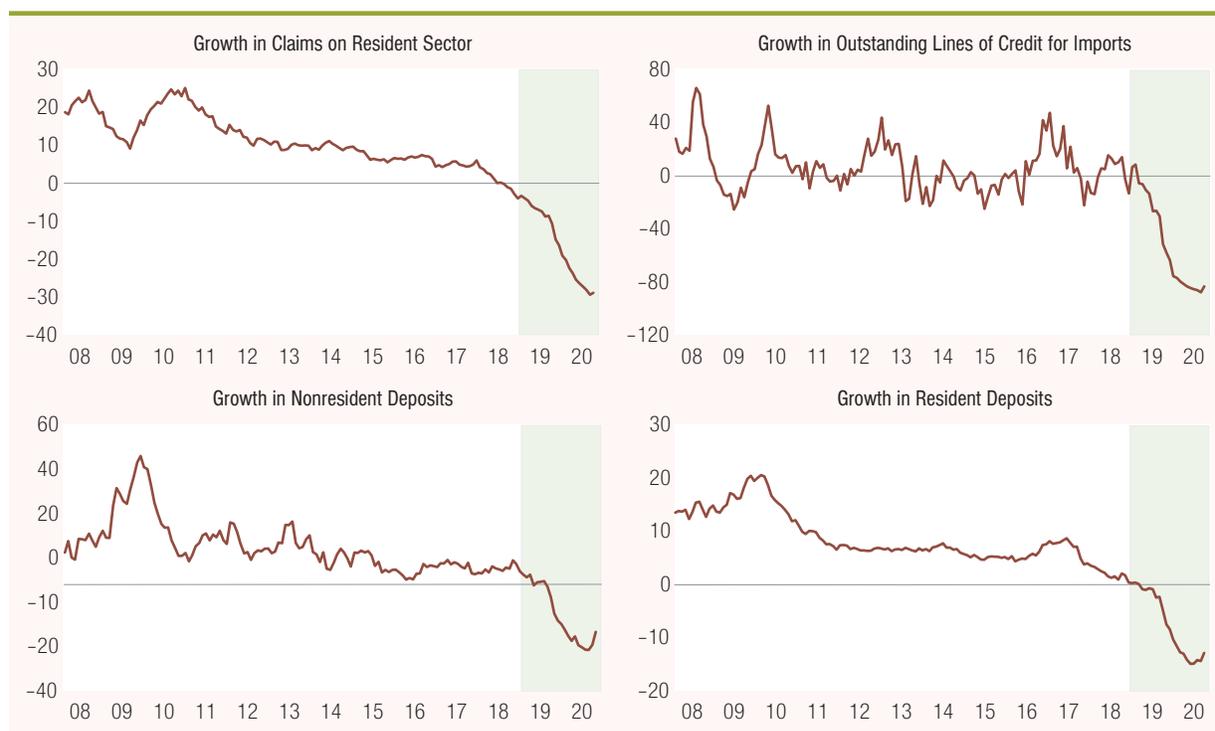
is referred to as the factor augmented MIDAS model. The low frequency variable of interest in the nowcasting or forecasting exercises is $y_t^L = (gdpg)$ where *gdpg* is the growth rate in GDP.

The dynamic (i.e., multi-step-ahead) forecasts of real GDP growth rates are generated using an ADL-MIDAS model, which is employed to introduce dynamics. The high frequency indicators are available until November 2020.

Forecasts of real GDP growth for 2020 are produced from the ADL-MIDAS using each of the above high frequency indicators. The forecasts of real GDP growth are provided in Table 6.

Forecasting Real GDP Growth for 2021

Under the assumption that the constraints relating to import demand are less binding in 2021 and that the bulk (but not the entirety) of the adjustment in the banking sector occurs in 2020, the set of high frequency indicators is enlarged to encompass real activity indicators.

TABLE 6 • Real GDP Growth Forecasts for 2020

	Real GDP growth forecasts for 2020
	Baseline
Growth in non-resident deposits	−12.6%
Growth in resident deposits	−14.8%
Growth in claims on the resident sector	−13.5%
Growth in lines of credit for imports	−14.4%
Factor Augmented MIDAS	−20.3%

This poses an immediate challenge: The set of candidate high frequency indicators of economic activity that can be used to forecast real GDP growth is sizeable. Tiffin (2016) employs a machine learning approach to identify the best predictors of economic activity. More specifically, Tiffin (2016) resorts to random forests, Least Absolute Shrinkage and Selection Operator ridge and elastic net

TABLE 7 • Candidate Predictor Variables for the Real High Frequency Indicators

Candidate predictor variables	Observations available until
BDL Coincident Indicator (annual change, percent) (CI)	2020:09
World Bank Coincident Indicator (annual change, percent) (WBCI)	2020:09
Cement Deliveries (annual change, percent) (CD)	2020:09
Customs Receipts in Real Terms (annual change, percent) (CR)	2020:09
Import of Petroleum Derivatives (annual change, percent) (PI)	2020:09
Incoming Freight at the Port of Beirut (annual change, percent) (IF)	2020:09
Outgoing Freight at the Port of Beirut (annual change, percent) (OF)	2020:09
Primary Spending in Real Terms (annual change, percent) (PRIM)	2020:08

TABLE 8 • Forecasts of Real GDP Growth for 2021 Using Real Activity Indicators

	Forecast for 2021
BDL Coincident Indicator (annual change, percent) (CI)	−19.6%
World Bank Coincident Indicator (annual change, percent) (WBCI)	−16.0%
Cement Deliveries (annual change, percent) (CD)	−9.9%
Customs Receipts in Real Terms (annual change, percent) (CR)	−24.5%
Import of Petroleum Derivatives (annual change, percent) (PI)	−8.7%
Incoming Freight at the Port of Beirut (annual change, percent) (IF)	−8.7%
Outgoing Freight at the Port of Beirut (annual change, percent) (OF)	−7.1%
Primary Spending in Real Terms (annual change, percent) (PRIM)	−6.7%

regressions to select the best predictor of quarterly GDP growth from a pool of noisy high frequency indicators.[87] The MIDAS setup is different from that used in Tiffin (2006). Tiffin (2016) predicts quarterly GDP using quarterly indicators and, therefore, does not mix low and high frequency data. Nonetheless, a subset of the candidate predictor variables that are entertained by Tiffin (2016) is considered in addition to the four high frequency indicators considered previously. The candidate predictor variables are provided in Table 7 and illustrated in Figure 28.

The nominal series are deflated by the Consumer Price Index (CPI). The data for the CPI are available starting in January 2008. The availability of the CPI data dictates the starting date of the MIDAS forecasting exercise to be January 2009. The same starting date is employed for all of the models to place them on an equal footing.

Forecasting Lebanon's real GDP growth for 2021 is more complicated and subject to considerably more uncertainty than nowcasting real GDP growth for 2020. To start with, none of the high frequency indicators are observed for 2021. Therefore, monthly forecasts of the four high frequency indicators for the year 2021 should be generated. In addition, the forecast of real GDP growth for 2021 builds on the

nowcast of 2020 (i.e., it is a dynamic forecast). This translates into more uncertainty. Further, the forecast of real GDP growth for 2021 will not reflect any positive developments on the policy front given that it builds on an extrapolation of time series dynamics.[88] The forecast of GDP growth for 2021 should therefore be used with these caveats in mind. The advantage of using a large pool of predictor variables is the ability to generate a large set of forecasts of real GDP growth, which can then be combined. This will attenuate uncertainty related to the forecast.

As noted in Timmermann (2006), combining forecasts is desirable for a number of reasons.[89] First, identifying the best performing model is not a straight-forward endeavor. Therefore, combining forecasts provides diversification gains. Second, the combined forecast is more robust to structural breaks in the individual forecasting models. Third, given that every

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[87] Tiffin (2016) notes that machine learning methods are particularly adept at prediction and that the best predictor is determined based on its out of sample predictive accuracy.

[88] This extrapolation embeds mean reversion, but this is not sufficient to reflect the positive effects of policy action.

[89] This discussion is based on Jamali and Yamani (2019).

model is likely to be misspecified, combining forecasts will alleviate the effects of misspecification in individual forecasting models (Elliott and Timmermann, 2016). Fourth, Timmermann (2006)'s synthesis of the empirical literature suggests that combining forecast yields gains in predictive accuracy relative even to

FIGURE 28 • Growth of High Frequency Real Economy Indicators Used to Nowcast and Forecast Lebanon's Real GDP Growth in 2021
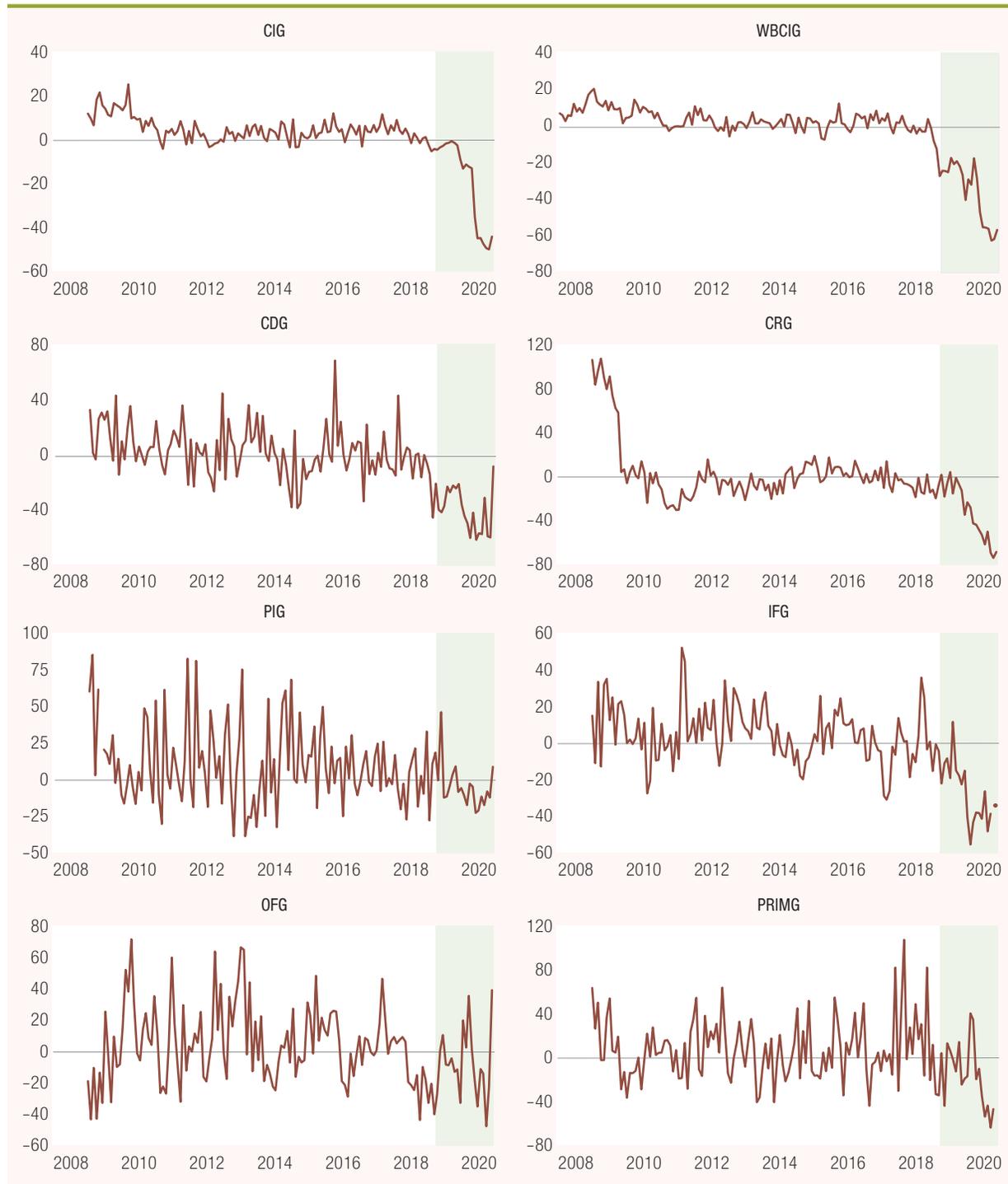
the best performing individual forecasting model. The simple mean, the trimmed mean and the median are three simple forecast combination methods that can be applied in this setup.

Dynamic forecasts of the growth in the high frequency indicators are generated from a well-specified Autoregressive Moving Average model. The forecast sample begins on the month following the last for which an observation on the high frequency indicator is available. The forecast sample for the high frequency indicators ends in December 2021. The set of high frequency candidate predictors is $x_t^H = (ci, wbci, cd, cr, pi, if, of, prim)$.

The time series dynamics of the high frequency indicators of economic activity are provided.

The simple average of the forecasts for 2021 is –12.65 percent whereas the median is –9.32 percent.

The growth forecasts using the main high frequency indicators are provided in Table 9.

Again, given that the import constraint is likely not binding in 2021, the GDP growth forecast for 2021 obtained from the growth in lines of credit for imports as a high frequency indicator is dropped from the forecast combination. Combining the forecasts from Tables 8 and 9 yields an average growth rate of –11.6 percent in 2021 and a median growth rate of –9.90 percent. If the forecast of real GDP growth obtained with lines of credit for imports is included in the forecast averaging, the average growth rate for 2021 becomes –12.05 percent while the median growth rate is –10.22 percent.

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Timmermann, A. 2006. Forecast combinations. *Handbook of Economic Forecasting*, *1*, 135–196.

TABLE 9 • Forecasts of Real GDP Growth for 2021 Using Real Activity and Financial Indicators

Indicator	Forecast for 2021
BDL Coincident Indicator (annual change, percent) (CI)	–19.6%
World Bank Coincident Indicator (annual change, percent) (WBCI)	–16.0%
Cement Deliveries (annual change, percent) (CD)	–9.9%
Customs Receipts in Real Terms (annual change, percent) (CR)	–24.5%
Import of Petroleum Derivatives (annual change, percent) (PI)	–8.7%
Incoming Freight at the Port of Beirut (annual change, percent) (IF)	–8.7%
Outgoing Freight at the Port of Beirut (annual change, percent) (OF)	–7.1%
Primary Spending in Real Terms (annual change, percent) (PRIM)	–6.7%
Growth in non-resident deposits (NR)	–10.5%
Growth in resident deposits (R)	–11.3%
Growth in claims on the resident sector (CL)	–8.9%
Growth in lines of credit for imports (LC)	–12.6%

Dynamic Response of Inflation to Currency in Circulation in Lebanon

This section offers an assessment of the response of inflation to changes in currency in circulation using multivariate time series models. The variables of interest are the percentage change (growth) in the currency in circulation, inflation and the percentage change in the World Bank coincident indicator. The coincident indicator is employed to control for real economic activity.

Unit Root Tests

We begin the exercise by testing for stationarity for each of the series using the augmented Dickey–Fuller (ADF) (1979) and the Phillips and Perron (PP)(1988) tests. The null hypothesis for both the ADF and PP tests is that the series contains a unit root. The ADF test is known to exhibit low power when the alternative is near unit root

behavior (Elliot et al., 1996). Therefore, the ADF test with GLS detrending of Elliott *et al.* (1996) is also employed. The existing literature shows that the ADF–GLS test has good power properties against near unit root behavior.

The crisis dynamics pervading the post October 2019 period imply that the series might be subject to a structural break. Therefore, the Zivot and Andrews (ZA) (1992) test, which allows for a break in the intercept and the trend, is also employed.

The results from the unit root tests suggest that all three series are stationary. The tests also indicate that the growth in currency in circulation can be characterized as a stationary variable that is subject to a structural break. The Perron (2006) test designates August 2019 as the break point.[90]

VAR Variables in Difference

Let M_{0t}, P_t and $WBCI_t$ denote, respectively, the level of the currency in circulation, the CPI and the World Bank Coincident Indicator index. The natural logarithms of the currency in circulation and the price level are denoted, respectively, m_{0t} and p_t. The percentage change in the $WBCI_t$ is computed as $wbg_t = 100 \times \dfrac{WBCI_t - WBCI_{t-1}}{WBCI_t}$.

The vector of variables in the VAR is thus $y_t = \left[\Delta m_{0t}, \Delta p_t, wbg_t\right]'$. Namely, the vector of variables y_t includes the percentage change in the currency in circulation, inflation as measured by the percentage change in the CPI, and lastly, the percentage change in the World Bank Coincident Indicator index. The VAR model is estimated using percent changes in the variables to circumvent non-stationarity.

A recursive ordering (Cholesky decomposition) is employed to identify the VAR. An optimal lag length of five is used based on the Akaike Information Criterion (AIC). The analysis is carried out at the monthly frequency over the period January 2008 to September 2020. The times series of the variables are displayed in Figure 29.

The effects of a shock to currency in circulation are assessed using impulse response analysis. Figure 30 provides the responses of each of the variables to a 1 percent shock to currency in circulation.

The response of inflation and the World Bank coincident indicator to a 1 percent shock to currency

TABLE 10 • Unit Root Tests

	ADF	PP	ADF-GLS	ZA
Growth of currency in circulation	–3.29	–11.29***	–2.62	–5.49***
Inflation	–4.33***	–7.46***	–4.18***	–6.27***
Percentage change in the World Bank coincident indicator	–12.96***	–13,08***	–4.01***	–5.36***

Notes: This table provides the results from the Augmented Dickey Fuller (ADF), Phillips and Perron (PP), Elliott, Rothenberg and Stock (1996) ADF test with GLS detrending (ADF-GLS) as well as the Zivot and Andrews (ZA) (1992) tests.

in circulation is significant. More specifically, the response of inflation peaks five months following the shock and remains positive and significant. The growth in the WBCI exhibits a negative response to the shock to currency in circulation. This response is significant in the two to five months following the shock.

The cumulative effect of the shock to the currency in circulation on inflation for the entire forecast horizon (12 months) can be computed by accumulating the responses in inflation. The effect is provided in Table 11. The results suggest that a 100 percent increase in the currency in circulation increase prices by 129 percent annually, which averages about 10.75 percent per month.

VAR Variables in (Log) Levels

The robustness of the results is assessed by estimating the VAR model in log levels. More specifically, the VAR in log levels comprises in the following order: m_{0t}, p_t and $wbci_t$, where $wbci_t$ is the natural logarithm of the

TABLE 11 • Cumulative Effect of a 1 Percent Increase in Currency in Circulation on Inflation

Percentage increase in currency in circulation	Cumulative effect on CPI
1%	1.29%
100%	129%

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[90] Other unit root tests that account for a break include Lee and Strazicich (2003) as well as Lumsdaine and Papell (1997).

FIGURE 29 • Time Series Dynamics of the Variables in Changes

World Bank coincident indicator.[91] The variables in log levels are displayed in Figure 31.

Again, the effects of a shock to currency in circulation are gauged using impulse response analysis. Figure 32 provides the responses of each of the variables to a 1 percent shock to currency in circulation. The sample period is January 2008 to September 2020 and the optimal lag length of the VAR is determined using the AIC.

The effect of a 1 percent increase in the currency in circulation on inflation is gauged by examining the response of the logarithm of the CPI. The

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[91] The variables in log levels are non-stationary. However, empirical analyses of the macroeconomic effects of monetary policy shocks commonly use a specification in log levels. See, for example, Faust (1998) and Christiano, Eichembaum and Evans (1999). Such a specification

Response of MOG to MOG

Response of INF to MOG

Response of WBCIG to MOG
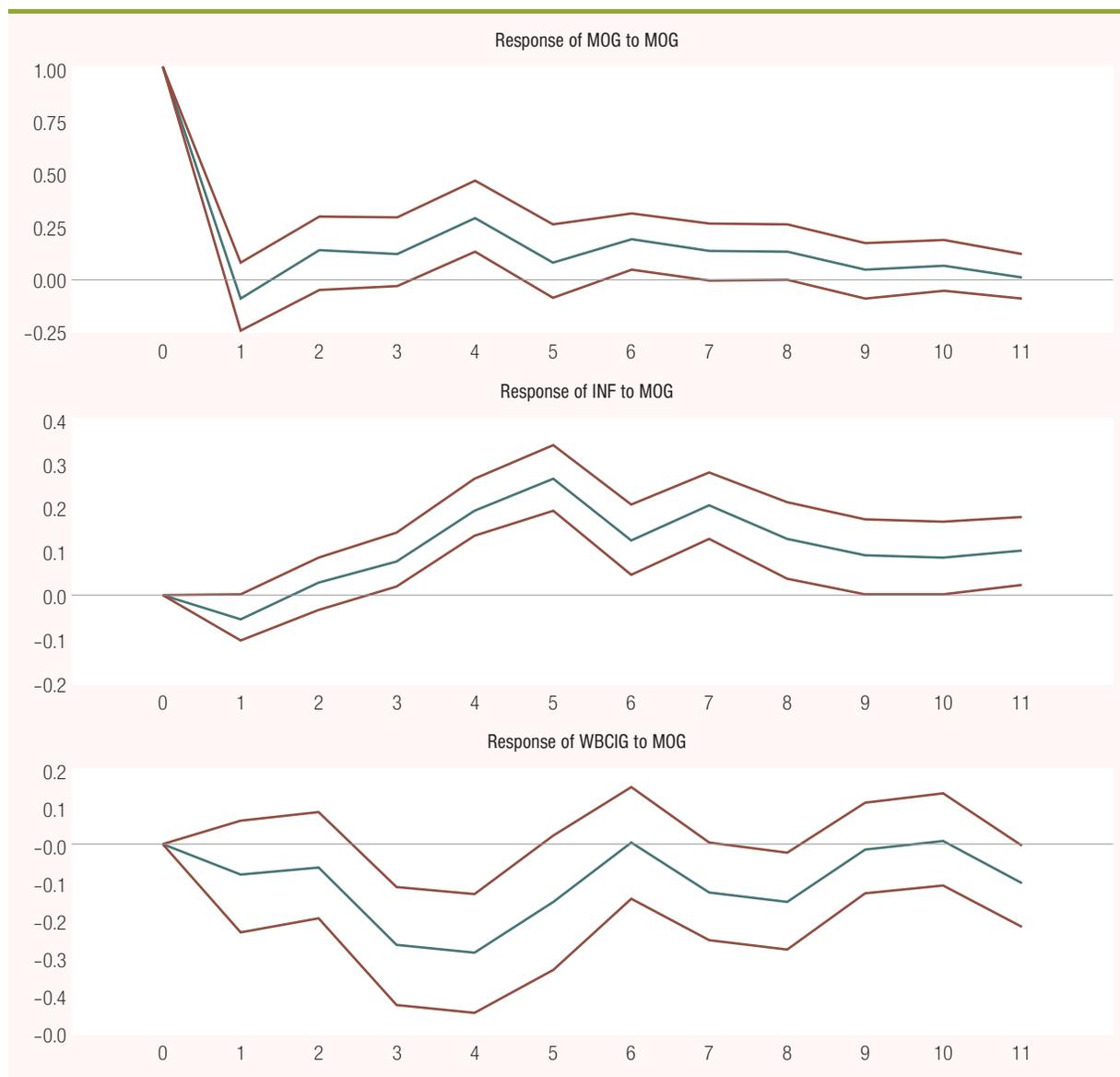
Notes: This figure provides the responses of each of the variables to a 1 percent shock to currency in circulation. The 95 percent confidence intervals are constructed using the bootstrap method.

results are summarized in Table 12. A 100 percent increase in the currency in circulation increase prices by 76 percent, annually averaging 6.33 percent per month.

The Cointegrated VAR: Vector Error Correction Model

The response of inflation to a shock to currency in circulation is examined next via a cointegrated VAR or vector error correction model. Figure 31 suggests

TABLE 12 • Cumulative Effect of a 1 Percent Increase in Currency in Circulation on Inflation

Percentage Increase in Currency in Circulation	Effect on CPI
1%	0.76%
100%	76%

is not invalid, but care must be exercised to account for cointegrating relation if such long-run relations are present.

FIGURE 31 • Time Series Dynamics of the Variables in Log Levels
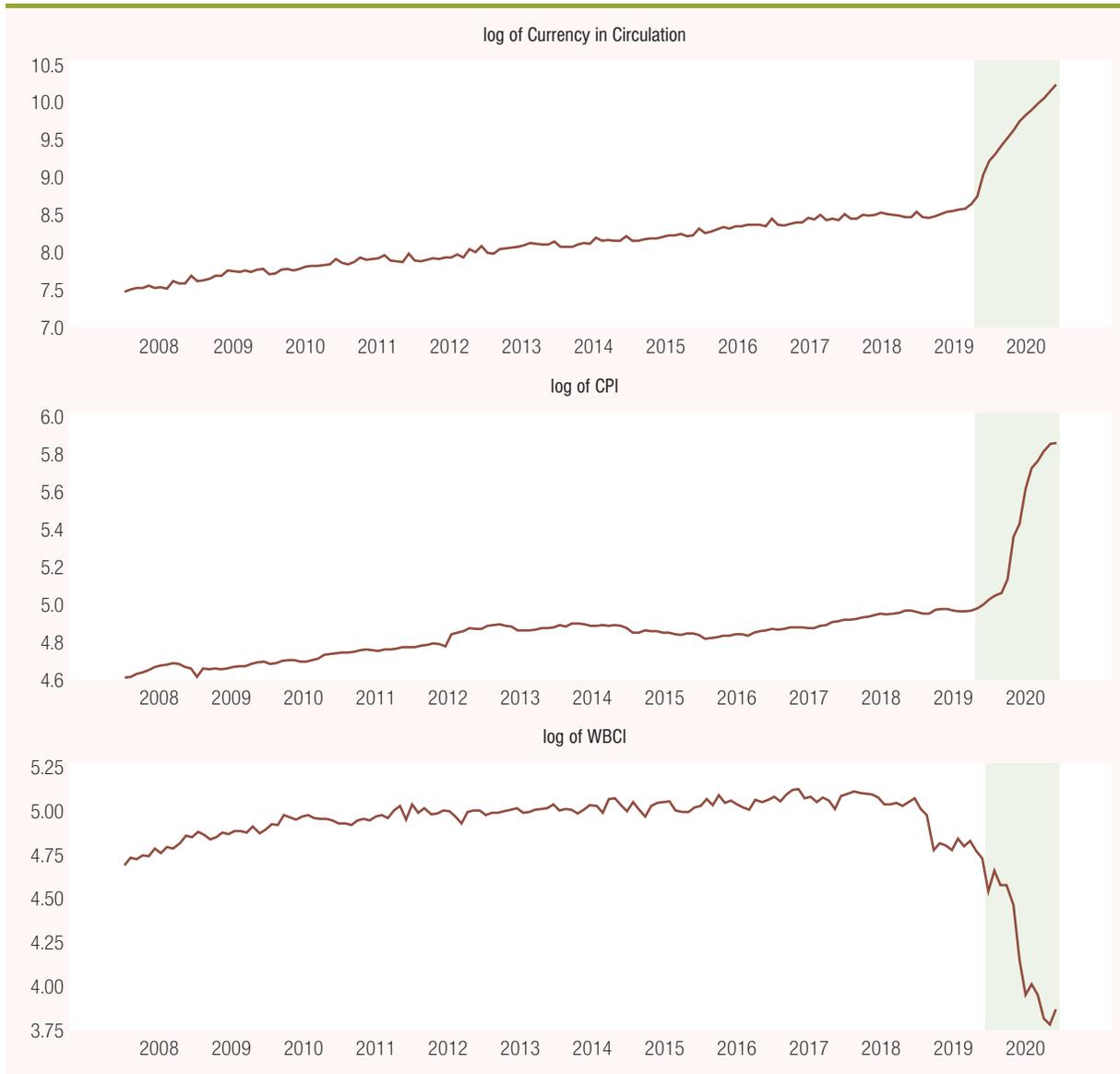
that the logarithms of the currency in circulation and the CPI may exhibit a long-run cointegrating relation.

The presence of a cointegration relation in the VAR in log levels is tested using the Johansen (1988) approach. More specifically, the existence of cointegrating vectors can be examined using the trace statistic:

$$\lambda_{trace}(r) = -T\sum_{i=r+1}^{g}\ln\left(1-\hat{\lambda}_i\right), \qquad (5)$$

where r is the number of cointegrating vectors under the null hypothesis and $\hat{\lambda}_i$ is the estimated i^{th} ordered eigenvalue of the matrix Π. The trace statistic tests the null hypothesis that the number of cointegrating vector is r or less against the alternative hypothesis that there are more than r cointegrating vectors. The trace statistic is reported in Table 13.

The null hypothesis of no cointegrating vector is marginally rejected (at the 10 percent level). The null hypothesis of one or less cointegrating vector

Response of LMO to log of MO

Response of LCPI to log of MO

Response of LWBCI to long of MO
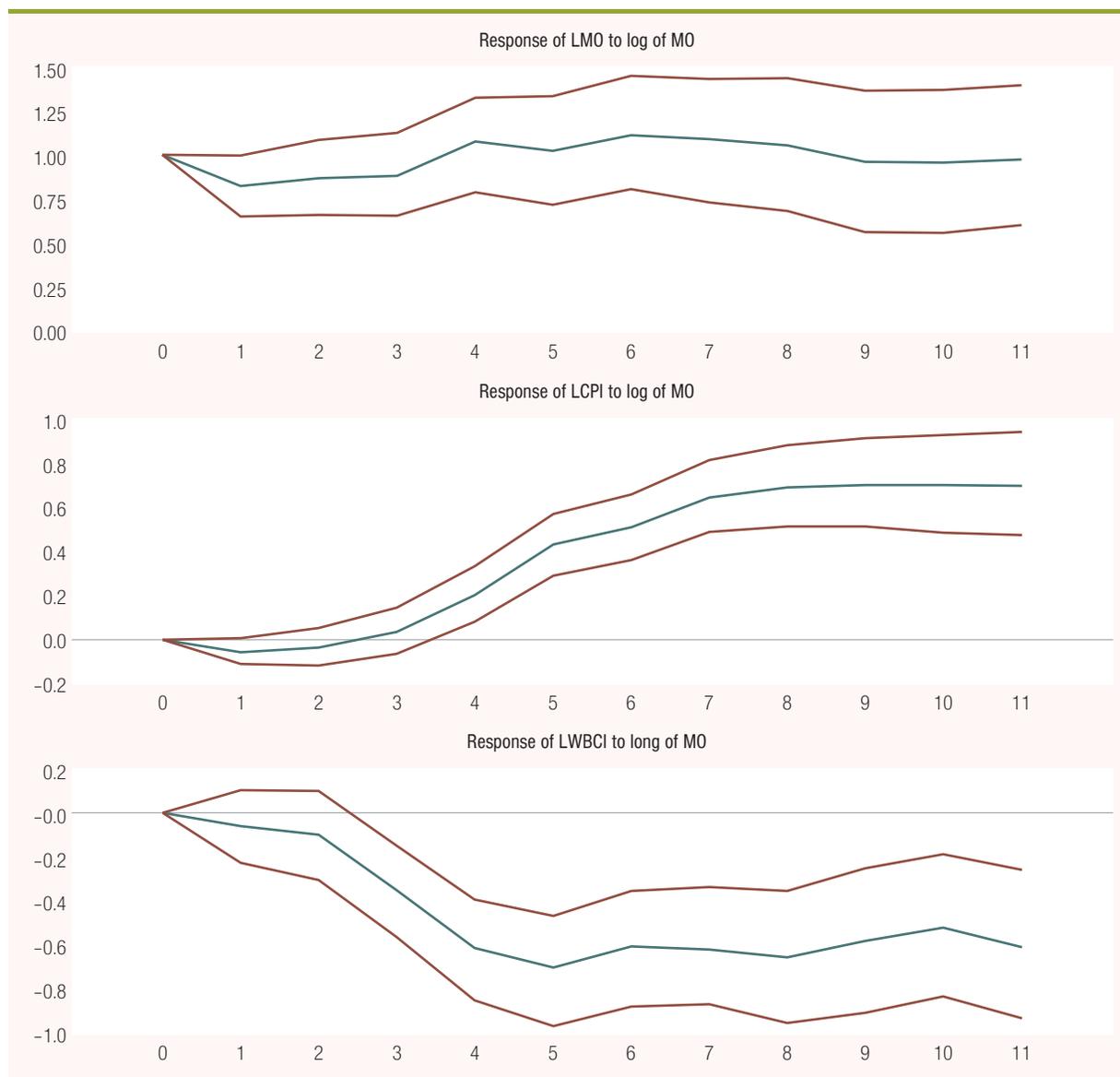
is not rejected. The null of two or less cointegrating vectors is rejected at the 5 percent.

TABLE 13 • The Johansen (1988) Trace Statistic

	Trace statistic
r = 0	28.30*
r ≤ 1	12.86
r ≥ 2	4.66**

A VECM is estimated and the response to a one standard deviation shock are provided in Figure 33. The 95 percent confidence bands are generated using Monte Carlo simulation.

The impulse response analysis suggests that a 1 percent shock to currency in circulation generated a response of 0.80 percent increase in CPI over a twelve-month horizon. This result is summarized in Table 14. Hence, an increase in currency in circulation by a 100 percent results in an 80 percent increase in

Response of log of MO to log of MO

Response of log of CPI to log of MO

Response of log of WBCI to log of MO
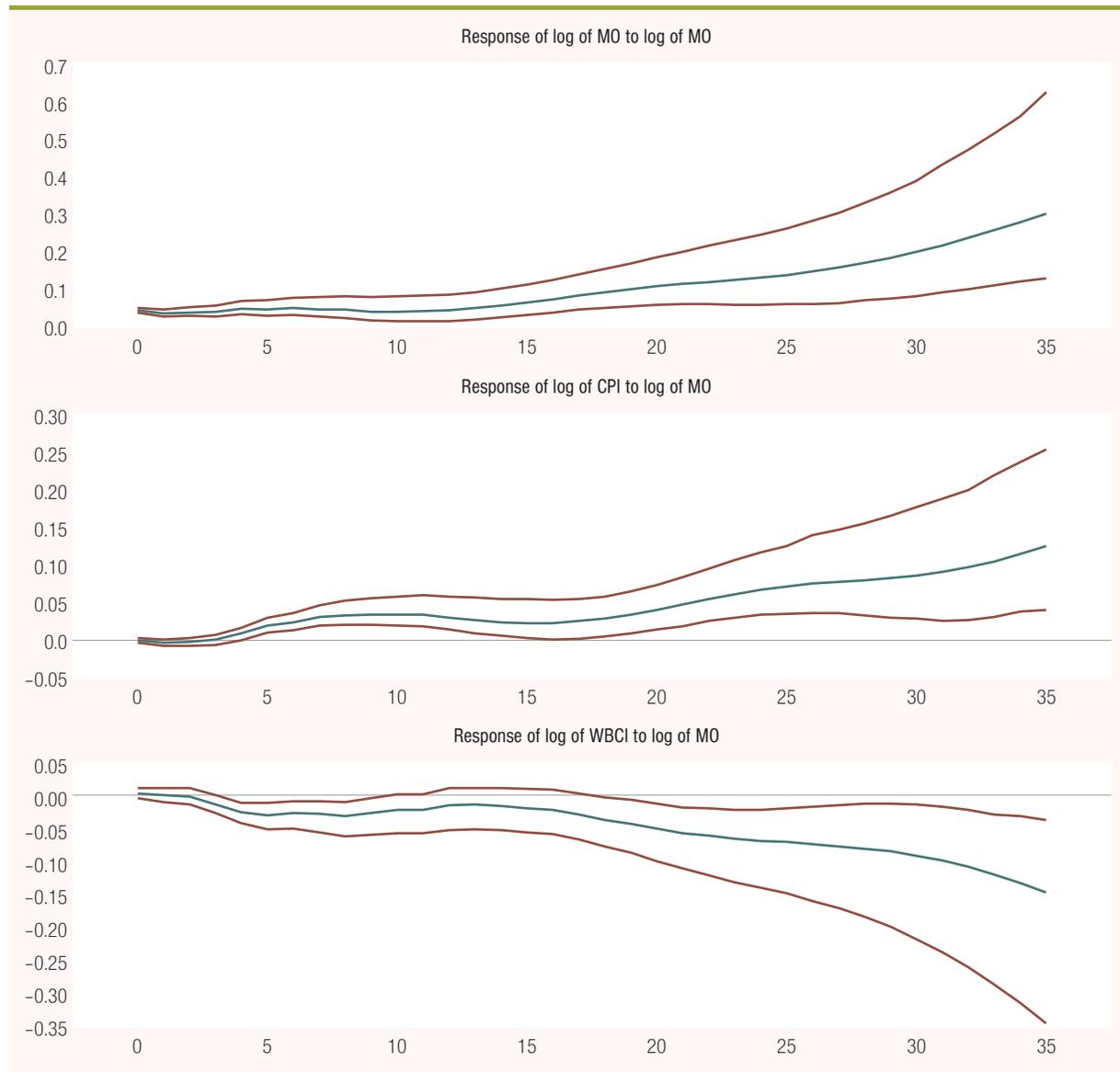
the price level, annually, which averages about 6.66 percent per month.

TABLE 14 • Cumulative Effect of a 1 Percent Increase in Currency in Circulation on Inflation

Percentage increase in currency in circulation	Effect on CPI
1%	0.80%
100%	80%

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Global Financial Crises Episodes

The Argentinian Banking Crisis of 1980

Prior to 1976, the Argentinian economy contended with high inflation, balance of payments pressures and fiscal deficits. Since 1976, and in a bid to address these chronic imbalances, policymakers undertook short-term and structural reforms that predominantly affected the financial sector.

A rapid liberalization of the financial sector was in full swing in 1977. The central bank gradually loosened prudential regulations relating to capital requirements, asset immobilization and limits on bank lending. It also eased its heavy regulatory oversight on the establishment of new banks as well as new branches of existing banks. The changes effectively transformed the Argentinian banking sector from a 100 percent to a fractional reserve system. The central bank, however, was not properly equipped to supervise a banking sector that grew precipitously.

At the monetary policy level, a crawling peg system became a main stabilization tool to rein in inflation; pre-announced devaluations of the Perso was hoped would reduce uncertainty and guide tradable prices along international prices (with non-tradables following). Exchange rate policies "had important effects on the soundness of the financial system, directly by influencing the capital flows and the value of the foreign debt of firms, and indirectly by dramatically changing many relative prices in the economy—in particular, asset prices" (Balino 1991, pg. 71).

Enterprise indebtedness increased significantly, leading to business failures and soaring levels of NPLs, which increased from 1.7 percent in 1975 to 11.7 percent in 1980 in the primary sector and from 3 percent in 1975 to 12.8 percent in 1980 in the manufacturing sector (Balino 1991). The rapid deterioration in the bank-lending portfolio in 1980 spelled trouble for the banking sector.

The crisis broke on March 18, 1980 with the failure of Banco Intercambio Regional, one of the largest private banks in the country. This failure struck at confidence in the domestic private banking model, prompting a reallocation of deposits to State banks and foreign affiliates. Further, the interbank lending market froze. Despite a retroactive increase in deposit insurance, uninsured Peso deposits exceeding 100 million Pesos were lost. Dollar depositors in failed institutions suffered a complete loss. The central bank was forced to intervene to rescue three major banks, two of which were ultimately liquidated (Balino, 1991).

The adverse developments in the banking sector strained the crawling peg regime. The exchange rate devalued by about 23 percent on June 2 owing to losses in foreign exchange reserves at the central bank. A two-tiered exchange rate regime emerged: a commercial rate set by the central bank and a market determined rate for financial markets. Confused and inconsistent exchange rate policies ensued by subsequent governments; first liberalization and unification in December 1981, and then the reintroduction of a dual exchange rate system in July 1982, before unification again in November 1982.

In response to the crisis, authorities pursued a three-pronged solution. "First, they had to take emergency measures to avoid a bank panic; second, they had to search for longer-term solutions to the private debt problem and its effects on financial institutions; and third, they had to find ways to restructure the financial system." (Balino 1991, pg. 92). The emergency measures included liquidating Banco Intercambio Regional, establishing a new credit facility as well as retroactively increasing the deposit insurance. The central bank also intervened with three troubled banks on April 28, 1980. The authorities addressed the private debt problems via maturity extensions and refinancing schemes. Despite the central bank's success in stemming the run on deposits, the crisis had far-reaching consequences and resulted in the liquidation of 71 financial institutions between 1980 and 1982.

The Philippines Financial Crisis of 1981

The Philippines crisis followed a boom-bust phenomenon typical of those analyzed in crisis literature (Nascimento 1991). Over the 1970's, The Philippines experienced high growth rates in its real Gross National Product (GNP). It was a demand-driven economic boom that reflected an investment-intensive development strategy by the Government.

In order to finance this boom and attract foreign capital, The Philippines authorities and the Central Bank of the Philippines (CBP) embarked over the 1972–81 period on a liberalization program in the financial sector and the capital controls regime. The authorities and the CBP relaxed controls on foreign capital, facilitated the entry of foreign banks and encouraged the establishment of "universal" banks—commercial banks whose activities encompass, in addition to retail banking, securities transaction and investment banking. The CBP introduced important changes to prudential regulations by lowering banks' capital requirement from 15 percent in 1972 to 6 percent in 1980, thereby encouraging loose lending practices. An investment (and credit) boom ensued and the external debt burden increased from 31.3 percent of GDP to 48.9 percent in 1980 (Nascimento 1991).

The large capital inflows stoked inflationary pressures and pushed real lending rates below zero in 1980, further enticing credit growth and a misallocation of resources. An overreliance by enterprises and the nongovernment sector on debt to finance expansion doubled the outstanding debt between 1972 and 1980 and quadrupled foreign currency denominated debt. The external imbalances and the sharp rise in foreign savings as a percent of GDP made the Philippines economy vulnerable to shocks.

In January 1981, confidence in the financial system of the Philippines was shaken by fraud in the commercial paper market—an episode that became known as the Dewey Dee affair. The confidence crisis rapidly spread from the periphery of the financial sector to its core. Rippling through the system, it first caused a collapse of the commercial paper market, failures of nonbank money market institutions and the crash of the two largest investment houses belonging to two major holding companies, which also subsequently failed. Wealth holders reacted by shifting savings to the commercial banking sector. The loss of confidence consequently afflicted the thrift banking system and precipitated failures in rural banks. As the year progressed, it became readily apparent that the Dewey Dee affair had lasting effects on public trust in the financial system as it triggered bank runs, capital flight and a "flight to quality" towards the (perceived) relative safety of the commercial banking sector.

In this first phase of the crisis, between 1981 and 1983, authorities' priority focused on containing the spread of financial distress. The CBP extended emergency lending to quasi banks through a special rediscount facility. An Industrial Fund, co-financed by Government budget and the CBP, was also established and, in early 1982, replaced with a special rediscount window. The CBP used the rediscount window to extend medium and long-term loans to universal banks and to the Government-owned Philippines National Bank and Development Bank of the Philippines. These two banks accounted for a significant share of credit to the private sector. The Government also provided emergency lending and equity contributions to nonfinancial public corporations from 1981 to mid-1983 (Nascimento 1991).

However, increasing uncertainty in the political climate and unfavorable external conditions caused a balance of payments crisis in the second half of 1983. Faced with these adverse developments, the Government declared a moratorium on external debt repayments on October 1983. This renewed the run on banks and deprived the Philippines from external financing.

The CBP injected reserve money to meet the increase in currency demand and provided extensive monetization of the fiscal deficit. This policy stance caused inflation to jump from 12 percent in 1983 to 50 percent in 1984, and led to a crowding out of the private sector. Inflationary pressures and accelerated depreciation in the Peso in 1983 and 1984 exacerbated financial difficulties of the corporates and increased distress among banking institutions.

The Government extended emergency lending and equity contributions to Government financial institutions from 1983 to 1985. The assistance aimed at financing acquisitions of distressed institutions and facilitating the conversion of debt owed to Government financial institutions into equity (Nascimento 1991).

The volume of CBP assistance soared from 3,054 million Pesos in 1981 to 13,549 million Pesos in 1985 (Nascimento, 1991). The financial crisis, which erupted in 1981 and lasted until mid-1987, resulted in a major contraction in the financial system. In total, the authorities intervened with 128 rural banks, 32 thrift institutions and 2 private banks. The Government-owned commercial banks, PNB and DBP, became practically insolvent in 1986 and their non-performing assets were transferred to the Asset Privatization Fund, a special purpose entity created to manage impaired assets. Between 1985 and 1986, CBP finally brought inflation under control by maintaining a tight policy.

The Mexican Debt Crisis of 1981-82

The intrigue and distinction of the Mexican debt crisis rest with its globally systemic nature that necessitated a complicated multi-stakeholder coordination and co-financing mechanism. This mechanism involved, in addition to Mexican authorities, the US Government, multilateral organizations, especially the IMF and the Bank of International Settlement (on behalf of main central banks), and commercial banks, both large and small. Significant linkages to the global financial system implied serious implications of a Mexican default to its commercial creditors; indeed, this fact ironically bestowed some leveraged on the Mexican negotiating position. The role of commercial banks in this mechanism can be considered as a progenitor of later participations in crisis resolutions (i.e., Greece, bail ins etc.).

In 1970s, on prospects of expanded volumes of oil exports, the Mexican Government borrowed heavily in foreign currency from commercial markets to finance a rapid rise in public expenditures (Dornbusch and Werner 1994; van Wijnbergen 1991). The rise in expenditures stoked inflationary pressures, caused an appreciation in the real exchange rate and led to a rapid accumulation of debt; inflation averaged 20.6 percent over the 1972–1981 period (Dornbusch and Werner 1994). Meanwhile, the external debt of the public sector, a significant part of which was short-term, increased at an annual rate exceeding 30 percent from US$4 billion in 1973 to US$43 billion in 1981 (Boughton 2001).

The Mexican economy faced a significant external shock as the price of oil, its major export, declined by 65 percent between 1981 and 1986 (Cantu, Park and Tornell 2015) due to a softening in the demand for oil (Boughton 2001). The tightening of monetary policy in the US and Europe—in a bid to combat inflation—in the late 1970s pushed world interest rates higher than 15 percent (Cantu, Park and Tornell 2015) exacerbating Mexico's financing difficulties.

On February 17, 1982, the authorities announced that the central bank will temporarily withdraw from the foreign exchange market. The Peso immediately depreciated by more than 40 percent (Boughton 1991), worsening Mexico's external debt servicing prospects. By April 1982, capital flight accelerated and Mexico's largest conglomerate, Alfa Industrial Group, defaulted on debt payments of US$2.3 billion (Boughton 1991).

On April 20, Mexico's Minister of Finance, Silva Herzog, announced a stabilization program that lowered the fiscal deficit by 3 percent by year-end. This announcement, however, was insufficient to

stem the crisis. Faced with dwindling foreign currency reserves, the Bank of Mexico drew US$800 million on a swap line with the Federal Reserve. A large debt repayment was looming in August 1982 and prospects for meeting this obligation appeared impossible (Oks and van Wijnbergen 1994). In July, commercial banks expressed increasing reluctance to roll over their maturing debt or to extend more funding to Mexico. This caused a widening in spreads relative to the LIBOR.

Mexico's political transition, from outgoing President Lopez Portillo to President-elect Miguel de La Madrid following presidential elections on July 4, 1982, complicated and increased vagueness around political consensus on a crisis management strategy. It was not clear the extent to which Herzog had a political mandate from his superiors to structure a strategy and negotiate with the IMF, US and other counterparts; decisions made in Mexico City contradicted those made by the Mexico negotiating team (Boughton 1991).

By August, the crisis was in full swing. On August 4, 1982, the Bank of Mexico drew a three-month loan of US$700 million on a swap line with the Federal Reserve. A dual exchange rate system was announced on August 5 with the aim of restricting speculative capital flows. At that point, it became apparent that Mexico's debt problems could not be resolved solely via negotiations with commercial creditors. Instead, on August 12, authorities closed the foreign exchange market, restricted banks' foreign exchange operations to the Bank of Mexico at a rate that was less favorable than the market rate, and paid out dollar-denominated deposits in Pesos. In addition, commercial creditors, the US Treasury, and the Federal Reserve were notified that Mexico is unable to honor the principal debt payment.

The implication of a Mexican default on its international commercial creditors directly threatened the global financial system. Faced with that fact, a concerted, multilateral funding effort was required to stem the crisis. Such an effort was underway by August 15. The US Treasury extended a line of credit of US$1 billion to Mexico, while the US Department of Agriculture offered credit guarantees of US$1 billion on August 15. A US$925 million bridge loan by the

Bank of International Settlements was announced on August 28. The IMF conditioned a Mexico program on a clear contribution by private creditors, which involved rolling over the debt and extending further credit to close a US$ 7 billion funding gap. Once this was secured, an IMF Extended Fund Facility (EFF) of US$3.75 billion was announced on December 23.

The Chilean Banking Crisis of 1981

Following the overthrow of the left-leaning, democratically elected President Salvador Allende by General Augusto Pinochet on September 11, 1973, Chile embarked on an intensive market-oriented liberalization of the economy; indeed, "the dictatorship that supplanted Allende used its powers to open the economy and to give market economics as free a rein as Latin America had ever seen" (Boughton 2001, pg. 346). This developed to be one of the more prominent macroeconomic liberalization case studies, especially espoused by free-market proponents.

Prevailing conditions at the time of the coup included a stagflationary economy with rising government expenditures, import controls and an overvaluation of the currency, with black-market rates that were over 10 times the official rate. Pinochet handed economic management to the so-called "Chicago boys"—a group of Chilean economists educated at the Department of Economics of the University of Chicago. The economic team, led by finance minister Sergio de Castro, undertook fiscal consolidation and structural reforms that succeeded in raising growth to 7.5 percent. The reform program was supported by the IMF in January 1974 via a one-year stand-by arrangement (SBA) of about $95 million as well as a Compensatory Financing Facility (CFF) that allowed for weathering the effects of export shortfalls and the 1973 oil supply shock.

The economic team proceeded with the liberalization of domestic markets, including the following: removal of controls on interest rates and credit growth; lowering of reserve requirements; reduction of barriers to entry into the banking sector, including for foreign banks; the privatization of previously nationalized banks; open access to foreign borrowing by private banks and businesses. Chile, however,

did not adequately adapt and update its supervisory capabilities and prudential regulations over the financial sector; "supervision continued to focus on reviewing compliance with accounting rules and related regulations, but did not concentrate on the overall risks affecting the operations of each bank" (Larrain 1989, page 10).

Starting in 1978, these changes resulted in a substantial accumulation of foreign currency debt by the private sector. Buoyed by the high economic growth, on June 29, 1979, the crawling peg regime was replaced with a firm peg. The move to a firm peg aimed at establishing a nominal anchor to counter stubbornly high inflation rates. Nonetheless, inflation and inflation expectations continued to be elevated and the firm peg resulted in a further loss of competitiveness and a widening current account deficit. Indeed, the current account deficit stood at 18.9 percent of GDP in 1981 (Larrain 1989).

Toward end-1981, domestic and external factors helped plunge the economy into a recession and made the debt burden more formidable. Difficulties included a decline in copper prices, Chile's main export. Further, an increase in global interest rates stalled the domestic credit boom and led to soaring domestic real interest rates in a bid to stanch capital flight. By year-end, the current account deficit stood at 15 percent of GDP and the annual lending rate reached 63 percent (Boughton 2001). This made the servicing of bank loans more challenging for debtors and forced the central bank to supply liquidity to the banking sector.

A systemic banking crisis was in full swing by November 1981 (Laeven and Valencia 2014); eleven financial institutions were intervened between 1981 and 1982 and eventually liquidated (Larrain 1989). These institutions accounted for about 14.5 percent of deposits in the banking sector. The two largest banks were put into receivership and their assets were transferred to other institutions. The government and shareholders absorbed the losses of the failed institutions and depositors were compensated.

The pressures on a weakened banking sector were exacerbated by adverse macroeconomic developments in 1982 and 1983. Rising fears of an impending devaluation were met with a cabinet shuffle on April 11, 1982, aiming at shoring up confidence. Despite official reaffirmations of the peg, authorities could not honor this commitment; on June 13, 1982, the Minister of Economy, Luis Francisco Danus, announced a devaluation in the Peso of about 18 percent vis-à-vis the dollar. Danus also announced that the Peso would continue to be depreciated at a fixed rate vis-à-vis a basket of the currencies. The crawling peg regime subsequently collapsed on August 5, 1982 causing a run on bank deposits and forcing the authorities to float the Peso.

The depreciation of the Peso severely hampered firms' ability to repay or service their foreign currency debts to the banking sector. Non-performing loans soared from 2.3 percent in 1981 to 18.4 percent in 1983. Domestic banks borrowed more in foreign currencies to honor their obligations to foreign banks.

On January 10, 1983, Chile secured a 24-month SBA from the IMF in the amount of US$550 million, and drew an additional US$325 million CFF. This, however, was insufficient to reverse the spiral. On January 14, eight financial institutions (seven banks and one finance company) became insolvent and required intervention, 3 of which were subsequently liquidated. A bank holiday was declared. At that stage, the IMF program was off track.

On March 22, 1983, the new finance minister announced an emergency economic program, which consisted of accelerating the Peso's devaluation, fiscal measures and the tightening of foreign exchange controls. In addition, a US$1.3 billion funding and public debt rescheduling package, supplanted with a bridge loan from the Bank of International Settlements, was agreed upon with the banks. In light of the agreement with the banks, the IMF disbursed based on a new shadow program on July 27.

Efficient and sensible restructuring of the banking sector and the credit portfolio were critical for an accelerated recovery. This included bank re-capitalization and incentives for recouping bad loans. Further, debt relief was offered to borrowers who were assessed to be "productive." These interventions were expensive; the cost of foreclosure of insolvent institutions was 10.6 percent of the GDP and the cost of portfolio purchase under conditions of repurchase reached 6.7 percent of the GDP (Sanhueza 2001).

The Venezuelan Banking Crisis of 1994

In the period preceding Venezuela's financial crisis, the country's banking system was oligopolistic in nature, composed of a large number of specialized banks belonging to financial groups that were ultimately owned by a few individuals. This concentration encouraged lax supervision, resulting in low capitalization and incentives to divert losses and problem loans to offshore branches, which were subject to even less supervision. This created large off-balance sheet items for Venezuela's financial sector, which was not monitored by authorities. Moreover, the share of state banks was relatively low compared to other Latin American economies; as of June 1993, private banks held about 90 percent of total assets, with the largest six banks holding 52 percent of the total (Garcia-Herrero 1997).

The state of the macroeconomy in the 1980s reflected anemic growth and rising inflation. This resulted in negative real interest rates causing disintermediation and capital outflows; in the late part of the decade, large amounts of deposits were transferred to banks' off-shore facilities. In 1989, the Venezuelan government, in coordination with the IMF, launched a macroeconomic adjustment program in a bid to stimulate the economy. The program consisted of abandoning interest rate controls and shifting to indirect monetary policy tools, as well as the unification and floating of the Bolivar.

Nonetheless, the resurgence of inflationary pressures led the Venezuelan authorities to reinstate the peg in 1990. Two coup attempts in 1991 and political instability throughout 1992 aggravated capital flight and made the economy more vulnerable. An exchange rate crisis occurred in October 1992 following the loss of about US$1 billion in reserves (Garcia-Herrero 1997). The Venezuelan economy depended heavily on oil exports and the weakening demand for oil in 1993, political uncertainty and loose fiscal policy weighed negatively on the economic outlook and exerted pressure on the Bolivar.

Amid these adverse conditions and due to a significant loss in reserves, the Central Bank of Venezuela (CBV) tightened monetary policy and adopted a crawling peg. The rising interest rates precipitated a recession, reduced bank lending and led to an increase in non-performing loans from 4 percent in 1991 to 10 percent in 1993 (Garcia-Herrero 1997). Higher interest rates did not curtail the outflow of deposits to the offshore banking sector. Indeed, deposits decreased in real terms by 11 percent in 1993 relative to 1991 (Garcia-Herrero 1997) and banks siphoned their liquidity to their offshore facilities. Despite liquidity injections by the CBV, rumors concerning the health of the banking sector continued unabated at end-1993.

The crisis broke with the collapse of Banco Latino in mid-January of 1994, the second largest bank in terms of deposits, prompting a run on two other banks that belonged to the same financial group. This affected over 10 percent of commercial banks' deposits. Hence, panic soon spread to other banks. The Deposit Guarantee Fund reacted by assisting the distressed banks and the CBV continued to inject liquidity into the banking sector. The resources of the Deposit Guarantee Fund were depleted by February 1994 and the foreign currency reserves of the CBV diminished considerably amid an unrelenting run on deposits and capital flight.

The authorities responded by passing a law on March 1994 to protect depositors, nationalizing Banco Latino and reopening it with withdrawals limits on deposits that were frozen, even those in off-balance sheet accounts. The Deposit Guarantee Fund injected the equivalent of 3.6 percent of GDP to cover the losses of Banco Latino (Garcia-Herrero 1997).

These actions proved insufficient to shore up the public's feeble confidence in the banking sector. Deposit runs continued in light of fears of partial deposit freezes, devaluation and exchange rate controls. When the CBV ceased supplying the Deposit Guarantee Fund with liquidity in June 1994, eight distressed financial institutions, accounting for 21 percent of deposits, had to be intervened despite a massive liquidity injection of 6 percent of GDP by that date (Garcia-Herrero 1997). In an attempt to restore confidence in the banking sector, the authorities established a Financial Emergency Board. However, the financial distress of the Deposit Guarantee Fund

continued to weigh heavily on confidence in the public sector.

In the following weeks, capital flight led to a large loss of reserves at the CBV. The authorities responded by fixing the exchange rate, and instituting price and exchange rate controls. Rumors surrounding two large banks—Banco Consolidado and Banco Venezuela—renewed the deposit run and the authorities decided to nationalize both banks. In December, two additional banks—Banco Progreso and Republica—were in distress. Authorities closed the former and nationalized the latter. Further, the liabilities of Banco Progreso were migrated to the nationalized banks (Banco Latino, Venezuela, Consolidado and Republica) without a corresponding transfer of assets (due to large one-sided off-balance sheet items in the form of deposits that suddenly appeared), thus placing enormous pressure on the four banks which continued to experience deposit withdrawals.

The passage of a Financial Emergency Law in July 1995, which gave broader powers to the Financial Emergency Board and eased restrictions on the liquidation of impaired assets at the Deposit Guarantee Fund, succeeded in mitigating, but not completely resolving, the banking crisis. Deposit flight continued, albeit at a slower rate, and a small bank was intervened in August 1995.

The Argentinian Financial Crisis of 2001-02

The Argentine Currency Board—via the so-called *Convertibility Law*—pegged the Argentine peso to the U.S. dollar at a parity from March 1991, until its failure in January 2002 (Spiegel 2002). Argentina adopted the hard peg in an attempt to eliminate hyperinflation and stimulate economic growth following a tumultuous economic performance in the 1980s. While successful initially, it became a main constraint on the economy's competitiveness in general, and on countercyclical macroeconomic management in particular. Moreover, there was a large degree of financial dollarization in the economy with the banking system functioning mainly in US dollars. The banking system's dollar-denominated, short-term liabilities exceeded its stock of dollar assets—namely

liquidity held by banks and international reserves. As the system lacked a lender of last resort in dollars, the financial system was inherently unstable, subject to bank runs (Kiguel 2016).

In the period just prior to the abandonment of the currency board (1998–2001), the economy witnessed a deep contraction, exposing mounting vulnerabilities in the economy. The hard peg and a lack of fiscal space precluded countercyclical macroeconomic measures. In response, in January 2001, the IMF approved an augmentation of financing, boosting an existing SBA program, to an equivalent of US$14 billion, centered on fiscal adjustment and accelerated structural reforms (IMF 2003). However, this failed to achieve stability. So did various attempts by the Government for voluntary debt arrangements. The IMF approved a new program, disbursing US$5 billion immediately and pledging another US$3 billion in support of prospective debt restructuring.

The crisis broke with a run on private deposits, which fell by more than US$3.6 billion (6 percent of the deposit base) over November 28–30, 2001. The authorities responded with a wide range of controls on banking and foreign exchange transactions. As the economy faltered, social and political unrest ensued, forcing the resignation of President de La Rua on December 20, followed by 4 other (Congress-appointed) Presidents within 3 weeks. On December 23, President Sáa declared a default on Government debt; on January 3, 2002, President Duhalde announced the end of the convertibility regime (IMF 2003).

The Uruguayan Banking Crisis of 2002

On the eve of the crisis, Uruguay's banking sector, which consisted of two large public banks—Banco de la Republica Oriental del Uruguay and Banco Hipotecario del Uruguay—and approximately thirty private banks, was widely regarded as sound and healthy (de la Plaza and Sirtaine 2005). The banking sector, however, was highly dollarized on the asset and liability sides and, although not as highly exposed to the sovereign as its neighbors, it was prone to external shocks and to cross-border bank runs due to its exposure to Argentina. On the liabilities side,

foreign currency deposits constituted 90 percent of total deposits in the system, with the latter amounting to US$ 15.4 billion (representing 83 percent of Uruguay's 2001 GDP). Further, 47 percent of foreign currency deposits were held by non-residents. The dollarization of assets reached 75 percent of the total loan book of the system, with the latter amounting to US$ 11.5 billion. The banking sector also suffered from currency mismatches as 71 percent of foreign currency loans were extended to residents, the vast majority of who earned in Pesos (de la Plaza and Sirtaine 2005, pg. 4–5).

A weakening macroeconomic environment weighed on banks' profitability. Uruguay had experienced a prolonged recession since 1999 and recurrent fiscal deficits were financed by issuing mostly foreign currency denominated debt. Government debt increased from 38 percent of GDP 1998 to 58 percent of GDP in 2001. The fixed exchange rate regime (Roubini and Sester 2004), which weakened external competitiveness, became untenable with devaluations in the currencies of Uruguay's two largest neighbors and trading partners, Brazil and Argentina, in 1999 and 2001, respectively. In the lead up to the banking crisis, the Uruguayan economy was characterized by a high level of foreign currency indebtedness and a significantly overvalued exchange rate vis-à-vis its major trading partners and the rest of the world.

The crisis broke in December 2001 when Argentina imposed deposit freezes ("el corralito"). Two of Uruguay's largest private banks—Banco Galicia Uruguay (a subsidiary of an Argentinian bank) and Banco Commercial—which combined accounted for around 20 percent of the deposit base, came under intense pressure due to their exposure to Argentinian depositors and debt. Deposit withdrawals continued unabated as the crisis in Argentina deepened.

By March 2002, deposit withdrawals, mostly by non-residents (i.e., Argentinians), amounted to 12 percent of the deposit base (de la Plaza and Sirtaine 2005). Argentina's tightening of its deposit freeze in February 2002 ("El Corralon") as well as Uruguay's downgrade from investment grade prompted a second wave of withdrawals by residents and non-residents totaling 18 percent of deposits in April and

May of 2002. The deposit withdrawals, which were no longer confined to specific banks, accelerated in May and June of 2002. On June 21, 2002, Banco de Monteviedo-Caja Obrera, the third largest private bank experienced severe liquidity shortages causing the authorities to intervene. As sentiment deteriorated further in July 2002 and government spreads widened, the bank run extended to local currency deposits. By the end of July 2002, a cumulative 38 percent of total deposits had been withdrawn from the system. The majority of banks had become technically insolvent (de la Plaza and Sirtaine 2005, pg. 11).

Faced with declining foreign currency reserves due to liquidity support to the banking sector, the authorities were forced to abandon the crawling peg. As a result, the Peso immediately depreciated by 27 percent forcing the authorities to declare a five-day banking holiday on July 30, 2002; by then, the Peso had lost 57 percent of its value.

The bank run had turned into a system-wide credit crunch; credit to the non-financial sector shrunk by 37 percent in 2002, greatly contributing to a GDP contraction of 10.7 percent for that same year (de la Plaza and Sirtaine 2005, pg. 11). The two public banks were in a perilous position. The Banco Galicia Uruguay had been suspended and the government took control of the Banco Commercial and Banco de Montevideo-Caja Obrera.

In the first stage, the authorities' response to the crisis consisted of: provision of ample liquidity support via already established lender of last resort facilities; the restructuring and/or liquidation of troubled institutions; and the expansion of the crawling exchange rate band from 6 to 12 percent. While this response appeared to stem cross-border bank run, the deepening of the crisis in June and July 2002 compelled the authorities to scale up and better target their response.

The central bank of Uruguay subsequently prioritized liquidity support to core banks, which played an instrumental role in the payment system; non-core banks, which were mostly Uruguayan branches of foreign banks, were to rely on liquidity support from their headquarters abroad. In light of the central bank's diminishing scope to act as a lender of last resort, the authorities established in June 2002 a

US$2.5 billion facility, the Fondo para la Fortificacion del Sistema Bancario (FFSB), to provide equity and liquidity support to the core banks. The FFSB was funded by an augmentation of the SBA with the IMF, other multinational institutions and the government.

The FFSB ultimately proved to be insufficient and was suspended. Following the five-day bank holiday that was declared on July 30, the authorities announced on August 5, 2002 the creation of US$1.4 billion stabilization fund, the Fund for the Stability of the Banking System (FSBS), that was funded by the IMF, the World Bank and the Inter-American Development Bank (IADB). The FSBS was sufficient to fully back the remaining US$ deposits at core banks (Seeling 2007; de la Plaza and Sirtaine 2005). The establishment of the FSBS, coupled with maturity extensions of dollar deposits in the public banks and changes to macropru-dential regulations, succeeded in stopping the bank run. The IMF's exposure (of US$1.3 billion) to Uruguay, relative to GDP, was its largest to date (Seeling 2007).

The Greek Financial Crisis 2009

Greece's accession to the European Monetary Union (EMU) in 2001 did not correct structural imbalances that included large internal and external deficits coupled with a low growth environment. Public sector net borrowing averaged around 7 percent of GDP annually in the Euro-but-pre-crisis period (2002–2008), compared to 6.7 percent in the pre-Euro period (1994–2000). Public debt remained relatively stable over the former period fluctuating between 100 and 110 percent of GDP. Externally, the current account deficit rose from a pre-Euro average of 3.3 percent of GDP to Euro-pre-crisis average of 10.5 percent. Moreover, external debt also rose decidedly from about 100 percent of GDP end-2003, to 133 percent by end-2008. Clearly, the EMU facilitated easier access to foreign financing for both the public as well as the private sectors; by 2009, private sector external debt stood at 175 percent of GDP (IMF 2017a). The adoption of the Euro also adversely affected the Greek economy's competitiveness relative to its trading partners, given that wages in the European periphery countries rose relative to the core countries (Hale 2013). Hence, on the eve of the

crisis, Greece was gripped with deep twin structural deficits, lack of competitiveness as wage growth outpaced productivity growth and a real exchange rate overvaluation (IMF 2012a).

The onset of the global financial crisis exacer-bated the mounting imbalances of the Greek economy. After the failure of Lehman brothers in September 2008, the spread between the Greek Government bonds and the German bunds soared to 100 basis points (IMF 2013) and led to downgrades by Standard and Poor's. A main trigger to the Greek episode was data revision by the authorities in October 2009, which entailed a sizeable increase in the projected fiscal deficit from 4 to 12.5 percent of GDP.[92] This roiled markets further, weakened confidence in the Greek economy and prompted a downgrade by Fitch (IMF 2013). The loss of confidence in the Greek economy prompted capital outflows from the banking sector estimated at 30 percent of the deposit base. It also suspended Greece's access to financial markets by significantly widening yields on Greek bonds to unaf-fordable rates.

Given that Greece is an EMU member, a nominal currency devaluation that corrects the built-up imbalances was not possible. Instead, under *the Troika* of the IMF, the European Commission and the European Central Bank (ECB), Greece underwent a very sharp internal devaluation, including a reduction in the wage bill and pension benefits. A deep reces-sion ensued over the next decade.

In return, the Greek authorities secured a €30 billion SBA from the IMF in May 2010, complemented with a cooperative package of financing from the European Union amounting to €110 billion (IMF, 2012b). The SBA was underpinned by a stringent fiscal consolidation program that aimed at putting Greek debt on sustainable footing. However, key SBA macro-fiscal targets, namely, fiscal and current account indicators, failed to be met. The SBA was subsequently cancelled in 2012 and was replaced with an Extended Fund Facility (EFF) arrangement

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[92] The data revision came amidst concerns raised by Eurostat—the statistical office of the European Commission—regarding the quality of Greece's fiscal data on five occasions over the period 2005–2009.

on March 15, 2012, also under *the Troika*. The EFF arrangement included financing of about €173 billion over four years.

Critically, and as a prior action for the EFF, a Private Sector Initiative (PSI) was announced on June 2011 for a voluntary debt swap of Greek sovereign bonds involving a haircut on private creditors who were represented by the Institute of International Finance. This haircut, which was subsequently implemented on March 2012, was equivalent to a 53.5 percent cut in the face value (principal) of the bonds, corresponding to an approximately €107 billion reduction in Greece's debt stock.[93]

The internal adjustment proved harsh and counter-productive, as macro-fiscal targets remained elusive due to unaccounted for economic contractions and an unsustainable public debt that persisted despite the PSI. This translated into social pain and political instability. A banking sector crisis ensued in 2015, which required the introduction of capital controls. Once again, the EFF program faltered and was eventually cancelled in January 2016 (IMF 2017a). The prolonged economic contraction helped drive the debt-to-GDP ratio to a peak of 180 percent of GDP in 2016. In July 2017, the IMF approved a precautionary €1.6 billion SBA for Greece (IMF 2017b). This time the program explicitly noted that, without debt relief, Greece's debt would continue to be unsustainable.

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