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The Great Denial

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The Great Denial

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Le Grand Déni

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ACRONYMS

| | | | |
|-------|---|---------|------------------------------------|
| AA | EU-Lebanon Association Agreement | GNI | Gross National Income (per capita) |
| ADL | Autoregressive Distributed Lag | GNP | Gross National Product |
| AER | Average Exchange Rate | GOL | Government of Lebanon |
| ARMA | Autoregressive Moving Average | IFS | International Financial Statistics |
| BdL | Banque du Liban | IMF | International Monetary Fund |
| BNR | Banknote Rate | LBP | Lebanese Pound |
| BoP | Balance of Payments | LEM | Lebanon Economic Monitor |
| CA | Current Account | MIDAS | Mixed-Data Sampling |
| CD(s) | Certificate of Deposit(s) | MoF | Ministry of Finance |
| CEDRE | Conférence Economique pour le Développement, par les Réformes et avec les Entreprises | NEER | Nominal Effective Exchange Rate |
| CAS | Central Administration of Statistics | NGO(s) | Non-governmental Organizations |
| CPI | Consumer Price Index | NPL(s) | Non-performing Loan(s) |
| CSI | Crisis Severity Index | PEP(s) | Politically Exposed Person(s) |
| ECB | European Central Bank | PMI | Purchasing Manager's Index |
| EU | European Union | PoB | Port of Beirut |
| ERPT | Exchange Rate Pass Through | PM | Prime Minister |
| EdL | Electricité du Liban | pp | Percentage Points |
| EFF | Extended Fund Facility | RDNA | Rapid Damage and Needs Assessment |
| EFTA | The European Free Trade Association | REER | Real Effective Exchange Rate |
| ESSN | Emergency Crisis and COVID-19 Response Social Safety Net Project | SDR | Special Drawing Rights |
| FCV | Fragility, Conflict, and Violence | TB(s) | Treasury Bond(s) |
| FEVD | Forecast Error Variance Decomposition | TD(s) | Time Deposit(s) |
| FI(s) | Financial Institution(s) | UN | United Nations |
| FX | Foreign Exchange | US\$ | United States Dollar |
| GAFTA | Greater Arab Free Trade Agreement | VAT | Value Added Tax |
| GCI | Global Competitiveness Index | VAR | Vector Autoregression |
| GDP | Gross Domestic Product | VEC | Vector Error Correction |
| | | WEO | World Economic Outlook |
| | | XM-2021 | First x months of 2021 |
| | | yoy | Year over Year |

PREFACE

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

The *Lebanon Economic Monitor* is a product of the World Bank's Lebanon Macroeconomics, Trade and Investment (MTI) team. It was prepared by Wissam Harake (Senior Economist), Naji Abou Hamde (Economic Analyst) and Ibrahim Jamali (Consultant), with contributions from Lars Jessen (Lead Debt Specialist), Ulle Lohmus (Senior Financial Sector Economist), Ganesh Kumar Seshan (Senior Economist), and Stefania Rodica Cnobloch (Consultant). The Special Focus: Searching for the External Lift in the Deliberate Depression, has been

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

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

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EXECUTIVE SUMMARY

The scale and scope of Lebanon’s deliberate depression are leading to the disintegration of key pillars of Lebanon’s post-civil war political economy. Our Fall 2020 issue of the Lebanon Economic Monitor (LEM hereafter) titled *The Deliberate Depression* argued that the depression was self-imposed, or more precisely, imposed onto the general population by the elite that has long ruled the country and captured the state and its associated economic rents (the role of elite capture as a constraint to development in Lebanon was a central thesis of the 2016 *Lebanon Systematic Country Diagnostic* (World Bank). This capture persists despite (1) a crisis which we estimated to potentially rank among the top three most severe economic collapses worldwide since the 1850s, (*Lebanon Sinking (to the Top 3)*), Spring 2021 LEM); and (2) non-confessional and, at times, massive popular movements. The elite’s preference has been to hold onto power and its rents—even as these shrink *comme une peau de chagrin*—and this entails preventing a recovery by eluding fundamental reforms to the unsustainable and now failed post-civil war development model.

Real GDP is estimated to decline by 10.5 percent in 2021, on the back of a 21.4 contraction in 2020. In fact, Lebanon’s GDP plummeted from close to US\$52 billion in 2019 to a projected US\$21.8 billion in 2021, marking a 58.1 percent contraction.

This represents the highest contraction in a list of 193 countries. The deliberate depression is creating long-lasting scars on the Lebanese economy and society: basic public services are failing; increasing numbers of Lebanese are migrating, especially those that are highly skilled. Meanwhile, the poor and the middle class, who were never well served under this model in the first place—the country was one of the most unequal in the world pre-crisis (Assouad 2017)¹—are carrying the main burden of the crisis. All components of GDP, bar net exports, are expected to continue to be negatively contributing to growth in 2021.² A scarce source of growth is the trade in services balance, led by the tourism sector. Tourist arrivals surged by 101.2 percent over the first seven months of 2021 (7M-2021). In our Special Focus, we analyze in detail the reasons for the weaker than expected increase in exports considering the Lebanese lira’s sharp depreciation. Private consumption continues to suffer heavily, having taken a severe blow since the eruption of the crisis in end-2019.

¹ Assouad, Lydia. 2017. *World Bank Rethinking the Lebanese Economic Miracle: The Extreme Concentration of Income and Wealth in Lebanon 2005–2014*, World Inequality Lab Working Paper No. 2017/13.

² It is important to note that, over the past couple of years, net exports contributed positively to growth due to a collapse in domestic demand, which in Lebanon has a high import content.

Monetary and financial turmoil along with surging inflation continue to drive crisis conditions.

The exchange rate further deteriorated in 2021, with the US\$ banknote rate depreciating by 211 percent (year-on-year – yoy) over the first 11 months of 2021 (11M-2021), breaching repeatedly the LBP22,000/US\$ threshold.³ This is within a multiple exchange rate system that also includes the official exchange (LBP1,507.5/US\$), and central bank (Banque du Liban – BdL), administered lower rates. Overall, the World Bank Average Exchange Rate⁴ depreciated by 219 percent (yoy) over 11M-2021. Exchange rate pass through effects have implied surging inflation, which is estimated to average 145 percent in 2021—the 3rd highest globally after Venezuela and Sudan. After falling to 100.6 percent (yoy) by June 2021, inflation rose again to 173.6 percent (yoy) in October. The surge since June is linked to the steady removal/fading of the FX subsidy on imported goods. We estimate the exchange rate pass through coefficient at 59–77 percent.⁵

Public finances improved in 2021 as spending collapsed faster than revenue.

Revenues are projected to almost halve as a ratio of GDP, from an already low 13.1 percent in 2020 to a mere 6.6 percent in 2021—this is the third lowest revenue ratio worldwide in 2021, ahead of only Somalia and Yemen. The expenditure contraction was even more pronounced, shrinking by 9.4 percentage points (pp) to 7 percent of GDP in 2021. This partly reflects low interest payments due to the Eurobond default and a favorable arrangement with BdL on domestic debt as well as drastic cutbacks in primary spending (these fell by 4.2 pp of GDP, over the first six months of 2021). As a result, we project the overall fiscal (primary) balance to reach –0.4 (0.2) percent of GDP in 2021, compared to –3.3 (–0.8) percent in 2020.

The sudden stop in capital inflows and the large current account (CA) deficit continued to steadily erode BdL's gross foreign exchange (FX) reserves. The CA deficit-to-GDP ratio remains broadly unchanged in 2021 at a projected 9.8 percent as strong remittances and tourism offset a wider trade deficit in goods. A widening trade-in-goods deficit-to-GDP-ratio in 2021 is largely driven by

a sharp decline in US\$ GDP (a denominator effect). This is expected to be offset by an improving trade-in-services balance, buoyed by the strong recovery in tourism. By September 2021, gross FX reserves (excluding gold reserves) at BdL reached US\$18.8 billion, declining by US\$5.3 billion since end-2020. Meanwhile, required reserves on banks' customer FX deposits is estimated at US\$14.8 billion. BdL does not publish net reserves, but these are estimated to be negative.

As repeatedly called for, Lebanon urgently needs to adopt and implement a credible, comprehensive, equitable reform plan if it is to avoid a complete destruction of its social and economic networks and immediately stop irreversible loss of human capital.⁶ As detailed and called for in our previous LEMs, this strategy would be based on:

(i) a new monetary policy framework that would regain

³ The new year heralded an unfortunate, albeit not entirely unanticipated milestone for the Lebanese economy; on January 4, 2022, the US\$ banknote exchange rate breached the LBP30,000/US\$ mark for the first time.

⁴ Since the Spring 2021 LEM, we have adjusted the AER to account for changes in the FX subsidy, including the divergence of coverage for fuel and medications. For a more detailed explanation, please see footnote 18.

⁵ That is, if the average exchange rate depreciates by 100 percent, inflation would rise by between 55 to 77 pp.

⁶ The World Bank has produced a series of publications/policy notes which detailed specific structural and sectoral reforms that could have helped achieve a soft landing prior to the crisis. These include:(1) World Bank (2016), *Priority Reforms for the Government of Lebanon*, December 2016; (2) Harake, Wissam and Christos Kostopoulos (2018), *Strategic Assessment: A Capital Investment Plan for Lebanon*, World Bank Group, Washington DC World Bank (2018); (3) *De-Risking Lebanon*, the Lebanon Economic Monitor, Fall 2018 Issue. In subsequent failure for the Government to de-risk the economy, Bank also presented publications that identified measures that addressed crisis conditions. Specifically, we refer you to:(1) World Bank (2019), *When Gravity Beckons*, the Lebanon Economic Monitor, Fall 2019 Issue; (2) World Bank (2020), *The Deliberate Depression*, the Lebanon Economic Monitor, Fall 2020 Issue; and (3) World Bank (2021), *Lebanon Sinking (To the Top 3)*, the Lebanon Economic Monitor, Spring 2021 Issue.

confidence and stability in the exchange rate; (ii) a debt restructuring program that would achieve short-term fiscal space and medium-term debt sustainability; (iii) a comprehensive restructuring of the financial sector in

order to regain solvency of the banking sector; (iv) a phased, equitable, fiscal adjustment aimed at regaining confidence in fiscal policy; (v) growth enhancing reforms; and (vi) enhanced social protection.

الموجز التنفيذي

العالمية (أسود، 2017)⁷. ويُتوقَّع أن تواصل مكُونات إجمالي الناتج المحلي كافةً، باستثناء صافي الصادرات، المساهمة بشكل سلبي في النمو في العام 2021⁸. ويُعتَبَر الميزان التجاري في الخدمات، على رأسها السياحة، مصدر مُو نادراً. فقد ارتفع عدد السائحين الوافدين بنسبة 101.2 في المئة خلال الأشهر السبعة الأولى من العام 2021 (2021-7M). وفي موضوعنا الخاص في هذا العدد، نحلّل بشكل مفصّل الأسباب وراء الإرتفاع الأضعف من المتوقع في الصادرات على الرغم من التدهور الحاد في قيمة الليرة اللبنانية. ولا يزال الاستهلاك الخاص يعاني بشدة، بعدما تعرّض لضربةٍ قويةٍ منذ اندلاع الأزمة في نهاية العام 2019.

لا تزال الفوضى الماليّة والنقدية إلى جانب تضخّم متنامٍ تتحكم بظروف الأزمة. فقد تدهور سعر الصرف بشكل أكبر في العام 2021، مع تدهور سعر صرف الليرة اللبنانية مقابل الدولار الأميركي بنسبة 211 في المئة (سنوياً) على مدى الأشهر الأحد عشر من العام 2021، متجاوزاً خلالها عتبة الـ 22000 ليرة لبنانية للدولار الواحد⁹ بشكل متكرّر. ويندرج ذلك ضمن نظام أسعار صرف

إن حجم ونطاق الكساد المتعمّد في لبنان يؤدّيان إلى تفكّك الركائز الأساسية للاقتصاد السياسي لفترة ما بعد الحرب الأهلية. وكان مرصد الاقتصاد اللبناني الصادر في خريف 2020 بعنوان «الكساد المتعمّد» قد أشار إلى أن الركود كان مفروضاً بشكل ذاتي، لا بل فرضته على الشعب النخبة التي حكمت البلد لوقتٍ طويل وقبضت على الدولة ووضعت يدها على ريعها الاقتصادي (شكّلت قبضة النخبة التي تعيق التنمية في لبنان موضوع أطروحة أساسية للتشخيص الوطني المنهجي للبنان، البنك الدولي). ولا تزال هذه القبضة قائمة بالرغم من (1) أزمة قدرناها أن تكون من بين الانهيارات الاقتصادية الثلاثة الأكثر حدّةً عالمياً منذ الخمسينات من القرن التاسع عشر (لبنان يغرق (نحو أسوأ ثلاث أزمات عالمية)، نشرة مرصد الاقتصاد اللبناني، ربيع 2021)؛ و(2) تحركات شعبية غير طائفية وأحياناً واسعة وكثيفة. وفصّلت النخبة التمسك بالسلطة وبريعة - وإن كان هذا الأخير يتقلّص ويتلاشى بسرعة فائقة - ممّا يمنع التعافي من خلال الامتناع عن إدخال الإصلاحات الأساسية على نموذج التنمية لفترة ما بعد الحرب الأهلية الذي بات غير مستدام وفاشل.

يُتوقَّع أن يتراجع إجمالي الناتج المحلي الفعلي بنسبة 10.5 في المئة في العام 2021، إثر تقلّص بلغ 21.4 في المئة في العام 2020. وفي الواقع، تدهور إجمالي الناتج المحلي في لبنان من 52 مليار د.أ. في العام 2019 إلى ما يُتوقَّع أن يبلغ 21.8 مليار د.أ. في العام 2021، مما يشكل تقلّصاً نسبته 58.1 في المئة، ليشكّل أكبر تقلّص على لائحة تضمّ 193 بلداً. ويولّد الركود المتعمّد ندباتٍ طويلة الأثر على المجتمع والاقتصاد في لبنان: فالخدمات العامة الأساسية تنهار؛ وعدد اللبنانيين الذين يلجؤون للهجرة يزداد؛ لا سيّما ذوي المهارات العالية. وفي موازاة ذلك، تتحمل الفئات الفقيرة والمتوسطة العبء الأكبر للأزمة، وهي الفئات التي لم يكن النموذج القائم يلبي حاجاتها أصلاً - إذ كان لبنان من بين البلدان الأقل مساواةً في ما قبل الأزمة

⁷ أسود، ليديا (2017)، *World Bank Rethinking the Lebanese Economic Miracle: The Extreme Concentration of Income and Wealth in Lebanon 2005-2014*، ورقة عمل رقم 13/2017 صادرة عن World Inequality Lab.

⁸ تجدر الإشارة إلى أنه، على مرّ السنوات الأخيرة، ساهمت الصادرات الصافية في النمو بشكل إيجابي بسبب انهيار في الطلب المحلي الذي يعتمد على الواردات بشكل كبير في لبنان.

⁹ شهدت بداية العام الجديد حدتاً مؤسفاً، وإن كان متوقّفاً بعض الشيء، بالنسبة إلى الاقتصاد اللبناني: ففي 4 كانون الثاني 2022، تجاوز سعر صرف الليرة اللبنانية مقابل الدولار الأميركي عتبة 30000 ل.ل. للمرة الأولى.

د.أ.، متراجماً بـ5.3 مليار د.أ. منذ نهاية العام 2020. وفي موازاة ذلك، يُقدَّر الاحتياطي الإلزامي على ودائع عملاء المصارف بالعملات الأجنبية بـ14.8 مليار د.أ. ولا ينشر مصرف لبنان صافي الاحتياطي، لكن يُقدَّر أن يكون سلبياً.

كما سبق وحذّرنا مراراً وتكراراً، يحتاج لبنان بشكل عاجل إلى اعتماد وتنفيذ خطة إصلاحية موثوقة، وشاملة، وعادلة من أجل تفادي الانهيار الكامل للشبكة الاجتماعية والاقتصادية ووضع حدٍّ فوري لخسارة الرأسمال البشري الذي يسير في اتجاه لا رجعة فيه¹². وكما تمّ تفصيله والدعوة إليه في نشرتنا الاقتصادية السابقة، يجب أن تعتمد هذه الاستراتيجية على: (1) إطار سياسة نقدية جديد يُعيد الثقة والاستقرار إلى سعر الصرف؛ و(2) برنامج إعادة هيكلة الدين الذي من شأنه أن يحقق الحيز المالي على المدى القصير واستدامة الدين على المدى المتوسط؛ و(3) إعادة هيكلة شاملة للقطاع المالي من أجل استعادة ملاءة القطاع المصرفي؛ و(4) تصحيح مالي منصف وتدرجي يهدف إلى إعادة الثقة في السياسة المالية؛ و(5) إصلاحات معززة للنمو؛ و(6) تعزيز الحماية الاجتماعية.

¹⁰ منذ صدور نشرة مرصد الاقتصاد اللبناني (طبعة خريف 2021)، عدلنا متوسط سعر الصرف الذي يحتسبه البنك الدولي لمقابلة التغيرات في دعم سعر صرف الليرة مقابل العملات الأجنبية، بما في ذلك فارق التغطية عن المحروقات والأدوية. ومن أجل الاطلاع على شرح أكثر تفصيلاً، يُرجى الإحالة إلى الهامش رقم 22.

¹¹ أي في حال تدهور متوسط سعر الصرف بنسبة 100 في المئة، يرتفع التضخم بين 55 و77 نقطة مئوية.

¹² أصدر البنك الدولي سلسلة من التقارير/مذكرات السياسة التي توضح بالتفصيل إصلاحات هيكلية وقطاعية محددة كان من الممكن أن تساعد في تحقيق هبوط سلس قبل الأزمة. وتشمل هذه: (1) البنك الدولي (2016)، *Priority Reforms for the Government of Lebanon*. كانون الأول/ديسمبر 2016؛ (2) وسام حركة وكريستوس كوستوبولوس (2018)، *Strategic Assessment: A Capital Investment Plan for Lebanon* مجموعة البنك الدولي، واشنطن العاصمة؛ (3) البنك الدولي (2018)، *Risking Lebanon*. مرصد الاقتصاد اللبناني، عدد خريف 2018

ومع إخفاق الحكومة اللاحق في التخلص من مخاطر الاقتصاد، أصدر البنك أيضاً منشورات حددت التدابير التي عالجت ظروف الأزمة. على وجه التحديد، نحيل القارئ إلى: (1) البنك الدولي (2019)، *When Gravity Beckons*. مرصد الاقتصاد اللبناني، عدد خريف 2019؛ (2) البنك الدولي (2020)، *The Deliberate Depression*. مرصد الاقتصاد اللبناني، عدد خريف 2020؛ (3) البنك الدولي (2021)، *Lebanon Sinking (To the Top 3)*. مرصد الاقتصاد اللبناني، عدد ربيع 2021

متعدّدة يشمل أيضاً سعر الصرف الرسمي (1507.5 ل. ل. مقابل دولار أمريكي واحد)، بالإضافة إلى أسعار صرف أدنى وضعها مصرف لبنان (المصرف المركزي). وبشكل عام، تدهور متوسط سعر الصرف الذي يحتسبه البنك الدولي¹⁰ بنسبة 219 في المئة سنوياً خلال الأشهر الأحد عشر من العام 2021. وأدت تقلّبات سعر الصرف إلى زيادة التضخم الذي يُقدَّر بحوالي 145 في المئة في العام 2021 - وهو ثالث أعلى معدّل تضخم في العالم بعد فنزويلا والسودان. وبعد تراجعته إلى 100.6 في المئة سنوياً مع حلول حزيران 2021، ارتفع التضخم مجدداً ليلبلغ 173.6 في المئة (سنوياً) في تشرين الأول. ويرتبط الارتفاع هذا منذ حزيران برفع/تلاشي الدعم المستمر عن السلع المستوردة بالعملات الأجنبية. ويُقدَّر معامل انتقال تغيرات سعر الصرف بـ59-77 في المئة¹¹.

تحسّنت المالية العامة في العام 2021 مع تراجع الإنفاق بوتيرة أسرع من الدخل. ويُتوقَّع أن تتراجع المداخيل إلى النصف تقريباً نسبة إلى إجمالي الناتج المحلي، من نسبة منخفضة أصلاً بلغت 13.1 في المئة في العام 2020 إلى 6.6 في المئة في العام 2021 - وهو ثالث أدنى معدل دخل على المستوى العالمي في العام 2021، بعد الصومال واليمن. كما أن تقلص الإنفاق كان أكثر وضوحاً، فتراجع 9.4 نقطة مئوية ليلبلغ 7 في المئة من إجمالي الناتج المحلي في العام 2021. وبالعكس ذلك بشكل جزئيّ تسديدات فوائده منخفضة بسبب عدم سداد اليوروبوندز وترتيب مؤاتٍ مع مصرف لبنان على الديون المحلية، بالإضافة إلى التخفيضات الجذرية في الانفاق الأولي (التي انخفضت بمقدار 4.2 نقطة مئوية من إجمالي الناتج المحلي، على مدى الأشهر الست الأولى من العام 2021). ونتيجة لذلك، نتوقَّع بلوغ رصيد المالية العامة الكلي (الأولي) -0.4 - (0.2) في المئة من إجمالي الناتج المحلي في العام 2021، مقارنةً مع -3.3 - (0.8) في المئة في العام 2020.

إن التوقُّف المفاجئ في التدفقات الرأسمالية الداخلة والعجز الكبير في الحساب الجاري، استمرا في استنزاف إجمالي احتياطات النقد الأجنبي لمصرف لبنان على نحو مستمر. وبقيت نسبة عجز الحساب الجاري إلى إجمالي الناتج المحلي على حالها في العام 2021، عند معدل متوقَّع قدره 9.8 في المئة، مع تعويض التحويلات الكبيرة والسياحة عن عجز أكبر في تجارة السلع. ويعزى ارتفاع نسبة عجز التجارة في السلع إلى إجمالي الناتج المحلي في العام 2021 بشكل كبير إلى تدهور حاد في إجمالي الناتج المحلي بالدولار الأمريكي (أثر القاسم المشترك). ويُتوقَّع التعويض عن ذلك من خلال تحسن الميزان التجاري في الخدمات، مدفوعاً بالتعافي القوي في مجال السياحة. وبحلول أيلول 2021، بلغ إجمالي احتياطي النقد الأجنبي (باستثناء احتياطي الذهب) في مصرف لبنان 18.8 مليار

RÉSUMÉ ANALYTIQUE

L'ampleur et la portée de la dépression délibérée du Liban conduisent à la désintégration des principaux piliers de l'économie politique de l'après-guerre civile. Le rapport de suivi de la situation économique du Liban publié à l'automne 2020 (LEM ci-après), intitulé *La Dépression Délibérée*, fait valoir que la dépression est auto-imposée, plus précisément imposée à la population générale par l'élite qui a longuement gouverné le pays et mis la main sur l'État et ses rentes économiques (l'emprise de l'élite comme une entrave au développement au Liban est l'une des deux contraintes fondamentales identifiées dans le *Diagnostic National Systématique du Liban*, Banque Mondiale, 2016). Cette mainmise se poursuit malgré (1) une crise qui, selon la Banque mondiale, représente le troisième effondrement économique le plus sévère de par le monde depuis les années 1850 (*Le Naufrage du Liban (au Top 3)*, Printemps 2021, LEM); et (2) des mouvements populaires non-confessionnels, parfois massifs. L'élite a préféré s'accrocher au pouvoir et aux rentes du pays, alors même que ces dernières se réduisent tel une peau de chagrin, plutôt que d'engager des réformes qui seraient essentielles au modèle de développement de l'après-guerre civile, non viable et aujourd'hui non soutenable, entravant ainsi une relance.

Le PIB réel devrait chuter de 10,5 % en 2021, en sus d'une contraction de 21,4 % en

2020. Le PIB du Liban a en effet chuté de 52 milliards de dollars en 2019 à 21,8 milliards de dollars en 2021, soit une baisse de 58,1 %, ce qui représente la plus forte contraction enregistrée sur une liste de 193 pays. La dépression délibérée provoque des cicatrices indélébiles qui marquent la société et l'économie libanaises : les services publics de base s'effondrent ; un nombre croissant de Libanais émigrent, particulièrement ceux dotés de compétences de haut niveau. En parallèle, les classes pauvres et moyennes, à qui ce modèle n'a jamais bénéficié pour commencer – le pays ayant été l'un des plus inégalitaires dans le monde d'avant-crise (Assouad, 2017)¹³ – subissent le principal fardeau de la crise. Toutes les composantes du PIB, à l'exception des exportations nettes, devraient continuer de contribuer à la croissance d'une manière négative en 2021¹⁴. La balance des échanges de services, guidée par le secteur du tourisme, représente une rare source de croissance. Le nombre de touristes a augmenté

¹³ Assouad, Lydia (2017), *World Bank Rethinking the Lebanese Economic Miracle: The Extreme Concentration of Income and Wealth in Lebanon 2005–2014*, Note de travail No. 2017/13 du World Inequality Lab.

¹⁴ Il est à noter que, au cours des dernières années, les exportations nettes ont contribué d'une manière positive à la croissance en raison d'un effondrement de la demande domestique, qui dépend largement des importations.

de 101,2 % durant les sept premiers mois de 2021 (7M-2021). Dans notre Volet Spécial, nous analysons en détails les raisons pour lesquelles la hausse des exportations est plus faible que prévue, compte tenu de la forte dépréciation de la livre libanaise. La consommation des ménages continue de pâtir énormément, après avoir essuyé un revers cinglant depuis l'émergence de la crise vers la fin 2019.

Les turbulences monétaires et financières, ainsi que l'inflation croissante demeurent des facteurs de crise. Le taux de change s'est dégradé davantage en 2021 : durant les 11 premiers mois de 2021 (11M-2021) le taux de change de la livre libanaise s'est déprécié de 211 % par rapport au dollar américain (sur une base annuelle), franchissant à plusieurs reprises le seuil de LBP22,000/US\$¹⁵, et ce dans un cadre de système de taux de change multiples qui comprend également le taux de change officiel (LBP1,507.5/US\$) et celui moins élevé de la Banque du Liban (la Banque Centrale, BdL). En général, le taux de change moyen de la Banque Mondiale¹⁶ s'est déprécié de 219 % (sur une base annuelle) durant les 11 premiers mois de 2021 (11M-2021). Les fluctuations du taux de change ont largement contribué à l'envolée de l'inflation, estimée en moyenne à environ 145 % en 2021 — soit la plus élevée à l'échelle mondiale, après le Venezuela et le Soudan. Après avoir chuté jusqu'à 100.6 % (sur une base annuelle) en juin 2021, l'inflation a augmenté de nouveau pour atteindre 173.6 % (sur une base annuelle) en octobre. Cette envolée depuis juin est liée à la levée des subventions en devises étrangères sur les biens importés. Le coefficient de l'incidence des fluctuations du taux de change s'estimait à 59-77 %.¹⁷

Les finances publiques se sont améliorées en 2021 suite à un effondrement des dépenses plus fort que celui des revenus. Les revenus devraient baisser de moitié par rapport au PIB, passant d'un taux déjà bas de 13.1 % en 2020 à tout juste 6.6 % en 2021 — soit le troisième taux de revenu mondial le plus bas en 2021, après la Somalie et le Yémen. La contraction des dépenses a été encore plus prononcée, baissant de 9.4 points de pourcentage (pp) à 7 % du PIB en 2021. Cela reflète, en partie, des paiements d'intérêts bas en raison du nonpaiement des eurobonds et un arrangement favorable avec la

BdL concernant la dette domestique, ainsi que des réductions drastiques dans les dépenses primaires (celles-ci ayant baissé de 4.2 pp du PIB durant les six premiers mois de 2021). En conséquence, nous prévoyons un solde (primaire) fiscal général de -0.4 (0.2) % du PIB en 2021, à comparer avec -3.3 (-0.8) % en 2020.

L'arrêt soudain des flux entrants de capitaux et le large déficit du compte courant continuent d'éroder de manière soutenue les réserves brutes de change de la BdL. Le ratio du déficit du compte courant par rapport au PIB demeure inchangé en 2021, à un taux prévu de 9.8 %, le tourisme et les transferts significatifs venant compenser un plus grand déficit du commerce des biens. Le ratio du déficit du commerce des biens par rapport au PIB, en augmentation en 2021, est en grande partie dû à une baisse accrue du PIB en US\$ (effet dénominateur). Cela devrait être compensé par un meilleur solde du commerce des services, soutenu par une forte relance du tourisme. En septembre 2021, les réserves brutes de change (exception faite des réserves en or) de la BdL ont atteint 18,8 milliards de dollars, chutant de 5,3 milliards de dollars depuis la fin 2020. En parallèle, les réserves requises pour les dépôts des clients en devises s'élevaient à 14,8 milliards de dollars. La BdL ne publie pas les réserves nettes, mais celles-ci sont négatives (estimation).

Nous réitérons nos recommandations concernant l'urgence pour le Liban d'adopter et de mettre en œuvre un plan de réformes crédible, exhaustif et équitable, afin de prévenir un effondrement total du réseau socioéconomique et

¹⁵ La nouvelle année s'ouvre sur un événement malheureux, mais tout à fait prévisible pour l'économie libanaise : le 4 janvier 2022, le taux de change de la livre libanaise par rapport au dollar américain a dépassé le seuil de LBP30,000/US\$ pour la première fois.

¹⁶ Depuis l'édition Printemps 2021 du LEM, nous avons ajusté le taux de change moyen (AER) pour qu'il reflète les changements dans les subventions des devises étrangères, y compris la différence de couverture des hydrocarbures et des médicaments. Pour obtenir de plus amples détails, veuillez voir la note de bas de page 22.

¹⁷ C'est-à-dire, si le taux de change moyen se déprécie de 100 %, l'inflation augmentera entre 55 et 77 pp.

de mettre immédiatement un terme à la perte irréversible du capital humain¹⁸. Tel que détaillé et mentionné dans nos précédentes éditions de LEMs, cette stratégie serait basée sur : (i) un nouveau cadre de politique monétaire qui rétablira la confiance et la stabilité dans le taux de change ; (ii) un programme pour la restructuration de la dette qui garantirait une marge de manœuvre budgétaire à court terme et la durabilité à moyen terme ; (iii) une restructuration exhaustive du secteur financier afin de recouvrir la solvabilité du secteur bancaire ; (iv) un ajustement fiscal progressif et équitable visant à rétablir la confiance dans la politique budgétaire ; (v) des réformes visant à soutenir la croissance ; et (vi) une protection sociale améliorée.

¹⁸ La Banque mondiale a produit une série de publications/notes d'orientation détaillant les réformes structurelles et sectorielles spécifiques qui auraient pu contribuer à un atterrissage en douceur avant la crise, dont : (1) Banque mondiale (2016), *Priority Reforms for the Government of Lebanon*, décembre 2016; (2) Harake, Wissam et Christos Kostopoulos (2018), *Strategic Assessment: A Capital Investment Plan for Lebanon*, Groupe de la Banque mondiale, Washington DC (2018); (3) *De-Risking Lebanon*, the Lebanon Economic Monitor, numéro d'automne 2018. En raison de l'échec du gouvernement à réduire les risques pour l'économie, la Banque a également présenté des publications identifiant des mesures répondant aux conditions de crise. Plus précisément, nous vous renvoyons à : (1) Banque mondiale (2019), *When Gravity Beckons*, the Lebanon Economic Monitor, numéro de l'automne 2019; (2) Banque mondiale (2020), *The Deliberate Depression*, the Lebanon Economic Monitor, numéro de l'automne 2020; ET (3) Banque mondiale (2021), *Lebanon Sinking (To the Top 3)*, the Lebanon Economic Monitor, numéro du printemps 2021



I. THE POLICY CONTEXT

A deliberate and disorderly termination of the foreign exchange (FX) subsidy commenced in Spring 2021 and was in full force by the summer.¹⁹ FX subsidies on critical and essential imports have largely been removed, except for chronic and cancer medications. The path to the subsidy removal was opaque, inadequately coordinated between (caretaker) Government and the central bank, and critically, lacked timely alleviation/compensation measures.²⁰ In the Special Focus of *Lebanon Sinking (to the Top 3)*, the Bank examined Lebanon's FX subsidy and the challenges it posed, and presented a credible way forward, including its replacement with a more effective and efficient pro-poor (targeted) program. Instead, marginal disputes and political positioning replaced effective policy responses, helping to drain precious and scarce FX resources. Those benefiting were mostly importers, hoarders and smugglers, while the poor and vulnerable received a small and declining share of the benefit.

This induced severe market distortions for the subsidized products due to hoarding, price gouging and smuggling. Over the summer of

2021, acute shortages of fuel²¹ for both the private and public utilities led to severe electricity blackouts across the country; the public utility, Électricité du Liban (EdL), cut power supply to as little as 2 hours per day; private generators—long the private substitute that filled the gap (especially for those with means)—could only partially compensate and faced constraints in obtaining diesel fuel supply. Shortages in gasoline caused long queues for motor vehicles,

¹⁹ The World Bank presented an example of an orderly and coordinated end to the FX subsidy in the Special Focus section of: World Bank (2021), *Lebanon Sinking (To the Top Three)*, the Lebanon Economic Monitor, Spring 2021 Issue.

²⁰ While making some progress, the World Bank Emergency Social Safety Net (ESSN), which is a targeted cash transfer program, has yet to disburse to beneficiaries, partially due to slow progress by the authorities on meeting project conditionality. Meanwhile, the Government's Ration Card program, which is a non-targeted cash transfer program, remains at the design stages.

²¹ Supplies were available at inflated prices, which could only be afforded by a very few privileged consumers.

leading to disputes and even violence between those waiting. The medical sector also suffered unduly, due to scarcities in essential medications and medical services while facing COVID-19 conditions. While these distortions have since moderated, at the cost of surging price levels that have further shrunk residents' purchasing power.

More positively, on September 10, 2021, PM Mikati and President Aoun signed off on a new Government, following 13 months of vacuum at the executive branch. This was the third attempt following the designations for the premierships of Saad Hariri in October 2020, and prior to him, Mustapha Adib in August 2020. The previous Government under Hassan Diab had resigned in the aftermath of the August 4, 2020 Port of Beirut explosion. The new cabinet, however, has yet to take any decisive action. It also has only one female minister, a fact that underscores the severe gender imbalance in the Lebanese public domain. The Government is further constrained by a short mandate, as Parliamentary elections are due by May 2022. Nonetheless, the Government has highlighted several priorities, notably: (i) restarting discussions with the IMF for a program; (ii) increasing EdL's power generation to 10–14 hours per day; and (iii) operationalizing cash transfer programs.

In October 2021, the Lebanese authorities and the IMF resumed discussions, which were

interrupted for many months since their initial launch in May 2020. Earlier discussions stalled as differences and inconsistencies emerged within the Lebanon team regarding the previous Government's financial recovery program.

The Mikati Government has already been bogged down by political and geopolitical pressures. These include disagreements over the investigation of the Port of Beirut explosion, followed by a breakout of violence on October 14 that killed seven people along historically sensitive sectarian corridors.²² Further, Saudi Arabia, Bahrain, the United Arab Emirates (UAE) and Kuwait recalled their ambassadors/chargé d'affaires from Lebanon in end-October over a statement critical of the war in Yemen by the Lebanese Information Minister (prior to his appointment). Saudi Arabia also banned Lebanese imports²³ and, along with the UAE, banned citizens from visiting Lebanon. The Minister of Information subsequently resigned, prompting President Macron to mediate a truce during a visit for him to Saudi Arabia. Saudi Arabia has not yet reversed the above measures.

²² In fact, this is close to the location of the violent incident that led to the 1975 civil war.

²³ In April 2021, Saudi authorities had already announced the suspension of fruit and vegetable imports from Lebanon, following the seizure of drugs smuggled from/through Lebanon.

RECENT MACRO-FINANCIAL DEVELOPMENTS

Output and Demand

The compounded crises: the financial crisis, the COVID-19 pandemic and the Port of Beirut (PoB) explosion, have had staggered impacts on output, with differentiated magnitudes. Due to insufficient high frequency data, precise identification of each of those impacts is a challenging task. 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)²⁴

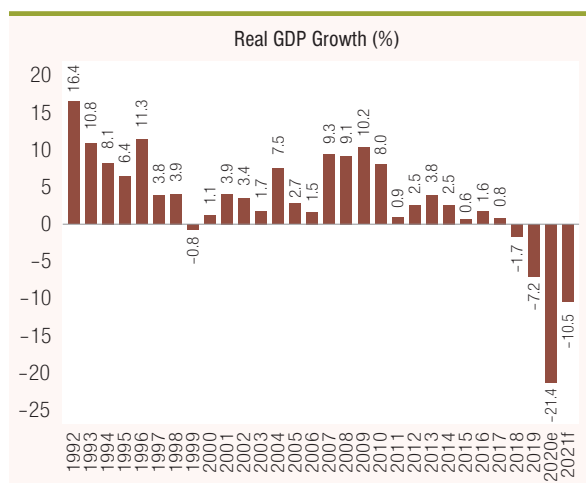
Real GDP is estimated to decline by 10.5 percent in 2021, on the back of a 21.4 contraction in 2020 (Figure 1). High frequency indicators support continued, albeit decelerated, contraction in economic activity. The BLOM-PMI index, which captures private sector activity, averaged 45.7 over the first eight months of 2021 (8M-2021) (<50

represents a contraction of activity), compared to 40.2 over 8M-2020. Meanwhile, the real estate sector has shown an improvement; over the first half of 2021 (H1-2021), cement deliveries—considered to be a proxy for construction activity—witnessed a rise of 9.5 percent (yoy), and construction permits—a leading indicators for future construction activity—increased by 203.7 percent (yoy). However, this increase is partially due to a low base effect: construction permits were 27 percent lower than their seven-year-average (2013-2019) over the first half of the year, while cement deliveries were 65 percent lower. On the other hand, throughout 2020 and 2021, real estate sales thrived as some depositors sought means to utilize their otherwise untransferable bank deposits.²⁵ In fact, revenues from real estate registration fees increased by 16.1 percent (yoy) in nominal terms over

²⁴ World Bank (2020), *Beirut Rapid Damage and Needs Assessment*, August 2020.

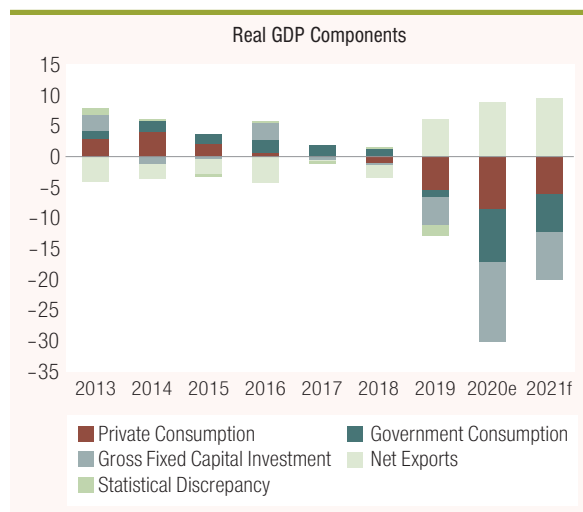
²⁵ The financial sector facilitated real estate purchases using pre-October 2019 dollar deposits under conditions of capital controls (and therefore, lack of alternatives to get those deposits out), leading to an increase in such purchases.

FIGURE 1 • While the Contraction in Real GDP Commenced in 2018, It Accelerated Sharply in 2020, and Is Expected to Persist in 2021



Sources: CAS and WB staff calculations.

FIGURE 2 • Net Exports Are Estimated to Have Been the Sole Positive Contributor to Real GDP in 2019 and 2020



Sources: CAS and WB staff calculations.

the first eight months of 2021 (8M-2021). Beyond the developments in the construction sector, the retail sector suffered sizable losses, due to a combination of the financial crisis and the COVID-19 lockdown measures; the BTA Fransabank retail trade index (in real terms) declined by 79.3 percent over Q1–2020.

Looking at GDP from the demand side, net exports are expected to continue to be the sole positive contributor to growth in 2021(Figure 2).²⁶ This is driven by an improvement in the trade in services balance, led by the tourism sector; tourist arrivals surged by 101.2 percent over the first seven months of 2021 (7M-2021) while hotel occupancy rates (published by Ernst & Young) rose by 23.7 percent (yoy) over 5M-2021.²⁷ Meanwhile, private consumption, which averaged 92.3 percent of GDP over the years 2015–18, has taken a severe blow since end-2019, the eruption of the crisis; Byblos Bank/AUB’s consumer confidence index declined by 65.1 percent (yoy) in the first nine months of 2020 (9M-2020; latest available).

Fiscal Developments

Early data from 2021 reveal drastic cutbacks in primary spending. Over the first six months of 2021

(6M-2021), total revenues declined by 2.4 pp (yoy) to register 3.5 percent of GDP, with tax revenues and non-tax revenues falling by 1.6 pp and 0.8 pp, respectively. This was more than offset by a larger decrease in total expenditures, falling 5.3 pp (yoy) in 6M-2021 to reach 3.4 percent of GDP. Expenditures benefitted from a declining debt service as a consequence of the default on foreign debt and a favorable arrangement with BdL on its holdings of Treasury Bonds (TBs);²⁸ (nominal) interest payments on domestic and foreign debt fell by 22.7 and 84.9 percent, respectively, over 6M-2021. Notably, primary spending also fell over the same period, decreasing by 4.2 pp (yoy) to 2.8 percent of GDP, driven by a 12.1 percent nominal decline in primary spending (i.e., the numerator) as

²⁶ It is important to note, that over the past couple of years, net exports contributed positively to growth due to a collapse in domestic demand, which is historically concentrated on imported goods.

²⁷ Hotel occupancy data excludes February 2021 and April 2021, as figures for these months were missing.

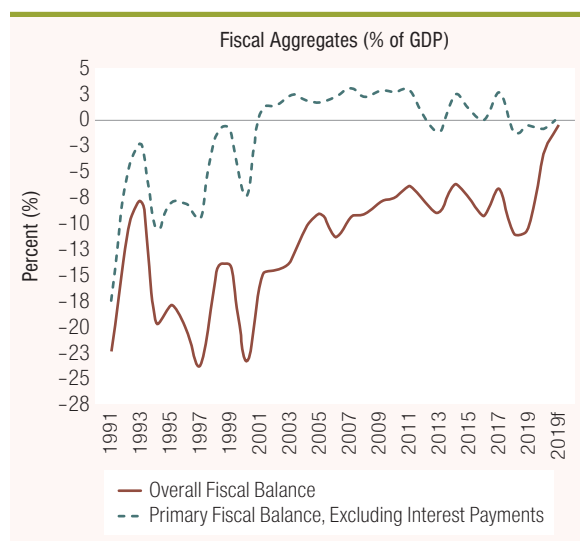
²⁸ In this arrangement, BdL would not receive coupon payments on TBs holdings as part of fiscal relief for the Government. This, however, pushes the cost of domestic debt to BdL’s income statement and balance sheet, both of which are in dire conditions

well as an inflation-driven increase in nominal GDP. When netting put transfers to the state-owned EdL, which fell by 0.4 pp of GDP over the same period,²⁹ primary spending fell by 3.9 pp of GDP (yoy). In fact, with inflation averaging 131.9 percent (yoy) over 6M-2021, real (non-EdL related) primary spending over this period contracted by 61 percent.

A substantial increase in nominal GDP—due to the steep growth in the GDP deflator that more than offset the contraction in real economic activity—is creating a denominator-led effect that adds to sharp declines in fiscal indicators as ratios of GDP. Despite the nominal increase in total revenues, they are expected to halve as a percentage of GDP from 2020 ratios to reach 6.6 percent of GDP in 2021. This is driven by several factors, including: (i) an inflation-driven increase in nominal GDP; (ii) failure to adjust taxes and fees valuations in line with inflation; (iii) weakened capacity in the revenue administration; (iv) lower collection of taxes on interest income due to declining deposits; and (v) a delay in tax declarations as one of COVID-necessary measures. However, this is more than offset by a sharp 9.5 pp of GDP decline in current spending, partially driven by the sharp cuts in primary spending as explained above. We project the overall fiscal balance in 2021 to be -0.4 percent of GDP, compared to -3.3 percent in 2020 and a pre-crisis medium-term average of -8.6 percent (Figure 3). The primary balance is also expected to improve, registering a small surplus of 0.2 percent of GDP in 2021, compared to -0.8 percent in 2020.

Fiscal outcomes in 2020 were affected by US dollar valuations of key revenue and expenditure items. In 2020, total revenues declined by 8 percent, driven by 42.8 and 28.4 percent decreases in VAT and customs revenues, respectively. Naturally, the collapse in economic activity in 2020 and the ensuing large decrease in imports is a principal factor behind the weak performance in both revenue items. Another important factor is the Government's valuation of US\$ imports at the official rate of LBP1,507.5 per US\$ instead of a much higher market-based rate, thus forgoing substantial revenues. Total expenditures also decreased by 23.6 percent, led by 63.7 percent fall in interest payments—resulting from the Eurobond default and a favorable arrangement with BdL on TBs

FIGURE 3 • Large Shortfalls in Revenues Will Induce a Significant Deterioration in the Fiscal Position



Sources: Lebanese authorities and WB staff calculations.

it holds—and to a lesser extent, due to cuts in primary spending, with 38.6 and 30.9 percent decreases in transfers to EdL and municipalities, respectively. EdL transfers are primarily intended to cover the cost of fuel, and when an allocation is ratified in Parliament it is valued at the official exchange rate. In effect, it becomes an FX subsidy covered by the central bank. A more accurate valuation based on a market-based exchange rate would significantly impact the overall fiscal position (Box 1). Officially, the overall fiscal deficit narrowed by 54.1 percent in 2020 even as the primary balance deteriorated.

Public debt ratios, which were already notoriously unsustainable, are further aggravated by the economic crisis. Debt-to-GDP is projected to reach 183 percent in 2021, compared to an estimated 179.1 percent by the end of 2020. The sharp depreciation in the local currency has implied a significantly

²⁹ In March 2021, and in response to a request from the Ministry of Energy and Water for an allocation in the amount of LBP 900 billion (equivalent to US\$600 million at the official exchange rate), Parliament ratified only LBP300 billion. Power generation was subsequently cut back to as much as 2 hours per day, as power cuts were increasingly used as a saving tool.

BOX 1: QUANTIFYING THE IMPACT OF EXCHANGE RATE CONSIDERATIONS ON EdL TRANSFERS

In 2020, as the financial crisis rippled through the economy, the emergence of multiple exchange rates caused uncertainty and opaqueness regarding the pricing of goods and services. Government transfers to EdL are a case in point. As it currently stands, allocations are made in LBP via a parliamentary law either as part of a budget or as a separate expenditure item. For the most part, those transfers are used to cover the cost of fuel used by EdL to generate electricity. BdL has been converting this at the official exchange rate (LBP1,507.5/US\$) to pay international fuel suppliers. This effectively was a FX subsidy on electricity consumption carried by BdL; the size of the subsidy is approximately equal to the difference between the US\$ banknote exchange rate and the official exchange rate—at current US\$ banknote rates, this means that EdL effectively pays less than 10 percent of the actual US\$ cost of its fuel imports, with the remaining 90 percent being paid by BdL using its dwindling gross reserves. In addition, EdL has been increasingly using blackouts to save on fuel consumption, as can be seen by a 12.9 and 16.5 percent (yoy) declines in electricity production and EdL fuel imports, respectively, in 2020.

In this box, we estimate counterfactual fiscal costs for 2020, if (1) a higher exchange rate were used—in this case we select the US\$ banknote rate; and (2) the US\$ banknote rate were used, plus an assumption that transfers to EdL in 2020 were equal a medium-term average. The former calculates the fiscal outcomes after correcting for the exchange rate mis-valuation resulting for the persistent use of the official exchange rate by the Ministry of Finance (MoF). The latter adds to that and assumes away EdL's excessive use of blackouts to save on costs in 2020, thereby calculating the fiscal costs if power supply were limited by power generation capacity and not by access to FX. Hence, we compare the below scenarios:

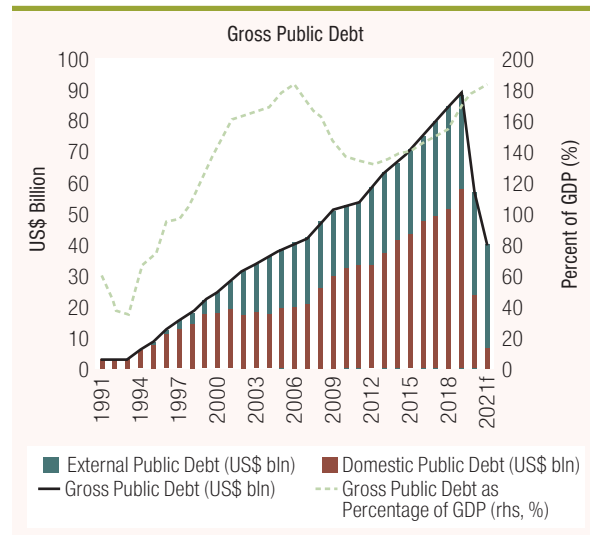
1. *Actual Scenario*: reflecting the actual published fiscal numbers, where transfers to EdL were recorded at the official exchange rate of LBP1,507.5 per US\$, and EdL cut production to generate savings.
2. *Valuation Scenario*: consistent with counterfactual scenario (1) discussed above, we deviate from the *Actual Scenario* by using the 2020 average US\$ banknote rate (LBP5,699 per US\$) to value LBP transfers to EdL. To do so, we multiply actual 2020 LBP transfers to EdL (LBP1,393 billion) by the ratio 5,699/1,507.5. This in effect transfers the cost subsidy from BdL to the Ministry of Finance (MoF).
3. *Valuation-Generation Scenario*: consistent with counterfactual scenario (2) discussed above, we add to the *Valuation Scenario* the assumption that LBP transfers to EdL were equal to their 2015–19 average, when power supply was limited to generation capacity. Actual EdL transfers over the 2015–19 period averaged LBP2,005 billion, compared to LBP1,393 billion in 2020. In this case, we multiply LBP2,005 billion by the ratio 5,699/1,507.5.

The results are presented in Table 1. Actual transfers to EdL were rather modest (by historical standards) at 1.2 percent of GDP; however, once the BdL FX subsidy is accounted for, the true fiscal (and quasi-fiscal) transfer/support to EdL is a more significant 4.5 percent of GDP. If electricity generation had remained at its pre-crisis level, the cost to the government's budget would have risen even further, to 6.5 percent of GDP. These would have pushed the government's fiscal balance deeper into deficits.

TABLE 1 • Summary of the Findings Under the Baseline and Both Scenarios

| <i>(in percent of GDP)</i> | 2020 | | |
|----------------------------|--------|--------------------|-------------------------------|
| | Actual | Valuation Scenario | Valuation-Generation Scenario |
| Revenue | 13.1 | 13.1 | 13.1 |
| Expenditure | 16.2 | 19.8 | 21.7 |
| <i>Transfers to EdL</i> | 1.2 | 4.5 | 6.5 |
| Fiscal Balance | -3.3 | -6.6 | -8.6 |
| Primary Balance | -0.8 | -4.1 | -6.1 |
| <i>(in LBP bln)</i> | | | |
| Revenue | 15,341 | 15,341 | 15,341 |
| Expenditure | 19,244 | 23,118 | 25,431 |
| <i>Transfers to EdL</i> | 1,393 | 5,268 | 7,581 |
| Fiscal Balance | -3,903 | -7,777 | -10,090 |
| Primary Balance | -978 | -4,852 | -7,165 |

FIGURE 4 • Valuation Effects from Exchange Rate Depreciations Will Pressure the Debt-to-GDP Ratio^a



Sources: Lebanese authorities and WB staff calculations.

^a To convert domestic debt to US\$, we use the World Bank Average Exchange Rate for 2020 and 2021, estimated at LBP11,770/US\$ and LBP37,664/US\$, respectively.

lower dollar value for domestic debt, 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 larger debt-to-GDP ratio (Figure 4). So, whereas the surge in inflation 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

Customs data illustrate widening of the trade-in-goods deficit over Q1-2021, driven by both higher imports and lower exports. According to Customs data for merchandise goods, imports grew by 13.6 percent (yoy) in Q1-2021, whereas exports shrank by 23.6 percent (yoy). On the imports side, netting out energy imports (which have actually declined over the same period) leaves imports at 28.2 percent higher. This included yoy increases of 36.2 and 19.9 percent in imports of industrial goods³⁰ and food products,³¹ respectively. As for exports, the sharp decrease in exports of merchandise goods over Q1-2021 is

largely driven by Pearls, Precious Stones and Metals, which when netted out leaves exports down by only 3.7 percent (yoy). We study in detail the surprisingly weak export performance of Lebanese firms—given the sharp increase in price competitiveness that the fall in the lira is providing—in our Special Focus.

The current account (CA) deficit-to-GDP ratio remains broadly unchanged in 2021 as strong remittances and tourism offset a wider trade deficit in goods. The widening trade-in-goods deficit in Q1-2021 is expected to be offset over the course of the year due to the binding financing constraints imposed by the declining foreign exchange reserves at BdL, and relatedly, the elimination of the FX subsidy. This dynamic is reinforced by the strong recovery in tourism, which will improve the trade-in-services balance. Meanwhile, net remittances are expected to increase from an estimated 10.3 percent of GDP in 2020 to 16.9 percent of GDP in 2021. 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 countercyclical³² 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 project the CA deficit in 2021 to be 9.8 percent of GDP, varying marginally from 9.3 percent in 2020, but much lower than the medium-term (2013–2019) average of 22.5 percent of GDP.

As foreign financing of the CA deficit came to a sudden stop in late 2019, a massive contraction of the CA took place in 2020 driven by

³⁰ This includes imports of the following categories: Wood, Rubber and Chemical Products; Non-Metallic Products; Textiles; Capital Goods; and Equipment Other than Capital Goods.

³¹ This includes imports of the following categories: Agricultural Products and Animals; and Food Industry Products.

³² During economic hardships in the home country, expatriates can also boost transfers back home in support of family.

a sharp contraction in imports. Scarcity of capital inflows into Lebanon followed de facto introductions of capital controls. 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.

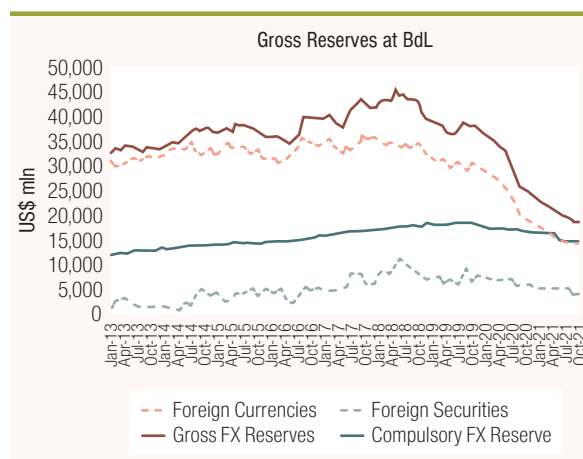
The sudden stop in capital inflows, coupled with a smaller but still large CA deficit, has steadily depleted BdL's FX reserves (Figure 5). By September 2021, gross FX reserves (excluding gold reserves) at BdL reached US\$18.8 billion, declining by US\$5.3 billion since end-2020. BdL's gross position includes Lebanese Eurobonds and an unpublished amount lent out to banks. Meanwhile, required reserves on banks' customer FX deposits is estimated at US\$14.8 billion.³³ 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.

In September 2021, Lebanon converted US\$1.139 billion from its share of IMF Special Drawing Rights (SDR) allocations, thereby covering 7.5 percent of its 2021 import bill. As a response to the global economic crisis from the COVID pandemic, the IMF approved on August 23, 2021, its largest ever allocation of SDRs, equivalent to US\$650 billion. Lebanon's share of this amounted to SDR607.2 million, equivalent to US\$864 million. In September, Lebanon converted this portion plus its share of a previous 2009 SDR allocation, which followed the global financial crisis and is equivalent to US\$275 million. While bringing limited temporary relief, the SDR allocations will not resolve the systemic crisis or long-term structural issues facing the country, which will require political will and decisive actions to recognize financial sector losses and push through a fundamental restructuring.

Money and Banking

Monetary and financial turmoil continue to drive crisis conditions. The exchange rate further deteriorated in 2021, with the US\$ banknote rate depreciating by an average of 211 (yoy) percent over

FIGURE 5 • A Steady Depletion in the Gross Foreign Exchange Position at BdL



Sources: BdL and WB staff calculations.

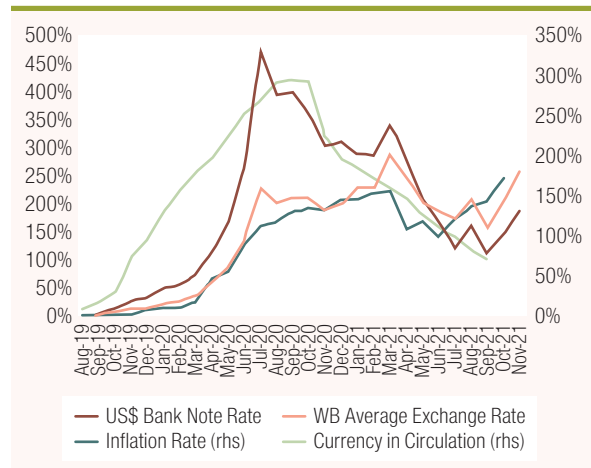
Note: Compulsory FX reserves are World Bank estimates based on published data, and a 15 percent required reserve ratio on FX deposits in commercial banks.

the first 11 months of 2021 (11M-2021), repeatedly breaching the LBP22,000/US\$ threshold. This is within a multiple exchange rate system that also includes the official exchange (LBP1,507.5/US\$), and BdL-administered lower rates. Overall, the World Bank Average Exchange Rate (AER)³⁴ depreciated by 219 percent (yoy) over 11M-2021 (Figure 6).

³³ In June 2021, BdL lowered required reserve ratio on dollar deposits from 15 percent to 14 percent.

³⁴ Since the Spring 2021 LEM, we have adjusted the AER to account for changes in the FX subsidy, including the divergence of coverage for fuel and medications. We now consider critical imports of goods 1 (C1) as changing over time—from August 2019 to June 2021, C1 consists of fuel products, medication and wheat, backed up at LBP 1,507.5/US\$; from July 2021 onwards, C1 becomes only fuel products, first backed up at LBP 3,900/US\$ in July 2021, then at LBP 8,000/US\$ in August and September 2021, and finally at the US\$ banknote exchange rate thereafter, denoting the full removal of the fuel subsidy. We also consider critical imports of goods 2 (C2) as changing over time—from August 2020 through June 2021, C2 consists of essential food products, backed up at LBP 3,900/US\$, with the subsidy gradually reduced until it is eliminated by June 2021. From July 2021 to September, C2 becomes medication, backed up at LBP 13,150/US\$, as agreed to between the Ministry of Health and BdL. After September, we assume the full subsidy on medication is removed, applying the banknote rate to C2.

FIGURE 6 • A Sharp Depreciation in the Exchange Rate along with Surging Inflation and Narrow Money



Sources: CAS, BdL and WB staff calculations.

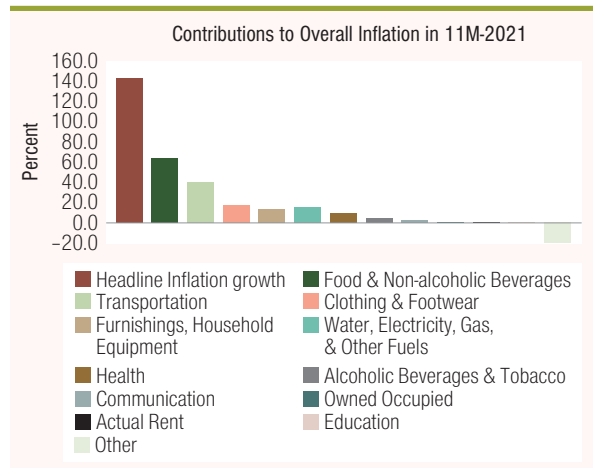
Limited economic utility for electronic dollars,³⁵ along with scarcity of dollar banknotes, and minimum incentives to save in LBP, all rendered the economy heavily cash-based in local currency.

By September 2021, the stock of currency in circulation increased by 72.8 percent (yoy), compared to 22 and 1.5 percent growths in M2 and M3, respectively. The latter two money-supply measures also reflect ongoing deleveraging in the financial sector (see Paragraph 24).

FX scarcity and exchange rate pass through effects on prices have resulted in surging inflation (Box 2). In 2020, the inflation rate averaged 84.3 percent, having risen steadily and sharply from 10 percent (yoy) in January 2020 to 145.8 percent (yoy) in December 2020. Over the first 11 months of 2021 (11M-2021), inflation has averaged 142.9 percent; it reached a high of 157.9 percent (yoy) in March, falling to 100.6 percent by June, before rising again to a new high of 201.1 percent in November. The surge since June is linked to the steady removal/fading of the FX subsidy on imported goods.

Inflation is a highly regressive tax, disproportionately 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

FIGURE 7 • Inflation in Basic Items is a Key Driver of Overall Inflation, Hurting the Poor and the Middle Class



Sources: CAS and WB staff calculations.

consumption basket are primary drivers of overall inflation. In fact, the main contributors of inflation over 11M-2021 are food and non-alcoholic beverages, followed by transportation, and then clothing and footwear (Figure 7); prices for these basic consumption items have surged by 305.9, 305.2 and 324.6 percent, respectively. It is notable the rise of the transportation category from the 4th largest contributor to overall inflation in 2020 to the 2nd largest over 11M-2021. This reflects the impact of the FX subsidy removal on fuel imports.

The severe restrictions on capital outflows have given the monetary authorities room to lower interest rates. From October 2019 to September 2021, average interest rates on LBP and dollar deposits in banks fell by 750 and 635 basis points (bps), respectively. Banks' lending rates in LBP and US\$ have mirrored this effect, falling by 354 and 371 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.

³⁵ 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 a significant haircut compared to the value of the dollar being traded in the parallel banknote market.

BOX 2: THE EXCHANGE RATE PASS THROUGH TO INFLATION FOR LEBANON

The exchange rate pass-through effect on prices measures the extent to which fluctuations in the exchange rate lead to changes in aggregate prices (i.e., inflation). The Exchange Rate Pass-Through (ERPT) coefficient is, therefore, akin to an elasticity coefficient in that it measures the sensitivity of the Consumer Price Index (CPI) to the exchange rate.

With the US\$ banknote exchange rate breaching the 27,000 LBP/US\$ mark and inflation soaring to the triple digits, estimating the ERPT coefficient allows for gauging the degree to which exchange rate fluctuations drive inflation.

The simplest approach to gauging the ERPT is to estimate the change in the CPI, ΔCPI_t , that is due to a change in the exchange rate, ΔE_t . Estimates of the contemporaneous response of changes in the price level to changes in the exchange rate $\Delta CPI_t / \Delta E_t$, or to lagged changes in the exchange rate $\Delta CPI_t / \Delta E_{t-1}$, $\Delta CPI_t / \Delta E_{t-2}$ can be computed from data on the CPI obtained from the Central Administration of Statistics and the World Bank Average Exchange Rate (AER).

Table 2 provides the estimates of the various pass-through coefficients estimated using data for the period August 2019 to October 2021.

Depending on the exact definition employed, the ERPT coefficient ranges from 59 to 89.3 percent. That is, a 100 percent depreciation in the exchange rate leads to an increase in the inflation rate ranging from 59 to about 90 percentage points.

Estimates the ERPT coefficient can also be obtained from more elaborate econometric models. The existing literature commonly employs well-specified Vector Autoregressive (VAR) models to gauge the response of prices to an exchange rate shock (see Annex B). The advantage of the latter approach is to allow for discerning the effects of exchange rate fluctuations on inflation over several horizons (one, six or twelve months). Using a trivariate VAR model comprising the AER, currency in circulation and the CPI for the period January 2008 to October 2021, the ERPT coefficient estimate is 56 percent when the VAR is estimated in changes and 77 percent when the VAR is estimated in levels. The latter estimates are consistent with the results obtained using the simple approach in Table 2.

When the US\$ banknote exchange rate (BNR) is employed instead of the AER, the ERPT coefficients are, respectively, 28 and 67 percent when the VAR model is estimated in changes and levels. The ERPT coefficients in this case form a wider range than when employing the AER in the VARs, indicating that the AER better controls for the pass-through of the exchange rate to prices. An example is that the AER accounts for the FX subsidy on imported goods that were in place, which was an important factor on prices from end of 2019 to early 2021.

TABLE 2 • Estimating the Change in CPI to Contemporaneous and Lagged Changes in Exchange Rate

| | Average | Standard Deviation |
|---------------------------------|---------|--------------------|
| $\Delta CPI_t / \Delta E_t$ | 59.0% | 17.0% |
| $\Delta CPI_t / \Delta E_{t-1}$ | 70.4% | 21.7% |
| $\Delta CPI_t / \Delta E_{t-2}$ | 89.3% | 45.3% |

Since the eruption of the financial crisis, BdL has been almost an exclusive policy maker.³⁶

The Fall 2020 LEM listed in detail the many BdL circulars, which formalized BdL's crisis management strategy. The Spring 2021 LEM presented an update on main BdL policy initiatives, including (i) a new financial operation; (ii) an announcement by BdL to allow commercial banks to conduct currency exchanges at the Sayrafa platform rate; and (iii) the expiration of a deadline for commercial banks to meet Circular 154 provisions,³⁷ conclusions for which have yet to be announced. Meanwhile, other than a default on its Eurobond obligations, the Government was not able to implement other important pillars in its financial recovery plan.

A principal deleveraging tool used by BdL has been lirafication of pre-crisis (October 2019) dollar deposits at commercial banks.

³⁶ Notwithstanding a brief period in which Government defaulted on its Eurobond obligations and unsuccessfully proposed its Financial Recovery Plan.

³⁷ 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.

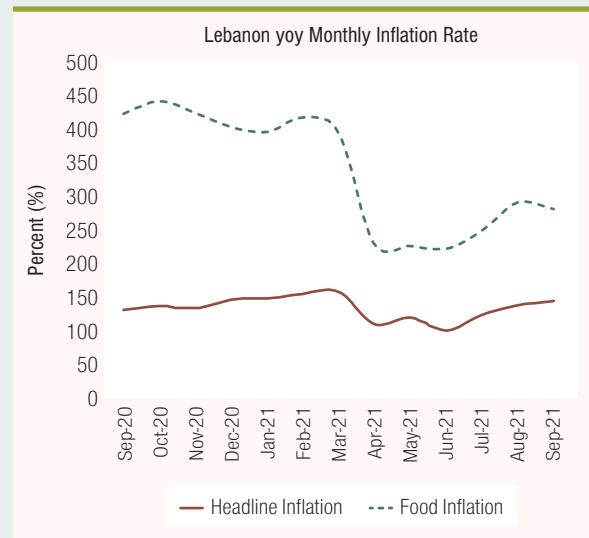
BOX 3. IMPACT OF CRISES ON POVERTY^a

Poverty is on the rise with the share of the Lebanese population under the US\$5.50 international poverty line estimated to have risen by 13 pp by end-2020 and is expected to further increase by as much as 28 pp by end 2021. The proportion of households facing challenges in accessing food, healthcare and other basic services are correspondingly on the rise.

Inflationary effects are highly regressive factors, disproportionately affecting the poor and middle class. Inflation in Lebanon is on track to be the highest seen in the past decade. Average year-on-year inflation over 9M-2021 was 133 percent, more than 75 pp over the same period in 2020. Food inflation remains concerning as food consumption forms a larger proportion of the expenses incurred by poorer households. Average food inflation over 9M-2021 period stood at 300 percent compared to 198.3 percent for the corresponding 2020 period. After reaching a peak of 441 percent in October 2020, year-on-year food inflation moderated to 208 percent in April 2021 but appears to be on the rise again, reaching 281 percent by September (Figure 8).

Households are struggling in making ends meet with their deteriorating purchasing power. Phone surveys conducted in May–July 2021 by the World Food Program with support from the WB found that 46 percent of households reported challenges in accessing food and other basic needs, up from 40 percent from July–August 2020. Half of the households surveyed reported adults restricting consumption in favor of children. The share of households having difficulties in accessing health care has increased sharply from 25 percent (July–August 2020) to 48 percent (May–July 2021). Unemployment rate also rose among the respondents, from 30.9 percent in January 2021 to 37.7 percent in the May–July 2021 period. Almost 49.3 percent of respondents considered their families to be either very poor or poor, reflecting the stark conditions in the country where close to one-third of households reported receiving some form of assistance.

FIGURE 8 • Lebanon’s Headline and Food Inflation



Source: Staff calculation using CPI data from CAS.

^aThis box has been prepared by Ganesh Kumar Seshan (Senior Economist, EMNPV) and Stefania Rodica Cnoblach (Consultant).

Recent BdL policies have further reinforce the following key features of the central bank’s approach to crisis management: (i) a deleveraging strategy for the financial sector that is pivoted on small-medium depositors; (ii) a deleveraging strategy for the financial sector that is not incorporated into the larger macro-financial framework, and hence, constitutes a non-comprehensive adjustment program; and (iii) inconsistencies/misalignments with other initiatives. Box 4 expands on these policies and analyzes some of their implications.

Conditions in the financial sector continue to deteriorate and political will and decisive actions to recognize banking sector losses and push through a fundamental restructuring are needed to put Lebanon on a path out of the crisis.

About 70 percent of banking assets are in sovereign securities, split between 60 percent with BdL and 10 percent in Government securities. Meanwhile, 76.5 percent of banks’ liabilities are private deposits (September 2021), which are highly concentrated, as about 60 percent of small depositors hold only 1 percent of total deposits. Despite the administrative measures imposed on deposit withdrawals and external transfers, customer deposits at commercial banks further declined by US\$6.2 billion over 8M-2021, on top of a decline of US\$19.9 billion (or 12.6 percent) in 2020. Liquidity needs in the banking system have been met mainly through deleveraging and reduction in their net foreign assets position. The domestic credit portfolio contracted by US\$7 billion during 8M-2021, bringing the total credit contraction

BOX 4. KEY BdL POLICIES ON DELEVERAGING THE FINANCIAL SECTOR

Lirafication policies were first enshrined in a series of circulars^a that allowed the withdrawal of pre-October 2019 dollar deposits in LBP at exchange rates that are higher than the official rate, but lower than the US\$ banknote rate. Until recently, banks' customers mainly used Circular 151 to access their pre-October 2019 dollar deposits, where they were able to withdraw in LBP up to a monthly maximum of US\$5,000 per account at LBP3,900/US\$. This implied an 84 percent haircut on relevant deposits—assuming a US\$ banknote rate of LBP25,000/US\$.

In June 2021, BdL introduced Circular 158, which facilitates an US\$800 monthly payout from pre-crisis dollar deposits, half in US\$ banknotes and the other half in LBP split between cash and electronic credit, converted at an exchange rate of LBP12,000/US\$.^b This would imply a 26 percent haircut on the beneficiary accounts^c assuming that LBP electronic credit is 100 percent substitutable with LBP cash.

Take-up for Circular 158 may be inhibited by important concerns touching on the credibility, sustainability and transparency of this mechanism. While the implied haircut by Circular 158 suggests that there would be a clear preference by depositors for this mechanism over other options, such as Circular 151, take-up could be inhibited by the following: (i) lack of clarity on whether beneficiaries of Circular 158 would still benefit from 151, which forced repeated clarifications from the central bank; (ii) at least in the first phase, implementation varied widely across banks, which reinforced the confidence crisis in the banking system; (iii) withdrawal ceilings on Circulars 158 versus 151 necessitated depositor-specific calculations on needed amounts; (iv) 158's ceiling on both the benefit amount and annual withdraws imply a multi-year maturity, a non-credible promise under current crisis conditions in the banking sector.

On December 9, 2021, BdL issued Circular 601, which allowed the withdrawal of pre-October 2019 dollar deposits in LBP at a new higher exchange rate of LBP8,000/US\$, for a monthly maximum of US\$3,000 per account. This is an update to Circular 151 (which allowed these deposits to be withdrawn at LBP3,900/US\$ for a monthly maximum of US\$5,000 per account). Circular 601 implied a 68 percent haircut on relevant deposits (compared to 84 percent for Circular 151). Further, based on Circular 151 exchange rate and ceiling, maximum injection of LBP per account would be LBP19.5 million (US\$5,000 x LBP3,900/US\$). Based on Circular 601, maximum injection per account would be LBP24 million. Hence, Circular 601 can in theory increase currency in circulation resulting from Lirafication by 23 percent.

Following a sharp depreciation for the LBP in the US\$ banknote rate over the first half of December 2021,^d BdL introduced two more measures intended to inject US\$ and reduce LBP liquidity in the market. In Circular 161, BdL would provide banks with US\$ resources for them to disburse customers' quota of pre-October 2019 dollar deposits in US\$ cash instead of in LBP (as stipulated in Circular 601). The final amount in US\$ would be subject to a significant haircut since it would first be converted to LBP at LBP8,000/US\$ (per Circular 601), then converted back to US\$ at the Sayrafa rate.^e Circular 161 would be effective until January 31, 2022. In the second measure, foreign currency denominated commercial loans would be paid back in LBP at LBP8,000/US\$ using LBP banknotes. The previous set up allowed payments at the official pegged rate of LBP1507.5/US\$ and from LBP bank deposits. In the first measure, BdL would inject US\$ into the market, sourced from its dwindling FX reserves, and in the second measure it would reduce the supply of LBP currency in circulation. The intended objective is to temporarily suspend the downward spiral in the Lebanese currency.

^a Circulars 148, 151, 549 and 565. For more details, please refer to:

World Bank (2020), *The Deliberate Depression* the Lebanon Economic Monitor, Fall 2020 Issue.

^b Key provisions for circular 158 include: banks to open special subaccounts for beneficiaries, such that the total amount of all subaccounts would not exceed US\$ 50,000 per beneficiary, from which a maximum of around US\$ 10,000 can be dispersed annually; beneficiaries would lift bank secrecy on the said subaccounts; these subaccounts would be precluded benefiting from circular 151.

^c Here too, we assume that the US\$ banknote rate is at LBP 25,000/US\$.

^d The Lebanese currency depreciated by around 22 percent in the US\$ banknote market over the December 3–16, 2021 period to breach LBP28,000/US\$.

^e For example, if a customer wants to withdraw US\$100 from their pre-October 2019 dollar deposit account, then according to Circular 601, this should come up to LBP800,000. Assuming the Sayrafa exchange rate for that day is LBP23,000/US\$, then per Circular 161, the customer would get US\$34.8 in cash, constituting a 65 percent haircut on the original amount.

to 41.5 percent since the beginning of the crisis in October 2019.

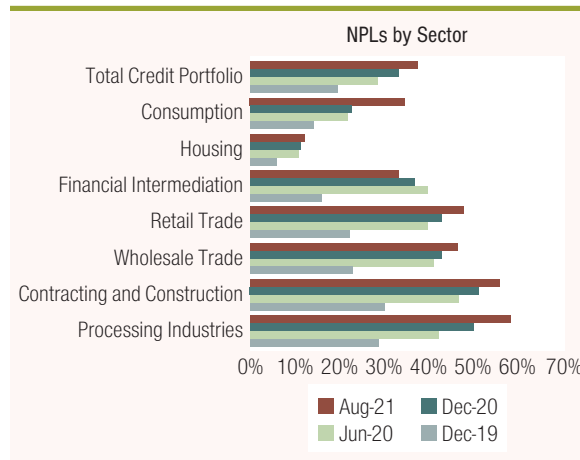
Lending from BdL has allowed Lebanese commercial banks to pay off liabilities to correspondent banks to retain linkages to the global financial system. As of end-August 2021, commercial banks' placements in, and liabilities for,

non-resident financial institutions (FIs) amounted to US\$5.1 and US\$5.3 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.

The credit portfolio of the banking sector has continued to deteriorate. The non-performing loan (NPL) ratio—that is, gross NPLs including unearned interests as a percentage to total loans—stood at 37.4 percent (43.9 percent for FX loans) as of end-August 2021, compared to 13.3 percent at end-June 2019 before the crisis. NPL ratio for construction, processing industries and wholesale and retail trade, reached 56, 58 and 47 percent, respectively (Figure 9). Provisioning coverage was at 55 percent as of end-August 2021. Continued deterioration in the quality of the remaining credit portfolio (US\$32 billion at the official exchange rate, 58 percent of which denominated in US\$) would be expected, given the lack of progress in restructuring and reform.

FIGURE 9 • A Steady and Sharp Deterioration in Credit Performance as Measured by NPL Ratio for Banks



Sources: BdL and WB staff calculations.



GLOBAL COMPARATORS: WHERE DOES LEBANON STAND NOW

We put into perspective Lebanon's macroeconomic conditions, depicting the severity of the compounded crises against those of the rest of the world. Some of Lebanon's worst-performing macroeconomic indicators are compared to those current (or recent) in other countries. Specifically, we compare the following macroeconomic indicators: nominal GDP in US\$ value, the inflation rate, fiscal revenues and public debt.³⁸

Lebanon's GDP in US\$ value has contracted over the 2019–2021 period more sharply than all other observed economies globally. In fact, Lebanon's GDP plummeted from close to US\$52 billion in 2019 to a projected US\$21.8 billion in 2021, marking a 58.1 percent contraction. This represents the highest contraction in a list of 193 countries.³⁹ Lebanon is followed by Macao SAR, Libya, Venezuela, and Suriname, whose GDPs in US\$ value declined by 47, 30.9, 29.8 and 29.3, respectively, over the same period (Figure 10).

Inflation in Lebanon has been steadily rising since the beginning of the crisis. Triple-digit figures have been recorded in every month since July 2020, reaching a maximum of 157.8 percent (yoy) in April 2021. Lebanon's inflation averaged 84.3 percent

in 2020, and it is expected to reach an average of 145 percent in 2021. This puts Lebanon in 4th place for the highest inflation rates in 2020 preceded by Venezuela, Zimbabwe and Sudan; and in 3rd place in 2021, after Venezuela and Sudan.⁴⁰ (Figure 11).

Lebanon's government revenues are projected to reach 6.6 percent of GDP in 2021, marking it as the 3rd lowest ratio globally. Only Somalia and Yemen are expected to fare worse in 2021.⁴¹ Lebanon deteriorated from the 18th lowest rank in 2020. Lebanon's Government revenues

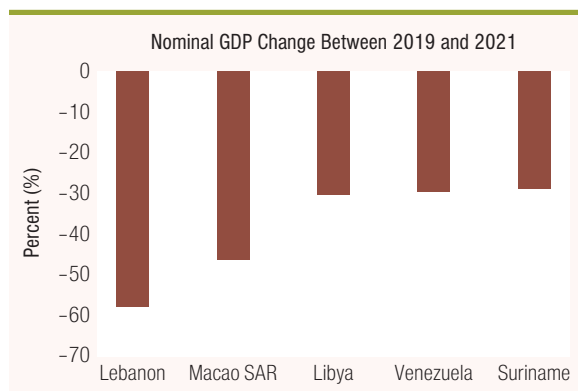
³⁸ The list of countries and data are sourced from the IMF's World Economic Outlook (WEO) and includes 196 countries. Lebanon's data are sourced from World Bank databases.

³⁹ WEO Nominal GDP data is missing for Afghanistan, Pakistan, and Syria, which takes them out of the comparison.

⁴⁰ Data on period average inflation is sourced from IMF's WEO database. It excludes Somalia and Syria in 2020, and Afghanistan, Argentina, Somalia, and Syria in 2021.

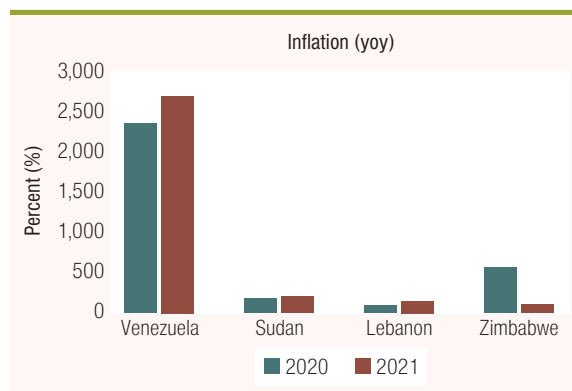
⁴¹ Data on general government revenues is sourced from IMF's WEO database. It includes 195 countries in 2020, where data is missing for Syria; while including 192 countries in 2021, with data missing for Afghanistan, Argentina, Syria, and Venezuela.

FIGURE 10 • The Sharpest Contractions in Nominal GDP (as a Percentage Change) Globally



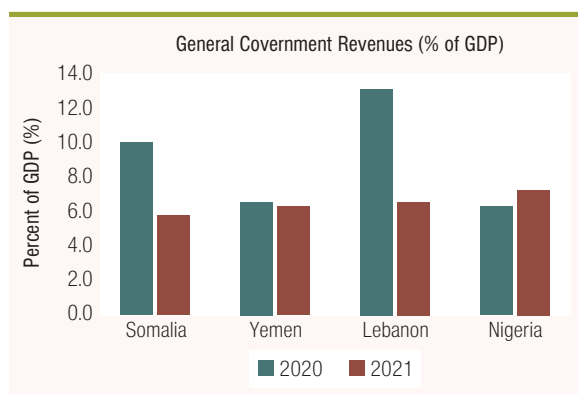
Sources: WEO and WB staff calculations.

FIGURE 11 • Lebanon Records 3rd Highest Observable Inflation Rate Globally in 2020 and 2021



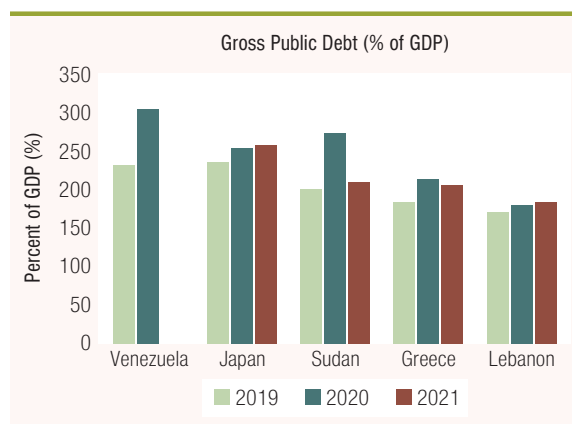
Sources: IFS and WB staff calculations.

FIGURE 12 • Lebanon’s Revenues as a Percentage of GDP Deteriorated, Ranking as the 3rd Lowest Observable Ratio Globally in 2021



Sources: WEO and WB staff calculations.

FIGURE 13 • Lebanon Has The 4th Highest Observable Public Debt as a Percentage of GDP in 2021



Sources: WEO and WB staff calculations.

dropped from an average of 20.4 percent of GDP in the period from 2015–2019, to 13.1 percent in 2020 and is estimated to decline further to 6.6 percent in 2021(Figure 12).

Lebanon’s gross debt as a percentage of GDP deteriorated further over the period 2019–2021. The ratio stood at 171 percent of GDP in 2019 and is projected to reach 183 percent of GDP in 2021. This takes Lebanon from the 6th highest ratio in 2019 to the 4th highest in 2021. Lebanon is preceded

by Japan, Sudan and Greece in 2021—limited by the unavailability of an estimation of Venezuela’s ratio for 2021 (Figure 13).⁴²

⁴² It is worth noting that IMF’s WEO general government gross debt data is missing for Venezuela in 2021. Venezuela’s gross public debt reached 232.8 percent of GDP and 304 percent of GDP in 2019 and 2020, respectively.

OUTLOOK AND RISKS

Subject to extraordinarily high uncertainty, we project real GDP to contract by a further 10.5 percent in 2021. Our projections (Table 3) 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 plausible scenario. Further, the multiple exchange rates pose valuation challenges on macroeconomic indicators. When running the macro-framework, we adopt the AER, with the following exceptions: (i) balance of payments indicators are denominated in US\$; and (ii) the fiscal indicators are in LBP, and as we have flagged earlier, MoF uses the official exchange rate as a basis of conversion—we have already highlighted key revenue and expenditure items that are affected.

As mentioned earlier, monetary and financial turmoil continue to drive crisis conditions, more acutely through interactions between the exchange rate, narrow money and inflation. The centrality of this dynamic on the macro framework is an important caveat regarding our macroeconomic outlook. 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. We assume that in 2021, the Lebanese pound suffers a 210 percent depreciation in the US\$ banknote market, compared to a 250 percent depreciation in 2020. We also expect inflation to worsen notably in 2021, and project it to average around 145 percent, compared to 84.3 percent in 2020. This is supported by more recent monthly data on inflation, which have started rising sharply again in the second half of 2021 (H2-2021), no doubt resulting from the collapse in FX subsidy.

The impact of the FX subsidy removal can vary based on (i) the new exchange rate(s) used for these imports; and (ii) the source of the FX supply. BdL proclaimed that it will offer credit lines for fuel imports based on the market exchange rate. It is not clear what BdL considers the market rate, but one option is the BdL-administered Sayrafa platform rate, which has been moving at about a few thousand LBPs below the US\$ banknote exchange rate. This proclamation also suggests that BdL will provide the FX supply from its reserves. Implications of this modality include: a reduction of subsidy to a value determined by the gap between the Sayrafa and the banknote rates; a spike in prices of these goods and a commensurate drop in their demand; and continued, albeit slower, depletion of valuable FX reserves at BdL. On the other hand, if importers resort

completely to the market for both the rate and FX supply, implications are: (i) the complete removal of the subsidy; (ii) a more pronounced first-degree spike in prices and drop in demand; and (iii) a worsening of the US\$ banknote exchange rate and second-degree effects on pricing and demand.

As the series of LEMs have illustrated, Lebanon's macro-financial bankruptcy is with such (relative) scale and scope that it has undermined Lebanon's post-civil war political economy. This political economy thrived under large inflows of deposits that funded a public-private privilege⁴³ for the few (including the financial sector) and political patronage that exercised dominion over the public administration. The political economy received repeated international support (Paris I-III, CEDRE, etc.) in return for promises of reforms advocated by donors.⁴⁴ The finality of the sudden stop in October 2019, however, is leading to the disintegration of this political economy, as manifested by a collapse of the most basic public services, persistent and debilitating internal political discord, and the resignation/exodus of the social and economic elite, which has traditionally benefited from this model. The poor and the middle class, who were never well served under this model in the first place, are carrying the main burden of this bankruptcy.

In the case of Lebanon, and taking history and geography as a guide, this can translate into national fragmentation and a breakdown of the social peace. The collapse of the political economy is occurring over highly unstable geopolitical fault lines, which renders it an explosive combination. Unless a local, regional and international consensus is found on Lebanon's stability, we can expect to see aggravated political and security conditions in the lead-up to the presumed parliamentary elections in Spring 2022. International-regional reconciliation efforts

can place a floor on Lebanon's political and security slippage. It will not, however, resolve Lebanon's dire financial and economic conditions, which require domestic recognition and agreement on losses and their distribution.

Worryingly, key public and private actors continue to resist recognition of these losses, perpetuating the zombie-like state of the economy and incurring unnecessary social pain. Over two years into the financial crisis, Lebanon has yet to identify, least of all embark upon, a credible path toward economic and financial recovery. In consequence, highly skilled labor is increasingly likely to take up potential opportunities abroad, constituting a permanent social and economic loss for the country.

In the Special Focus, we briefly examine Lebanon's external position and the economy's output, especially in regard to the exchange rate, which has been a main source of volatility and uncertainty. In principle, a depreciation in the real exchange rate benefits exporters of goods and services. Hence, sharp contractions in consumption and investment can be (partially/equally/more than) offset by net exports, which can assume a much-needed lead in growth. In Lebanon, however, the extent to which net exports drive growth in the short to medium term is inhibited by three factors: (i) economic fundamentals; (ii) global conditions; and (iii) political/institutional environment.

⁴³ The collusion of public and private representatives at macro and micro levels to guarantee capture of resources.

⁴⁴ Unlike Paris II and III, CEDRE did not disburse any funds to Lebanon due to the absolute lack of progress on implementation of measures that GoL committed to in the CEDRE conference.

TABLE 3 • Selected Macroeconomic Indicators for Lebanon; 2013-2021

| | 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 | -21.4 | -10.5 |
| Real GDP per Capita ^a | -2.8 | -3.2 | -3.9 | -1.2 | -0.6 | -2.5 | -6.8 | -21.8 | -10.9 |
| Agriculture (share of GDP) | 3.9 | 4.4 | 3.8 | 4.0 | 4.5 | 4.4 | 5.0 | 6.0 | 6.0 |
| Industry (share of GDP) | 14.2 | 13.4 | 12.7 | 12.8 | 12.3 | 12.0 | 10.6 | 12.7 | 12.7 |
| Services (share of GDP) | 70.9 | 71.3 | 72.0 | 71.5 | 71.6 | 72.2 | 74.3 | 77.0 | 79.2 |
| Net indirect taxes (share of GDP) | 11.0 | 10.9 | 11.5 | 11.7 | 11.6 | 11.4 | 10.1 | 4.3 | 2.1 |
| Money and prices | | | | | | | | | |
| CPI Inflation (p.a) | 2.7 | 1.2 | -3.7 | -0.8 | 4.5 | 6.1 | 2.9 | 84.3 | 145.0 |
| Money ^b | 9.0 | 6.0 | 5.1 | 7.3 | 4.2 | 3.0 | -6.7 | 198.0 | 115.0 |
| 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 | 7.7 | 2.0 |
| o/w private | 25.8 | 23.4 | 20.8 | 21.3 | 19.9 | 19.1 | 17.2 | 7.4 | 1.6 |
| Gross National Savings | 2.1 | -1.3 | 5.1 | 2.2 | -1.5 | -3.5 | -2.7 | -1.6 | -7.8 |
| o/w private | -1.8 | -3.9 | 1.0 | -1.0 | -4.8 | -5.3 | 7.9 | 1.4 | -7.8 |
| 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 | 13.1 | 6.6 |
| o/w. tax revenues | 14.3 | 14.3 | 13.7 | 13.7 | 15.5 | 15.4 | 15.5 | 8.9 | 4.5 |
| Total expenditure and net lending | 29.0 | 28.9 | 26.9 | 28.6 | 28.6 | 32.0 | 31.2 | 16.4 | 7.0 |
| Current | 27.3 | 27.3 | 25.5 | 27.3 | 27.1 | 30.3 | 29.9 | 16.1 | 6.6 |
| o/w Interest Payment | 8.1 | 8.7 | 8.9 | 9.3 | 9.4 | 9.8 | 10.0 | 2.5 | 0.7 |
| Capital & Net Lending (excluding foreign financed) | 1.8 | 1.5 | 1.4 | 1.4 | 1.5 | 1.7 | 1.3 | 0.4 | 0.4 |
| Overall balance (deficit (-)) | -9.0 | -6.3 | -7.7 | -9.3 | -6.7 | -11.0 | -10.5 | -3.3 | -0.4 |
| Primary Balance (deficit (-)) | -0.9 | 2.4 | 1.2 | 0.0 | 2.7 | -1.2 | -0.5 | -0.8 | -0.2 |
| 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 | -9.3 | -9.8 |
| Trade Balance | -28.4 | -29.9 | -22.9 | -23.6 | -24.7 | -24.8 | -24.9 | -20.3 | -28.0 |
| o/w Export (GNFS) | 44.5 | 40.0 | 39.7 | 37.3 | 36.0 | 35.7 | 35.4 | 28.2 | 41.4 |
| Exports of Goods | 11.0 | 9.5 | 8.0 | 7.7 | 7.6 | 7.0 | 9.3 | 12.9 | 16.9 |
| Exports of Services | 33.5 | 30.6 | 31.7 | 29.6 | 28.4 | 28.7 | 26.1 | 15.3 | 24.5 |
| o/w Import (GNFS) | 73.0 | 69.9 | 62.6 | 60.9 | 60.8 | 60.5 | 60.3 | 48.5 | 69.4 |
| Imports of Goods | 45.3 | 42.5 | 35.2 | 35.0 | 34.7 | 34.4 | 35.0 | 33.4 | 48.6 |
| Imports of Services | 27.7 | 27.4 | 27.4 | 25.9 | 26.1 | 26.1 | 25.2 | 15.1 | 20.8 |
| Net private current transfers: | 3.4 | 4.9 | 6.8 | 4.8 | 2.3 | 2.5 | 5.6 | 14.2 | 23.0 |
| Net Remittances | 5.0 | 5.8 | 7.2 | 6.6 | 5.2 | 4.2 | 6.1 | 10.3 | 16.9 |
| Net Income receipts | -0.6 | -1.2 | -0.9 | -1.7 | -0.5 | -2.1 | -1.9 | -3.3 | -4.8 |

(continued on next page)

TABLE 3 • Selected Macroeconomic Indicators for Lebanon; 2013-2021 *(continued)*

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 Est. | 2020 | 2021 |
|--|--------|--------|--------|--------|--------|--------|-----------|--------|--------|
| | | | | | | | | Proj. | |
| 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 | 18.8 | 14.3 |
| Total Public Debt | | | | | | | | | |
| Total Debt Stock (in million US\$) | 63,490 | 66,564 | 70,325 | 74,900 | 79,530 | 85,139 | 88,900 | 56,832 | 39,903 |
| Debt-to-GDP ratio (percent) | 135.3 | 138.3 | 140.8 | 146.3 | 149.7 | 154.9 | 171.0 | 179.1 | 183.0 |
| Memorandum Items: | | | | | | | | | |
| GDP (in million US\$) | 46,909 | 48,134 | 49,939 | 51,205 | 53,141 | 54,961 | 51,992 | 31,735 | 21,804 |

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

SPECIAL FOCUS: SEARCHING FOR THE EXTERNAL LIFT IN THE DELIBERATE DEPRESSION

With the sharp fall of the lira since late 2019, we would have expected Lebanese exports to surge. This did not happen. In this Special Focus, we analyze the failure thus far for the external sector to sufficiently benefit from increased price competitiveness and become a more robust driver of growth. We find that Lebanon's exports are inhibited by three factors (outside of the crisis itself):⁴⁵ (i) (pre crisis) economic fundamentals; (ii) global conditions; and (iii) political/institutional environment. The latter, which is under control of current policymakers, includes decisions to respond to the crisis and re-align resources and policy to reinforce the economy's competitiveness. Further, we find that leading up to the crisis, Lebanon's external macroeconomic imbalances were larger than some of the most severe episodes of global crises, per Rogoff and Reinhart (2014).⁴⁶ Moreover, despite the harsh adjustment in Lebanon, depletion of its FX reserves is also steeper than in these episodes. This reinforces conclusions in earlier LEMs that Lebanon's financial crisis stands out as a particularly arduous episode, even when compared to some of the most severe crises observed.

Economic Fundamentals⁴⁷

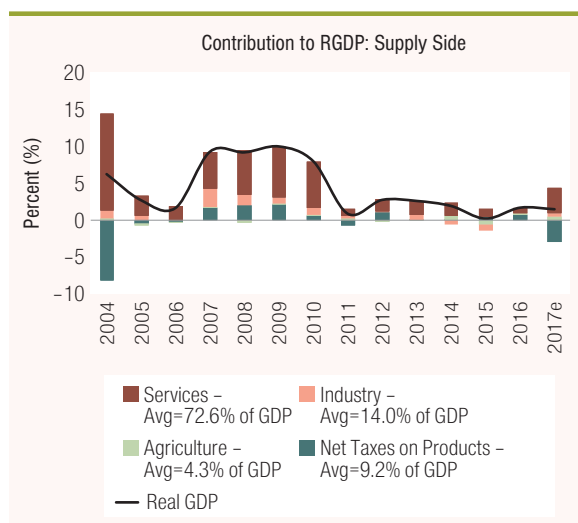
Despite a sharp deceleration in real GDP growth starting in 2011, the economy's main drivers

⁴⁵ Naturally, crisis conditions, including systemic financial sector failures and highly uncertain and volatile monetary and financial conditions, greatly compromise businesses' ability to export in the immediate term. In Lebanon, we have seen this through the vanishing of trade finance. However, as crisis conditions are well monitored and analyzed in the LEMs, in this Special Focus we focus on potential for net exports to lead a recovery in the short to medium term. Notably, and as discussed extensively in the LEMs, net exports did indeed assume a leading, and in fact the only positive, contribution to growth in the immediate term. This, however, is due to a perverse effect of crashing imports that reflect the massive contraction in economic activity.

⁴⁶ 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.

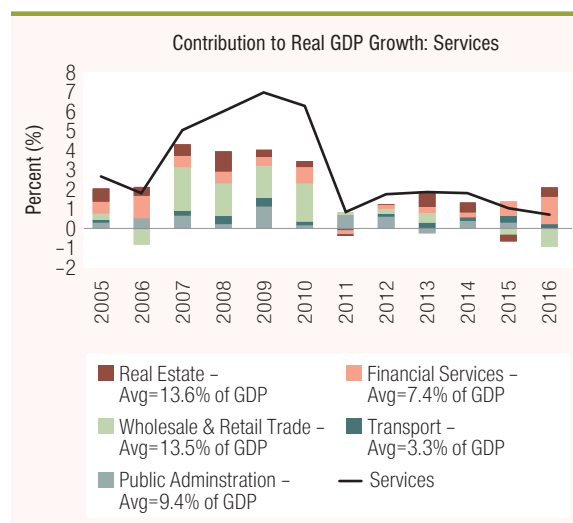
⁴⁷ The discussion presented here on economic fundamentals is taken directly from World Bank (2018), *De-Risking Lebanon*, Lebanon Economic Monitor, Fall 2018 Issue.

FIGURE 14 • Services Are the Main Drivers of Economic Activity in Lebanon ...



Sources: CAS and WB staff calculations.

FIGURE 15 • ...Dominated by Largely Low Productivity Sectors ...



Sources: CAS and WB staff calculations.

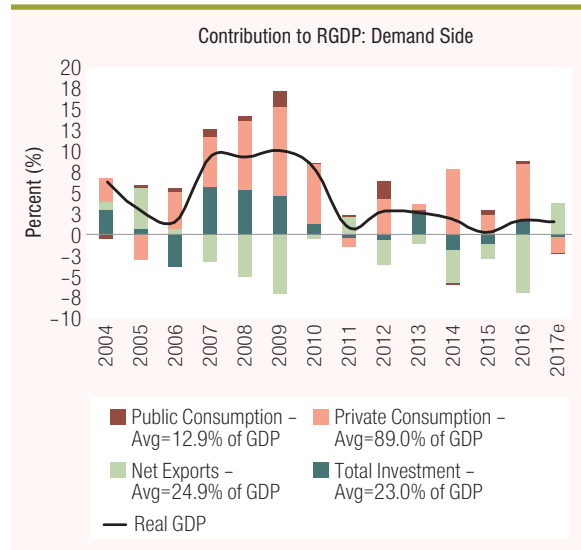
have remained the same: services characterized by low productivity and low employability potential for high-skill labor. The service sector constituted 72.4 percent of real GDP over the 2004–2016 period, while industry and agriculture made up 14 percent and 4.3 percent of GDP, respectively (Figure 14). Real estate was the largest service sector, averaging 13.7 percent of GDP over the same period (Figure 15), and increasing to 17.3 percent if combined with construction. Wholesale and retail trade was also a principal output for the economy, making up 13.4 percent of GDP. This is followed by public administration at 9.4 percent of GDP and financial services at 7.3 percent of GDP.

On the demand side, the economy was strongly biased towards a large structural external deficit position. Lebanon’s economy was heavily consumption based, with private consumption averaging 88.4 percent of GDP over the 2004–2016 period (Figure 16). The main supply-side sectors identified above—real estate, trade, public administration etc.—did not produce the consumption goods in demand, which instead were largely imported. This rendered the external sector a large net negative on output, averaging –24.4 percent of GDP over the 2004–2016 period. Meanwhile, total investments at 23 percent of GDP mostly focused on the real estate sector.

Lebanon ranked as one of the least competitive economies, both globally and regionally. The Global Competitiveness Index (GCI) by the World Economic Forum consistently ranked Lebanon one of the lowest, both globally and regionally (Figure 17). For example, in the 2019–20 GCI, Lebanon was ranked 105th of 137 countries, ahead of only Yemen in the region. Moreover, Lebanon’s backslide in competitiveness has been the most marked in the region over the previous decade. The leading drags on Lebanon’s competitiveness were the macro-economic environment, a dilapidated infrastructure and weak institutions and governance.

From a BoP perspective, a surplus in net exports of services, driven by travel services, has historically (partially) offset the massive trade-in-goods deficit. The regional turmoil that erupted in 2011, and the war in Syria in particular, exacerbated an already sizable current account deficit from a pre-turmoil (2002–10) average of 16.3 percent of GDP to an average of 20.1 percent of GDP over the 2011–17 turmoil period (Figure 18). Nonetheless, the current account retained its fundamental structure over the two periods; a surplus in net exports of services, driven by travel services, has historically (partially) offset the massive trade-in-goods deficit. Thus, the deterioration in the current account balance from pre-turmoil to turmoil periods can be attributed to a

FIGURE 16 • ...Biasing the Economy Toward Large External Deficits



Sources: CAS and WB staff calculations.

decline in the average net exports of travel services from 9.9 percent of GDP to 4.8 percent of GDP, respectively.

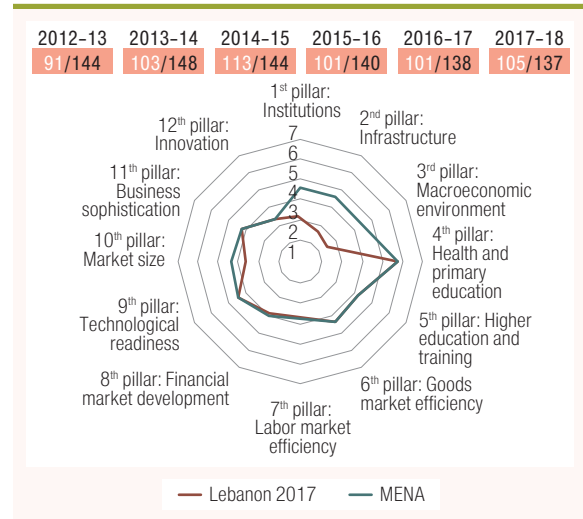
Global Conditions and Environment

The COVID-19 pandemic constituted a massive supply and demand shock on the global economy, affecting almost every country around the globe.

As a result, global growth contracted from 2.9 percent in 2019, to -3.5 percent in 2020. Major economies have been hit hard; 2020 real GDP growths registered -1.8, -7.3, -4.1, -3.0, -6.6, and -3.5 percent in Nigeria, India, Brazil, Russia, the Euro area and the US, respectively. Regionally, the economies of the Middle East and North Africa (MENA) region contracted by 3.9 percent in 2020, with Saudi Arabia real GDP declining by 4.1 percent.

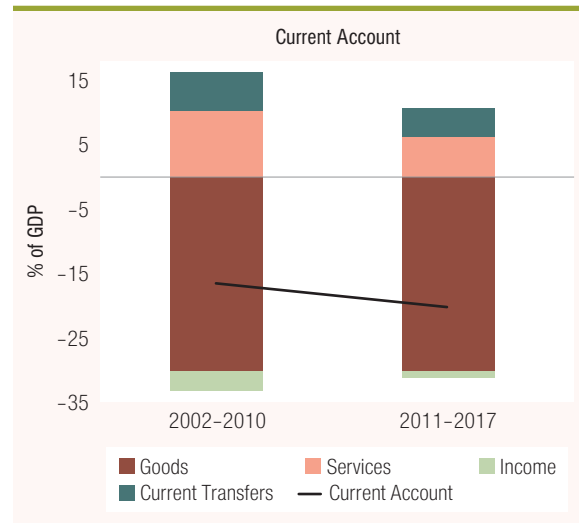
As a result of the pandemic, tourism, one of the few sectors that Lebanon could have benefited more from in the short term, has suffered greatly on a global scale. In Lebanon, the tourism sector has been particularly afflicted; tourist arrivals fell by 80 percent in 2020; recovering in 2021, growing by 101.2 percent (yoy) over 7M-2021. Hotel occupancies, declined from an average of 65 percent

FIGURE 17 • Long Term Structural Deficiencies Render the Lebanese Economy Uncompetitive



Sources: WEF Global Competitiveness Report.

FIGURE 18 • Exports of Services Has Historically Helped Offset the Large Trade Deficit



Sources: BdL and WB staff calculations.

in 2018 to 21 percent in 2020, rebounding somewhat over 5M-2021 to reach 39 percent (seasonally adjusted). Further, tourism has also been negatively impacted by severely deteriorating basic public services, especially the electricity sector. Anecdotal evidence suggests that signs of a promising tourist season emerged early in the summer of 2021, only to

be undermined by collapsing power supply from EdL and private suppliers.

Lebanon has been a long-time member of a number of regional and bilateral trade associations.

Most prominent of these associations include memberships in (i) the Greater Arab Free Trade Agreement (GAFTA), which has been in force since January 1st, 1998, and includes 17 member countries of the Arab League; (ii) the EU-Lebanon Association Agreement (AA), which is part of the Euro-Mediterranean Partnership; (iii) The European Free Trade Association-Lebanon Free Trade Agreement (EFTA), which includes Iceland, Liechtenstein, Norway and Switzerland. EFTA covers trade in industrial goods, including fish and other marine products, as well as processed agricultural products.

Lebanon's trade partnerships and associations have coincided with a significant widening of its trade-in-goods deficit. Lebanon's trade-in-goods balance has worsened from -25.1 percent of GDP in 2002 to a low of -38.3 percent in 2008, narrowing somewhat to -32.1 percent in 2010; over the 2011-2018 period, the trade in goods balance averaged -29.8 percent of GDP.

Political/Institutional Environment

Lebanon is enduring a severe and prolonged economic depression, in part due to inadequate policy responses to the assault of compounded crises—the country's largest peace-time financial crisis, COVID-19 and the Port of Beirut explosion.

A vacancy in the country's executive branch lasted for 13 months, following the resignation of the Hassan Diab Government in August 2020. Even prior, little progress was achieved on a crisis management strategy. The (Diab) Government's own Financial Recovery Plan was opposed by key stakeholders, including Parliament and the central bank. Since Diab's resignation, two PM-designates—Moustapha Adib and Saad Hariri—failed to garner sufficient support to form a Government. Najib Mikati finally succeeded in doing so in September 2021.

More structurally, Lebanon's post-war governance endured systemic failures.⁴⁸ Institutionalized confessionism intended as

protection for the mosaic of communities in a country that lacks a demographic majority developed into pervasive elite capture and patronage system. This elite commands the main economic resources, generating large rents and dividing the spoils of a dysfunctional state. In the process, the public sector has become increasingly governed by bribery and nepotism practices, failing to deliver basic public services and incapable of resolving the most urgent needs. This has culminated in the comprehensive breakdown in the political process, with the three branches of government either vacant or effectively idle, and the only national plebiscite abrogated for many years. This has triggered a series of protests and civil disobedience measures targeting the ruling political class with emphasis on corruption and incompetence.

Global Comparators

We continue to monitor the Lebanon financial crisis in the context of Global Crisis Comparators.⁴⁹

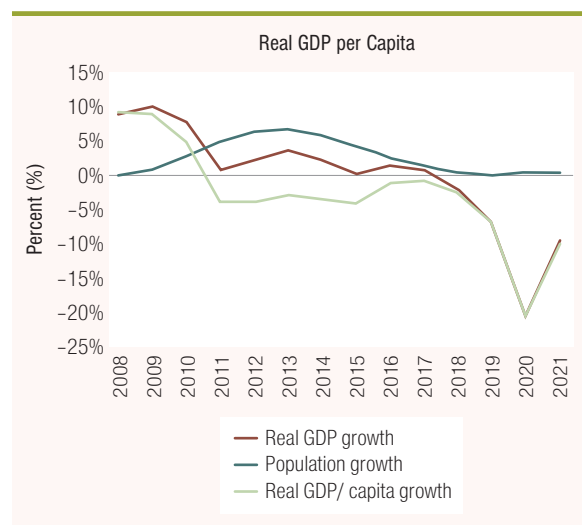
We compare Lebanon with the most severe global crises episodes as observed by Reinhart and Rogoff (2014), henceforth referred to as R&R.⁵⁰ The Spring 2020 LEM, entitled *Lebanon Sinking (To the Top*

⁴⁸ World Bank. 2016. "Lebanon Systematic Country Diagnostic".

⁴⁹ 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 2000s [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. In the Spring 2021 LEM, entitled *Lebanon Sinking (To the Top Three)*, we compare the Lebanon crisis to the most severe global crises episodes (from the mid-1800's to 2013) and conclude that the Lebanon episode could rank in the top 10, possibly top three most severe crises globally.

⁵⁰ For more details on Reinhart and Rogoff (2014), please refer to Annex .

FIGURE 19 • 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.

Three), found that the Lebanon financial crisis is likely to rank in the top 10, possibly three, of the most severe crises episodes globally from the mid-1800s until 2013.

In Lebanon, real GDP is a more accurate indicator (than real GDP per capita) to use when gauging the impact of the financial crisis. 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 19). Prior to 2018, real GDP per capita declined as a direct consequence of the war in neighboring Syria, driven by a two-pronged effect: (i) an appreciable slowdown in real economic activity—annual real GDP growth fell from a pre-Syria war average of 4–5 percent to 1.8 percent over the 2011–2017 period; and (ii) a significant increase in population due to the refugee influx—total population expanded by 27.3 percent from 2010 to 2017. In order to isolate the effects of the financial crisis from those of the Syria war, we use real GDP instead of real GDP per capita. Real GDP reached a pre-crisis peak in 2017.

We proceed to cross-compare macroeconomic indicators associated with the external position as well as output for Lebanon against R&R’s relatively more recent episodes

per availability of data. Specifically, we compare Lebanon to the following R&R episodes, henceforth referred to as G5: Chile (1980), Philippines (1981), Mexico (1981), Uruguay (2002) and Greece (2009).⁵¹ To the extent data is available, we plot each macroeconomic indicator for the G5 plus Lebanon over the years leading to the crisis point and observe dynamics in years that follow.⁵²

Real Effective Exchange Rate—Output

REER in Mexico (1981) depreciated more severely than REERs in other G5 episodes.

Examining REERs in the G5 sample,⁵³ we note the following (Figure 20): REERs for Chile (1980) and Philippines underwent appreciations in $t+1$ or earlier, followed by a general depreciating trend thereafter; Mexico (1981)’s REER depreciated more severely in $t+1$, recovering somewhat in $t+3$ and $t+4$, before resuming further depreciation; Uruguay’s REER depreciation was more frontloaded beginning at $t-2$ and lasting though $t+2$; lastly, REER in Greece (09) varied minimally as a result of successfully remaining in the Euro. Peak REER depreciation⁵⁴ was most severe for Mexico (1981)—where the REER depreciated by 30.2 percent in $t+5$ —followed by Uruguay (2002) and Philippines (1981)—with REER depreciations of 21.7 percent for each in $t+1$ and $t+5$, respectively—then

⁵¹ A summary of crisis events for each of these episodes is presented in Annex C of:

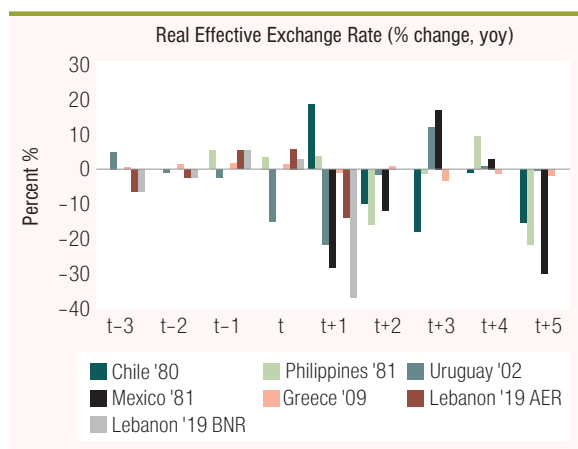
World Bank (2018), *The Deliberate Depression*, the Lebanon Economic Monitor, Fall 2020 Issue.

⁵² In these charts, the indicator is plotted from 3 or 4 years prior to crisis year ($t-3$ or $t-4$), 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.

⁵³ Source: International Financial Statistics.

⁵⁴ Peak REER depreciation denotes the sharpest yoy depreciation over the time period observed, in this case $t-3$ to $t+5$.

FIGURE 20 • Real Exchange Rate Growths for G5 Plus Lebanon



Sources: IFS, BdL, CAS and WB staff calculations.

Chile (1980), whose REER depreciated by 18.1 percent in $t+3$.

In the Lebanon episode, the REER⁵⁵ appreciated during the period just prior to the crisis, and then depreciating at $t+1$ (2020). Lebanon's

peak REER depreciation (so far) varies according to the exchange rate used in calculating the REER. When using the World Bank Average Exchange Rate (AER), peak REER depreciation is mild at 13.9 percent, occurring at $t+1$. Peak REER depreciation, however, becomes much starker when using the US\$ banknote rate (BNR), registering 36.9 percent at $t+1$. In fact, using the latter, Lebanon's REER depreciation surpasses other G5 episodes.

Lebanon's real GDP decline is significantly more pronounced than in other G5 episodes. Peak real GDP decline (so far) reached 21.4 percent in $t+1$ (2020), surpassing second place Chile (1980), whose real GDP contracted by 11 percent in $t+2$ (Figure 21). It is notable that the economy in Uruguay (2002) rebounded briskly, suggesting that it was able to benefit from the REER depreciation illustrated above. This is less so the case for Mexico (1981), where we see evidence of volatility in output. Meanwhile, Greece

⁵⁵ Lebanon's REER calculations are explained in Box 5.

BOX 5. REAL EFFECTIVE EXCHANGE RATE CALCULATIONS

We first calculate Lebanon's Nominal Effective Exchange Rate (NEER) using the following formula:^a

$$NEER = \prod_i E_i^{w_i}$$

where E_i is the bilateral exchange rate expressed in foreign currency units per LBP, and w_i is the weight assigned to each trading partner.

Then, we proceed by adjusting NEER for the changes in price levels, to reach the Real Effective Exchange Rate (REER) using Lebanon's and its trading partners' Consumer Price Indices (CPI)^b

$$REER = NEER \frac{P}{\prod_i (P_i^*)^{w_i}}$$

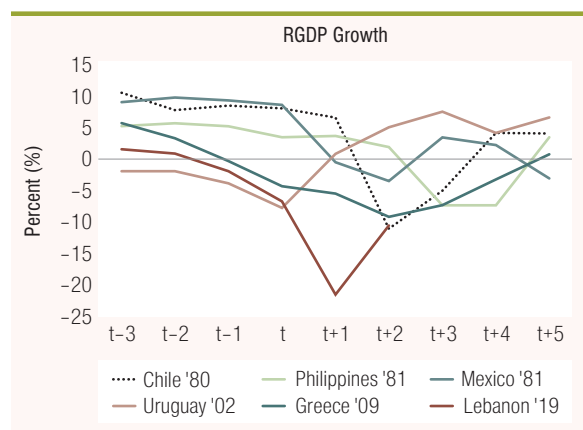
Where P is the local price level in Lebanon, and P_i^* is that in the trading partner, given by the CPI.

Data for the bilateral nominal exchange rates is sourced from BdL and IMF's IFS database, for the period from January 2013 till December 2020. The weight for each trading partner is obtained as its share out of Lebanon's total imports. We use 30 countries, from which Lebanon imports about 80 percent of its total imports between 2013 to 2020. The formula used necessitates the weights adding up to 1, so we adjust these shares (weights) accordingly. We use Lebanon's Customs' figures to obtain data on imports and calculate those shares. CPI data is also sourced from IMF's IFS database.

^a Govil, Rajan. 2014. Exchange Rates: Concepts, Measurements and Assessment of Competitiveness, IMF Regional Training Institute: Bangkok, Thailand.

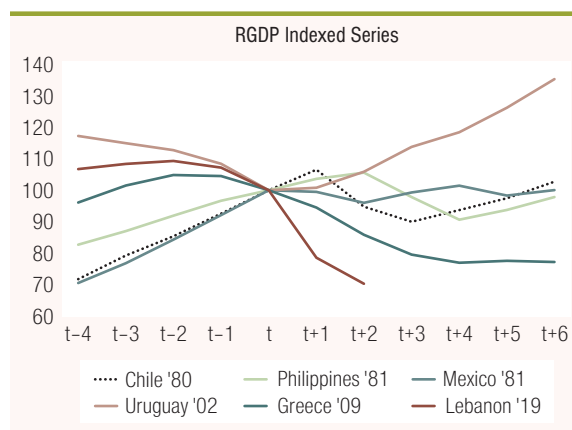
^b Bayoumi, T, J Lee. and S Jayanthi. 2005. New Rates From New Weights, IMF Working Paper WP/05/99, May.

FIGURE 21 • Real GDP Growth for G5 Plus Lebanon.



Sources: WDI, CAS and WB staff calculations.

FIGURE 22 • Real GDP Index Series for G5 Plus Lebanon



Sources: WDI, CAS and WB staff calculations.

(2009) illustrates a more prolonged and painful recession, partially due to an inability to adjust via nominal exchange rate depreciation.

The contraction in Lebanon’s real GDP per capita is already worse than any of the G5’s peak-to-trough changes (Figure 22). The contraction in Lebanon’s real GDP per capita from its level in peak year $t-2$ (2017) had already reached an estimated 29.3 percent by 2020 and is projected to be 37 percent by 2021. This is significantly larger than G5 peak-to-trough changes in per capita GDP: –18.9 percent for Chile (1980), –18.8 percent for Philippines (1981), –14.1 percent for Mexico (1981), –18.9 percent for Uruguay (2002) and –24 percent for Greece (2009) (Table 11).

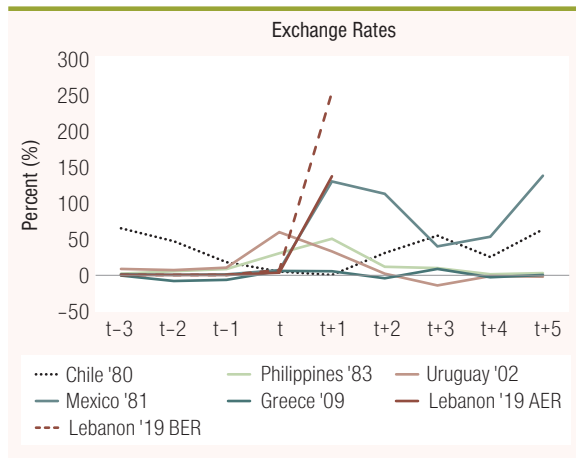
Depreciation-Inflation

Apart from Greece (2009), a depreciation-inflation dynamic is a key driver of macroeconomic instability for all other G5 episodes, a characteristic also shared by the Lebanon financial crisis.

In order to dissect REER behavior, we examine primary components—that is, nominal exchange rates (vis-à-vis the US\$ as a proxy) and inflation rates—for the G5 plus Lebanon episodes (Figures 23 and 24). The Mexican peso depreciated sharply against the US\$ in $t+1$, driving the REER to depreciate in $t+1$ and $t+2$. Thereafter, REER fluctuations resulted from lagging exchange rate pass-through effects on prices;

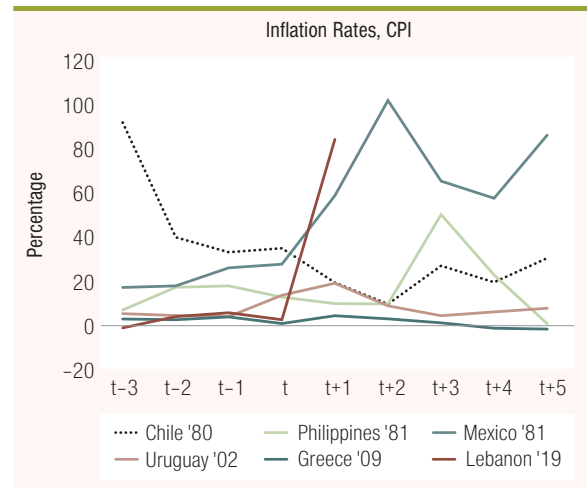
first, inflation rates surpassed the peso’s depreciation, appreciating the REER, followed by a more pronounced loss in the peso’s value that once again forced a REER depreciation. The currency in Uruguay (2002) started losing value at $t-2$ through $t+2$, surpassing the inflations rates for these years, thereby depreciating the REER; relative stability in the REER ensued. The Philippines peso and prices experienced relative stability until $t+2$, at which time a sharp loss in the local currency’s value led a REER depreciation. This was followed by lagged inflationary effects at $t+3$ that offset a further nominal depreciation in the peso, tempering REER movements. The race between prices and exchange rate movements in $t+4$ and $t+5$ led to a significant REER appreciation and depreciation, respectively. The Chile (1980) episode diverges from the other G5 cases, in that high inflationary rates led the depreciation in the nominal exchange rate, causing a REER appreciation in $t+1$. Lagged effects on the currency finally depreciated the REER thereafter. Meanwhile, Greece (2009) had successfully retained membership of the Euro monetary area, safeguarding REER stability throughout its crisis period. In the Lebanon episode, mild inflationary pressures drove marginal REER appreciations in the period leading to crisis. This was followed by the collapse in the peg, leading to a REER depreciation starting in $t+1$. Lebanon’s case up until $t+1$ most closely resembles Mexico (1981) when it comes to movements in the exchange rate and prices.

FIGURE 23 • Exchange Rates for G5 Plus Lebanon



Sources: WDI, BdL, Lebanese Customs and WB staff calculations.

FIGURE 24 • Inflation Rates for G5 Plus Lebanon



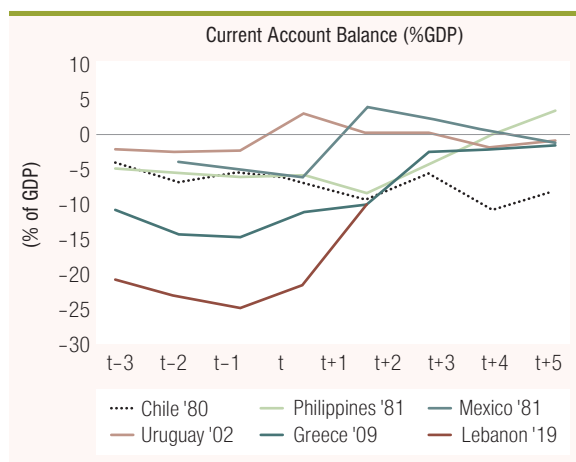
Sources: WDI, CAS and WB staff calculations.

Some Insights

While REER and its components for Lebanon (2019) seem to most resemble that of Mexico (1981), and to a lesser extent Uruguay (2002), the economic contraction in the Lebanon case is much starker, and in fact is closer to Greece (2009). A main reason for that is the size of the external imbalances that Lebanon accommodated for such a long time, and which reflect economic fundamentals and pre-crisis structure. The current account deficit in Lebanon in the pre-crisis period exceeded 20 percent

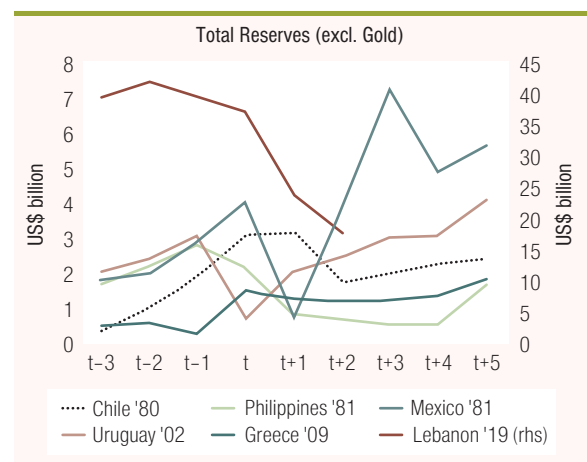
of GDP, surpassing all G5 episodes (Figure 25). While a correction is taking place in Lebanon in the form of a narrowing current account deficit, it is mainly doing so through crashing imports via a contraction in economic activity, rather than a boost to exports. As discussed previously, COVID-19 conditions and systemic failures in the banking sector have prevented Lebanon from benefiting from its main exports: tourism and financial services. This a painful and prolonged adjustment that mostly resembles Greece (2009). Meanwhile, the current account imbalances in Mexico (1981) and Uruguay (2002) corrected much

FIGURE 25 • The Current Account Balance for G5 Plus Lebanon



Sources: WDI, BdL and WB staff calculations.

FIGURE 26 • Total FX Reserves for G5 Plus Lebanon



Sources: WDI, CAS and WB staff calculations.

more briskly—commodities being important exports for both—with Philippines (1981) taking a longer time to do so. More worryingly for Lebanon, and despite the harsh adjustment, depletion of its FX reserves is steeper than all G5 episodes. Further, Lebanon’s reserve position does not yet show any signs of stability at $t+2$, a point when G5 reserves regained some form of stability or even strong recovery (Figure 26).

The above analysis reinforces conclusions in earlier LEMs that the Lebanon’s financial

crisis stands out as a particularly arduous episode even when compared to some of the most severe crises observed since 1900. This has been supported by socio-economic conditions which are expected to continue to be more painful and to persist 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.

ANNEX

A. 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. A revision to real GDP data for 2019 by the Central Administration of Statistics (CAS) is also accounted for in this run.

The data on the high frequency indicators are available for the entirety of 2020 and for part of 2021, depending on the indicator.⁵⁶ Real GDP growth was also revised down from -6.7 percent to -7.15 percent in 2019 by the CAS.

In forecasting growth for 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 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 and resident deposits. 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

⁵⁶ Table 5 provides the sample end date for each of the high frequency indicators. In the previous update to the MIDAS forecasting exercise, the data on the high frequency indicators were available until November 2020.

FIGURE 27 • Evolution of High Frequency Indicators Used to Nowcast and Forecast Lebanon’s Real GDP Growth in 2020



Sources: WDI, BdL, Lebanese Customs and WB staff calculations.

rates in claims of the commercial banking sector on resident customers, outstanding lines of credit for imports, non-resident 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, is referred to as the factor augmented MIDAS model. The low frequency variable of interest in the nowcasting or forecasting exercises is $y_t^l = (gdp_g)$ where gdp_g is the growth rate in real GDP.

A static (i.e., one-step-ahead) forecast of real GDP growth rates is generated using ADL-MIDAS using the data on the high frequency indicators that

are available for the entirety of 2020. The ADL-MIDAS model is employed to introduce dynamics.

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 4.

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 banking sector occurs in 2020, the set of high frequency indicators is enlarged to encompass real activity indicators.

The candidate predictor variables are provided in Table 5.

TABLE 4 • Real GDP Growth Forecasts for 2020

| | Real GDP Growth Forecasts for 2020 |
|---|------------------------------------|
| | Baseline |
| Growth in non-resident deposits | -13.3% |
| Growth in resident deposits | -13.5% |
| Growth in claims on the resident sector | -13.8% |
| Growth in lines of credit for imports | -15.5% |
| Factor Augmented MIDAS | -21.4% |

It should be noted that the data for the Bdl coincident indicator were revised for July, August and September of 2020 relative to the previous run and that the set of high frequency indicators was enlarged to include cleared checks as well as total passenger flow at the airport (defined as the sum of the number of passengers arriving, departing and in transit).

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

TABLE 5 • Candidate Predictor Variables for the Real High Frequency Indicators

| Candidate Predictor Variables | Observations Available Until |
|--|------------------------------|
| BDL Coincident Indicator (annual change, percent) (CI) | 2021:03 |
| World Bank Coincident Indicator (annual change, percent) (WBCI) | 2021:01 |
| Cement Deliveries (annual change, percent) (CD) | 2021:03 |
| Cleared Checks in Real Terms (annual change, percent) (CC) | 2021:03 |
| Customs Receipts in Real Terms (annual change, percent) (CR) | 2021:03 |
| Import of Petroleum Derivatives (annual change, percent) (PI) | 2021:03 |
| Incoming Freight at the Port of Beirut (annual change, percent) (IF) | 2021:03 |
| Outgoing Freight at the Port of Beirut (annual change, percent) (OF) | 2021:03 |
| Passenger Flow (annual change, percent) (PF) | 2021:03 |
| Primary Spending in Real Terms (annual change, percent) (PRIM) | 2021:01 |

the CPI data dictates the starting date of the MIDAS forecasting exercise to be January 2009. The same starting date is employed for all 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 is 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.⁵⁷ 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 several reasons.⁵⁸ First, identifying the best performing model is not a straightforward 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 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 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.

⁵⁷ This extrapolation embeds mean reversion, but this is not sufficient to reflect the positive effects of policy action.

⁵⁸ This discussion is based on Jamali and Yamani (2019).

TABLE 6 • Forecasts of Real GDP Growth for 2021 Using Real Activity Indicators

| | Forecast for 2021 |
|--|-------------------|
| BdL Coincident Indicator (annual change, percent) (CI) | -19.53% |
| World Bank Coincident Indicator (annual change, percent) (WBCI) | -20.69% |
| Cement Deliveries (annual change, percent) (CD) | -7.04% |
| Customs Receipts in Real Terms (annual change, percent) (CR) | -11.40% |
| Cleared Checks in Real Terms (annual change, percent) (CC) | -13.14% |
| Import of Petroleum Derivatives (annual change, percent) (PI) | -10.59% |
| Incoming Freight at the Port of Beirut (annual change, percent) (IF) | -2.62% |
| Outgoing Freight at the Port of Beirut (annual change, percent) (OF) | -8.56% |
| Passenger Flow (annual change, percent) (PF) | -11.18% |
| Primary Spending in Real Terms (annual change, percent) (PRIM) | -13.94% |

Dynamic forecasts of the growth in the high frequency indicators are generated from a well-specified Autoregressive Moving Average (ARMA) 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 $x_t^H = (ci, wbc, cd, cr, pi, if, of, pf, prim)$.

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

Data on the four financial indicators are available until June 2021. The real GDP growth forecasts for 2021 using the financial indicators are provided in Table 7.

The simple average of the forecasts for 2021 is -10.55% whereas the median is -10.89%.

Again, given that the import constraint is likely not to be 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 3 and 4 yields an average growth

TABLE 7 • Forecasts of Real GDP Growth for 2021 Financial Indicators

| Indicator | Forecast for 2021 |
|--|-------------------|
| Growth in non-resident deposits (NR) | -5.72% |
| Growth in resident deposits (R) | -5.27% |
| Growth in claims on the resident sector (CL) | -6.03% |
| Growth in lines of credit for imports (LC) | -12.05% |

rate of -10.44% in 2021 and a median growth rate of -10.59%.

References

- Elliott, G., & A. Timmermann. 2016. *Economic Forecasting*. Princeton University Press.
- Jamali, I., & E. Yamani. 2019. Out-of-sample exchange rate predictability in emerging markets: Fundamentals versus technical analysis. *Journal of International Financial Markets, Institutions and Money*, 61, 241–263.
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B. Estimating the Exchange Rate Pass Through to Inflation in Lebanon

Introduction

Estimates of the degree Exchange Rate Pass Through (ERPT) to inflation are of direct policy relevance. Indeed, policymakers require estimates of the ERPT to understand the drivers of inflation. The ERPT coefficient is estimated by assessing how inflation responds to a change in the nominal exchange rate.

Existing studies have commonly employed Vector Autoregressive (VAR) or Vector Error Correction (VECM) models to gauge the degree of pass through from the exchange rate to inflation (Bhundia 2002; Ha, Stocker, and Yilmazkuday 2019; McCarthy 2007; Korhonen and Wachtel 2006; Korhonen and Wachtel 2006; Leigh and Rossi 2002; McCarthy 2007). The latter studies estimate the ERPT coefficient using

impulse response analysis from a well-specified model. The extent to which exchange rate (or devaluation/ depreciation) shocks drive inflation is also examined using forecast error variance decompositions.

Jasova, Moessner, and Takáts (2016) propose an alternative method to gauging the ERPT coefficient in a panel data setting. The advantage of their methodology is twofold. First, it permits estimating a time-varying ERPT coefficient. Hence, changes in the ERPT coefficient across time can be inspected. Second, the nonlinearities in relation between inflation and the exchange rate can be accounted for by way

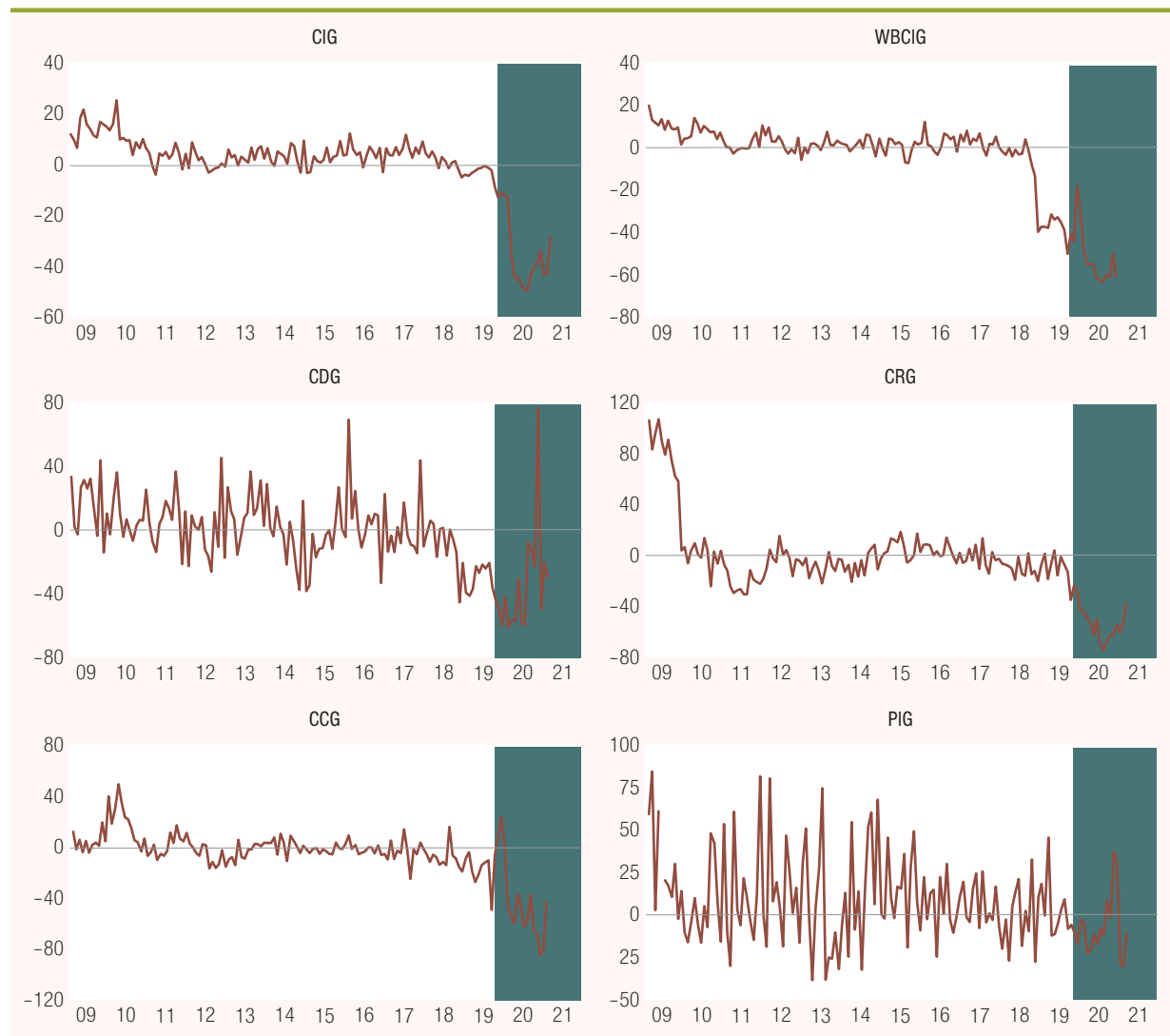
of including quadratic and cubic terms of the change in the exchange rate.

Estimating the ERPT Coefficient with VAR

The first approach to estimating the ERPT coefficient is to specify and estimate a VAR model. A VAR relates a $(k \times 1)$ vector of variables, y_t to p of its own lags. A structural VAR model is given by:

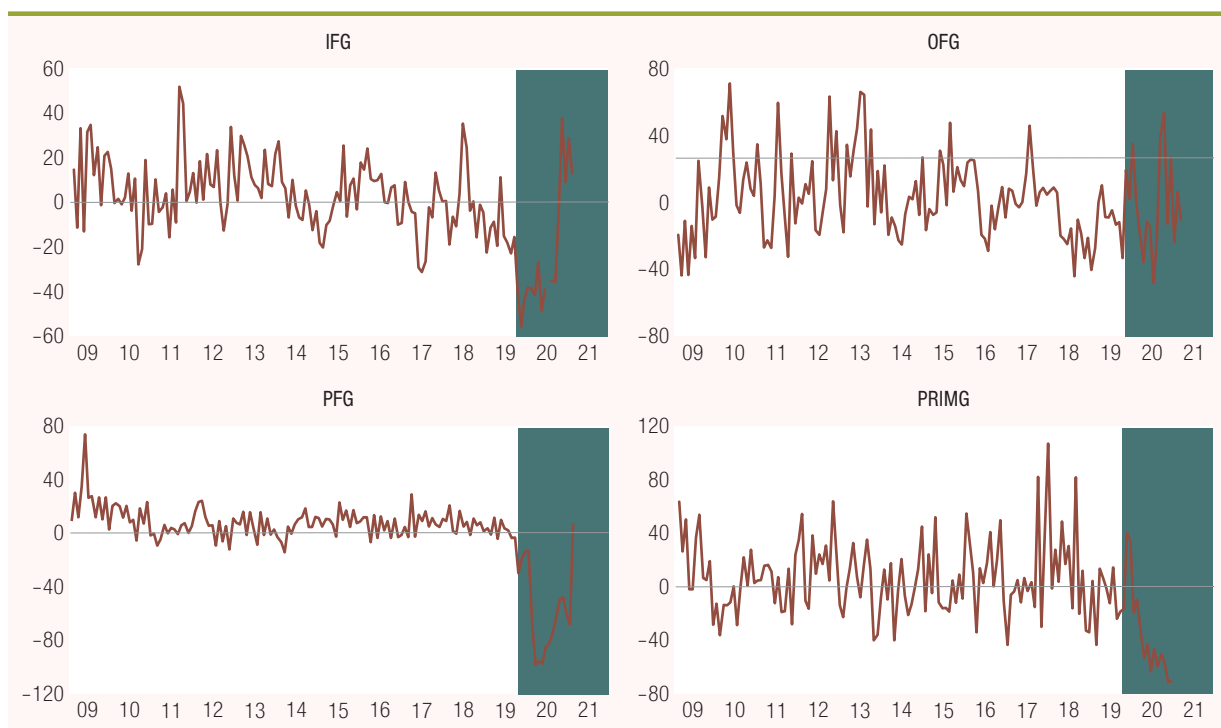
$$B_0 y_t = B_1 y_{t-1} + \dots + B_p y_{t-p} + \omega_t, \quad (1)$$

FIGURE 28 • Growth of High Frequency Real Economy Indicators Used to Nowcast and Forecast Lebanon’s Real GDP Growth in 2021



(continued on next page)

FIGURE 28 • Growth of High Frequency Real Economy Indicators Used to Nowcast and Forecast Lebanon’s Real GDP Growth in 2021 (continued)



The VAR model in reduced form can be written as:

$$y_t = B_0^{-1}B_1 y_{t-1} + \dots + B_0^{-1}B_p + B_0^{-1}\omega_t, \quad (2)$$

That is, the reduced form residuals relate to the structural residuals via: $u_t = B_0^{-1}\omega_t$.

The vector of variable y_t includes the changes in changes in the currency in circulation, inflation as measured by changes in the Consumer Price Index (CPI) as well as changes in the Average Exchange Rate (AER). Let E_t , M_{ot} and P_t denote, respectively, the levels of the AER, money in circulation and the CPI and e_t , m_{ot} and p_t denote the natural logarithm of the variables.

These vector of variables in the VAR is thus $y_t = [\Delta e_t, \Delta m_{ot}, \Delta p_t]'$ and a recursive ordering (i.e., Cholesky) is employed to identify the VAR.

The VAR model is estimated using the logarithmic changes in the variables to circumvent possible non-stationarity. The model is estimated with one lag to avoid degrees of freedom problems.

The sample period is January 2008 to October 2021 and the analysis is carried out at the monthly frequency.

Figure 29 provides the responses of the three variables in the VAR to a 1% shock in the logarithmic change of the AER.

The effects of the exchange rate shock on inflation are discernable for the first four months. The response of inflation to an exchange rate shock peaks one month after the shock.

Following Leigh and Rossi (2002), the ERPT coefficient is computed as:

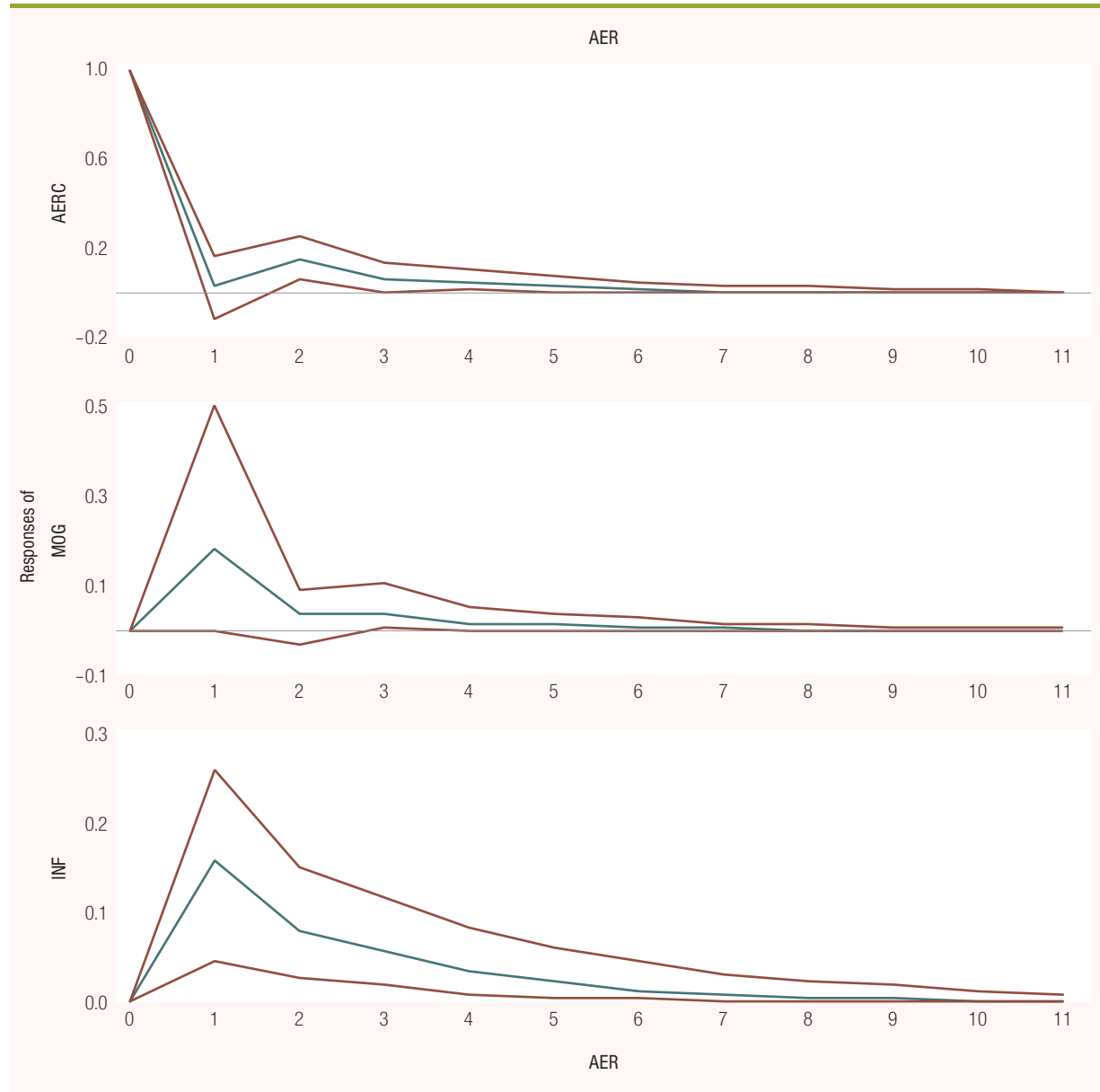
$$PT_{t,t+j} = P_{t,t+j} / E_{t,t+j}, \quad (3)$$

where $PT_{t,t+j}$ and $E_{t,t+j}$ are, respectively, the cumulative changes in the price level and the exchange rate between months t and $t+j$.

Estimates of the ERPT coefficient for a horizon of 12 months are provided in Table 8 and Figure 30:

The Forecast Error Variance Decomposition (FEVD) from the VAR estimated in log levels are

FIGURE 29 • Responses to a 1% Shock to the Logarithmic Change in the AER



provided in Figure 31. The VAR is estimated in log levels to discern longer horizon dynamics of the variable.

The h -step FEVD for the CPI from the estimated VAR is provided in Figure 31:

The FEVD suggests that shocks to the AER account for a progressively larger proportion of the variance of the CPI up to a horizon of 6 months. Further, shocks to the AER account for the bulk of

the variance of the CPI three to nine months following the shock. In contrast, changes in money in circulation become a gradually more important driver of the variance of the CPI sixth months after the shock to the AER.

Table 9 provides the cumulative effect of an exchange rate depreciation on inflation from the VARs in log changes and log levels:

TABLE 8 • Estimates of the ERPT Coefficient

| Horizon | ERPT Coefficient |
|---------|------------------|
| 0 | 0.367879441 |
| 1 | 0.437178369 |
| 2 | 0.401352574 |
| 3 | 0.397545455 |
| 4 | 0.390552061 |
| 5 | 0.386970429 |
| 6 | 0.384339885 |
| 7 | 0.382643321 |
| 8 | 0.381495204 |
| 9 | 0.380730692 |
| 10 | 0.380217432 |
| 11 | 0.379873871 |

TABLE 9 • Cumulative Effect of an Exchange Rate Depreciation

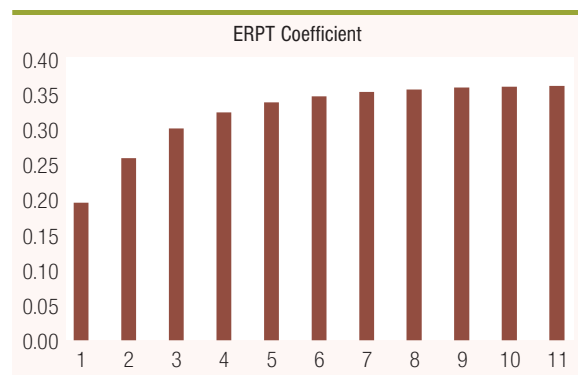
| Panel A: VAR in log changes | |
|-----------------------------|---------------------|
| Change in AER | Change in Inflation |
| 1% | 0.56% |
| 100% | 56% |
| Panel B: VAR in log levels | |
| Change in AER | Change in Inflation |
| 1% | 0.77% |
| 100% | 77% |

When the US\$ Banknote Exchange Rate is used instead of the AER, the following are the estimates:

TABLE 10 • Cumulative Effect of an Exchange Rate Depreciation

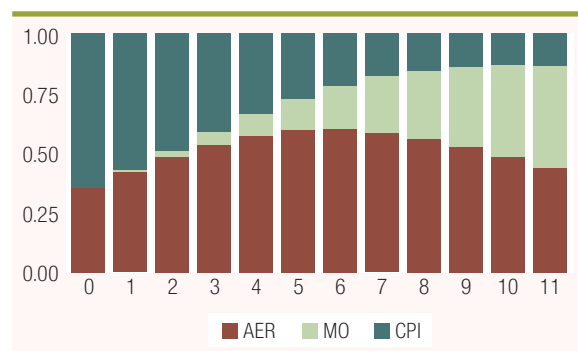
| Panel A: VAR in log changes | |
|-----------------------------|---------------------|
| Change in AER | Change in Inflation |
| 1% | 0.28% |
| 100% | 28% |
| Panel B: VAR in log levels | |
| Change in AER | Change in Inflation |
| 1% | 0.67% |
| 100% | 67% |

FIGURE 30 • Estimates of the ERPT Coefficient



Notes: This figure provides the ERPT coefficient for a horizon of 12 months.

FIGURE 31 • Forecast Error Variance Decomposition



Notes: This figure provides the ERPT coefficient for a horizon of 12 months.

Direct and Time-Varying Estimates of the ERPT Coefficient

Following Jasova, Moessner, and Takáts (2016), the second approach consists of estimating the ERPT coefficient directly using the regression:

$$\Delta\rho_t = \alpha + \delta\Delta\rho_{t-1} + \gamma_0\Delta e_t + \sum_{j=1}^{12}\gamma_j\Delta e_{t-j} + \varnothing y_t + \varepsilon_t, \quad (4)$$

The above regression adapts Jasova, Moessner, and Takáts (2016) to monthly data and variants of it have been employed in the literature to measure the ERPT coefficient (Bailliu and Fujii 2004; Bussiere 2013)

An important departure from the latter study is that the quadratic and cubic terms of the AER are not included to account for possible non-linearity in

the relation between inflation and the exchange rate (Bussière 2013; Ben Cheikh and Rault 2016). The quadratic and cubic terms are omitted for parsimony and because of the data limitations in Lebanon.

In line with Jasova, Moessner, and Takáts (2016), the contemporaneous ERPT coefficient is γ_0 . The yearly linear pass-through coefficient is $\sum_{j=0}^{12} \gamma_j$ and the long run pass through coefficient is $\sum_{j=0}^{12} \gamma_j / (1 - \delta)$.

The first pass at estimating the ERPT coefficient is to use the simplest possible specification:

$$\Delta\rho_t = \alpha + \delta\Delta\rho_{t-1} + \gamma_0\Delta e_t + \varepsilon_t, \quad (5)$$

The estimate of the ERPT coefficient, γ_0 , in this simple specification is 0.304 (significant at the 5% level). When the US\$ banknote rate is employed, the ERPT coefficient is estimated to be 0.22.

The second specification includes lags of the change in the exchange rate:

$$\Delta\rho_t = \alpha + \delta\Delta\rho_{t-1} + \gamma_0\Delta e_t + \sum_{j=1}^{12} \gamma_j\Delta e_{t-j} + \varepsilon_t \quad (6)$$

Estimating the specification in equation (6) using the AER yields a an ERPT coefficient of 0.27.

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C. Reinhart and Rogoff (2014)

Based on the most extensive financial crises database available,⁵⁹ Reinhart and Rogoff (2014), henceforth referred to as 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. R&R's 25 most severe crises and associated results are presented in Table 11.

⁵⁹ Reinhart, Carmen M., and Kenneth S. Rogoff (2009), *This Time Is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.

TABLE 11 • 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 | Peak to Trough | Peak to Recovery | CSI | Double Dip |
|----------------|-----------|-------------------|----------------|----------------|------------------|-------------|----------------|
| | | | % change | # years | # years | | 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 |
| <i>Average</i> | | | <i>-24.3</i> | <i>5</i> | <i>16</i> | <i>40.5</i> | |

^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.



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