LIVING WITH DEBT: How Institutions Can Chart a Path to Recovery in the Middle East and North Africa

WORLD BANK GROUP

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Abbreviations

CDC	Centers for Disease Control and Prevention
CDS	Credit Default Swaps
COVAX	COVID-19 Vaccines Global Access
COVID-19	Coronavirus Disease 2019
DSA	Debt Sustainability Analysis
DSSI	Debt Service Suspension Initiative
EM-DAT	Emergency Events Database
FDI	Foreign Direct Investment
FOMC	Federal Open Market Committee
G20	Group of 20 Advanced Economies
GCC	Gulf Cooperation Council
GDD	Global Debt Database
GDP	Gross Domestic Product
GHS	Global Health Security
IDS	International Debt Statistics
IMF	International Monetary Fund
MENA	Middle East and North Africa
MPO	Macro and Poverty Outlook
NPR	National Public Radio
OECD	Organization for Economic Cooperation and Development
PMI	Purchasing Managers' Index
RHS	Right-hand side
SOE	State-Owned Enterprises
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
USEIA	U.S. Energy Information Administration
VIX	Chicago Board Options Exchange Volatility Index
WEO	World Economic Outlook
WHO	World Health Organization

Preface

One year ago, the first cases of a new coronavirus appeared in the Middle East and North Africa (MENA) region, and the pandemic that followed has been wreaking havoc ever since. Nearly every country in MENA has been overwhelmed by a surge of deadly infections, accompanied by collapsing economies that threw millions of people out of work and pushed many more into poverty.

The pandemic hit MENA countries at a bad time. Many countries in the region entered 2020 with chronic low growth, persistent macroeconomic imbalances, and governance challenges, including a deficit in transparency. Public health systems in developing MENA countries were unprepared to face the pandemic.

Today the MENA region, like the rest of the world, remains in crisis. But we can see hopeful signs of light through the tunnel. Vaccines to fight COVID-19, the disease caused by the coronavirus, are being produced and, in some countries, rapidly deployed. Shortages of medical supplies are abating. There is evidence that the lockdowns and social distancing that caused the economic distress have also helped tamp down the spread of the virus. And after a sharp contraction in GDP, a recovery of sorts is forecast for the global economy and for the MENA region in 2021.

But that recovery is unlikely to be strong enough to get the MENA region's output back to pre-pandemic levels. And the substantial borrowing that MENA governments had to incur to finance essential health and social protection measures boosted government debt dramatically. The average public debt in MENA countries is expected to rise 8 percentage points, from about 46 percent of gross domestic product (GDP) in 2019 to 54 percent in 2021. Notably, debt among MENA oil importers is expected to average about 93 percent of GDP in 2021. And the need to keep spending—and keep borrowing—will remain strong for the immediate future.

The tension between short-term needs and long-term consequences is stark for countries in the MENA region. For many, debt repayments are large and growing. Moreover, although global interest rates are at an all-time low, some MENA countries do not have access to markets because they are not considered creditworthy, while some others must pay high rates. Poor governance and lackluster growth prospects prevent them from taking advantage of favorable global credit conditions. Consequently, most MENA countries may find themselves, in a post-pandemic world, stuck with a debt service bill sucking up resources that otherwise could be devoted to economic development.

This report examines both the region's economic challenges and the uncomfortable tradeoffs governments will have to make in the coming years. They have no option but to continue spending on health and income transfers as long as the pandemic continues. That will improve the health and help maintain the financial stability of their citizens. But it will also add to already high debt burdens, which spell complicated policy decisions after the pandemic recedes. Should MENA governments then immediately turn their attention to providing fiscal stimulus to stumbling economies? Will they need to? Pent-up demand—especially from tourism and other travel—could provide enough spark to invigorate economies. Eventually MENA countries will have to deal with accumulated debt and its costs and will have to bring debt down to a more sustainable level.

The report discusses policy options available for MENA countries. One significant takeaway is the important role of strong, efficient and transparent institutions in addressing the tradeoffs between short-term needs and long-term costs of public debt. Good governance could increase the effectiveness of fiscal spending. Improving debt transparency could lower borrowing costs when countries try to roll over their debt. Even in the short term, improvements in governance and transparency will help

during the pandemic. Investing in testing, disease surveillance, and data transparency can reduce the economic costs of the pandemic. As the crisis subsides, effective, transparent and credible pandemic surveillance in the region would help boost demand from domestic and foreign sources—such as the arrival of foreign tourists.

Strong institutions are one crucial dimension to helping MENA build back stronger and more resilient economies. As needed, they can be reformed and strengthened with limited fiscal costs and can thus help boost the region's long-run growth. As MENA emerges from this dark time, the World Bank stands ready to help the region, not only to meet the short-term needs of disaster relief, but also to enhance institutions that will help usher in brighter years ahead.

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Overview

The Middle East and North Africa (MENA) region, like the rest of the world, remains in a pandemic-spawned crisis. In 2020, the region's real output contracted by 3.8 percent. The rebound in 2021 is unlikely to be strong enough to allow the region to regain the level of economic activity it had in 2019 and certainly not the level the World Bank had forecasted before the pandemic.

The region's inflation-adjusted government revenues dropped by 24 percent in 2020. The disaster relief demanded by the pandemic, combined with the decline in revenues led to further accumulation of debt in a region that already had high public debt. The World Bank expects the region's public debt to rise from 46 percent of its GDP in 2019 to 54 percent by the end of 2021. This increase would be MENA's fastest accumulation of public debt as a share of output in the 21st century. Among MENA country groups, MENA oil importers have the highest levels of debt, which will hover around 93 percent of GDP in 2021.

As the pandemic subsides, tensions will inevitably emerge between the potential short-run gains and the potential long-run costs of debt-financed public spending.

In the short-term, fiscal spending is needed to mitigate the effects of the pandemic, including income transfers to support consumption of hardest hit families and health spending on testing, treatment, and vaccination. As the pandemic subsides, fiscal authorities will have to decide whether additional fiscal stimulus is warranted to raise aggregate demand to accelerate the post-pandemic economic recovery.

Because the pandemic shares many traits with natural disasters, this report examines trends in public debt and output growth around natural disasters to illustrate how debt-financed fiscal expenditures can help the recovery. The evidence indicates that growth in both public debt and output tends to rise faster after disasters than it does in economies without disasters, thus illustrating how debt-financed fiscal expansions can help economic reconstruction.

However, in the longer run, debt might be costly, especially for developing economies. When governments borrow, they may crowd out private sector investment because rising interest rates increase the cost of capital for the private sector. In fact, the correlation between private investment and public debt was negative for MENA's developing countries[1] during the past two decades. In addition, high levels of debt may be accompanied by costly debt-interest payments that gradually reduce the space for other growth-enhancing public investment priorities. For example, a few countries in the MENA region already have interest payments equivalent to about 10 percent of GDP and account for more than 30 percent of total public expenditures.

Maintaining high debt could also be risky in the long term, threatening economies' credit worthiness and their ability to refinance (or roll over) maturing debt in the future. These risks, if they materialize, can result in economic pain characterized by currency devaluations, run-away inflation, capital flight, and ultimately costly debt crises. Lebanon's debt default in March 2020 and the ongoing crisis is a painful example.

The report provides suggestive evidence that atypically high debt levels relative to GDP can dampen long-term growth prospects. Countries that entered the 21st century with high debt- to- GDP ratios tended to grow more slowly over the next two decades than countries with lower debt burdens. For developing countries, the data are striking. Economies in the top tercile of countries in terms of debt-to-GDP ratios in 2000 typically experienced a GDP-per-capita growth rates about 1 percentage point per year lower than the rest of the developing countries over the next 20 years.

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1   Throughout the report, the term "MENA's developing countries" refers to low- and middle-income MENA countries.

The tension between short-term needs and long-term costs of debt-financing seems more severe for developing economies than for high-income ones. In advanced economies, accommodative monetary policy and rising savings are expected to combine to keep interest rates low, favoring government borrowing that could help finance growth-enhancing activities. In general, academic literature suggests that advanced economies are less "debt intolerant" than developing and emerging economies (Reinhart et al., 2003). That is, they can continue to borrow when debt levels are high without risking major growth slowdowns. The data collected for this report is consistent with this hypothesis.

For developing economies, however, including those in MENA, the tension between debt and growth is apparent. During the pandemic, many MENA countries face borrowing costs higher than other economies even though global interest rates are at historically low levels. Default risk indicators for many MENA countries rose sharply during 2020 and some have not returned to pre-pandemic levels. This is probably because many MENA countries entered 2020 with high debt and chronic low growth relative to world peers, while also facing notable institutional challenges such as poor transparency and governance. These pre-existing vulnerabilities might have heightened the long-term costs of public debt accumulation.

What can MENA countries do to resolve the tensions between short-term objectives and long-term risks of rising public debt?

Chapter 2 tackles this question by discussing policy options during three distinct phases of economic recovery:

- expenditure priorities during the pandemic

- fiscal stimulus as the pandemic subsides

- mitigating the potential costs of debt overhang in the medium term.

Governance and transparency issues emerge as central protagonists across all three phases.

Prioritizing spending during the pandemic

While the pandemic is still ongoing, fiscal spending is probably best used to protect the welfare of vulnerable families and to invest in public health. The pandemic is having disproportionate impacts on poor households because they are less healthy and less likely to be able to social distance. Supporting the consumption of the hardest hit households is an essential objective for fiscal spending at this time. MENA countries have taken unprecedented actions to support the most vulnerable. The good news is that cash transfers are reasonably well-targeted, although there is room to improve. Evidence from phone surveys in the region suggests that a higher percentage of the poorest households are beneficiaries than those at the top of the distribution. Using fiscal spending to stimulate aggregate demand is likely to be difficult as long as the risk of Covid-19 exposure remains – for the very reason that social distancing and limited mobility continue to be key to overcoming the pandemic.

Public health investment as a short-term response to the pandemic could also bring long-term gains. As vaccines become available, it is important to plan and roll out effective vaccination campaigns. Proper investment in vaccination would not only reduce the risk of a prolonged crisis and speed up economic recovery, but also would reinforce the infrastructure for long-term public health. Rough calculations of the costs and benefits of investing in vaccination programs, which need to be interpreted with a grain of salt, indicate that the benefit-cost ratio could be large, around 78:1 if MENA vaccinates 20 percent of its population at current prices proposed by COVAX, the multilateral effort to channel Covid-19 vaccines to poor and lower-middle income countries.

Investing in testing and public surveillance of the outbreak also appears to reduce the economic costs of the pandemic. Preliminary evidence suggests that countries with higher test-positivity rates suffered larger growth downgrades. A high test-positivity rate indicates a relatively uncontrolled pandemic and might reflect a slow or ineffective public health surveillance strategy. Unfortunately, many MENA countries have either high positivity rates (above the 5 percent benchmark set by the World Health Organization) or do not reliably report test data. Notably, however, several high-income countries in MENA have been at the global forefront of using testing for disease surveillance and in rolling out vaccination programs.

Fiscal stimulus as the pandemic subsides

MENA policymakers will soon decide whether additional fiscal stimulus is warranted after the public health emergency abates. Embarking on additional stimulus at that time is not without risks.

First, economic growth might rebound without fiscal stimulus. Consumer and business spending might rise quickly after it becomes clear that the health risks have subsided (Krugman, 2020; Lee, 2020). This phenomenon is referred to in the current debate as "pent-up demand". In MENA, the extent of such a pent-up demand rebound, especially from external sources of demand such as tourism, is likely to depend on the effectiveness and transparency of governments' pandemic surveillance.

Second, fiscal stimulus can be ineffective or even counterproductive in economies with elevated debt, such as many MENA oil importers. Published refereed research indicates that when public debt is high, the so-called fiscal multiplier -- the effect on GDP from additional spending -- can be zero (Huidrom et al., 2020). Consequently, the short-term costs of fiscal consolidation could also be negligible, and thoughtful consolidation could be a preferred policy stance in economies with very high public debt ratios.

Third, while public investment such as infrastructure projects can be a tool of choice, studies have cautioned that delayed implementation can result in a limited short-term multiplier. More importantly, the economic gains from public investment projects can be hindered by poor governance, which reduces the efficiency of public investment. This appears to be the case for a large sample of European countries (Izquierdo et al., 2019). Therefore, in countries with the lowest institutional capacity and transparency, the multiplier of public investment can be close to zero in both the short- and long-terms, which reinforces the need to work on reforms to improve the governance of public investment decisions.

Instead, targeted fiscal spending can help heal the economic scars of the crisis. In times of limited fiscal revenues and competing social demands for government assistance, it is best to focus on scars with potentially long-lasting consequences. For example, financial constraints might prevent firms from making necessary investment to re-enter a market. Likewise, workers who became unemployed or under-employed during the crisis might face long-term reductions in employment probabilities and wages. In these situations, targeted government spending, such as subsidized loans and job training, might help heal the economic scars from the pandemic that can obstruct long term development. Similarly, investment in education that might help disadvantaged children recoup the lost learning during the pandemic might avert costly long-term losses in human capital.

Mitigating the costs of debt after the pandemic

The costs of elevated debt are likely to manifest themselves eventually, perhaps even in the short term. Countries in the region may have to take action to reduce debt to GDP ratios soon after the pandemic, even if output is below its potential.

As mentioned, highly indebted MENA countries can consider taking an approach to reduced debt and debt accumulation that combines prioritizing the most effective spending items and improving governance of investment decisions. In highly indebted countries, thoughtful fiscal consolidation could be welcomed by the private sector.

MENA countries can also aim to roll over debt on more favorable terms. To do so, they would have to enhance their long-term growth prospects. Perhaps more importantly, transparency could also aid MENA countries by improving debt reporting and monitoring financial market vulnerabilities. Published research indicates that such measures can lower borrowing costs (Cady, 2005; Choi and Hashimoto, 2018).

If rolling over debt is not an option, highly indebted MENA countries will have to risk costly debt restructurings. Evidence presented in this report suggests that pre-emptive restructurings, in which a country decides to enter negotiations with external creditors before it misses any payments, are less costly than post-default restructurings. Unfortunately, the evidence presented in this report also suggests that highly indebted countries are more likely to enter either preemptive or post-default restructurings with low growth and weak governance. Several MENA oil importers entered 2020 with low growth and weak governance relative to countries that have not experienced episodes of debt distress.

In sum, economic growth is the most sustainable way to reduce public debt but is also the most challenging in the MENA region because it requires structural reforms to raise productivity and put people to work. Many MENA countries have characteristics that would render post-pandemic fiscal stimulus ineffective. In such situations, policymakers may want to consider fiscal reforms early in the recovery phase. Perhaps most importantly, key institutional reforms that help improve debt transparency and the quality of public investment can be implemented immediately with limited fiscal costs. They also hold the promise of boosting long-run growth. Institutions, then, might help chart a path to lasting recovery for the Middle East and North Africa.

CHAPTER I: A Continuing Crisis

CHAPTER I TAKEAWAYS:

- Economies in the Middle East and North Africa (MENA) remain in crisis. The World Bank estimates that MENA's GDP contracted 3.8 percent in 2020 and expects it to rebound by only 2.2 percent in 2021.

- Declining government revenue combined with the need to support vulnerable families and other policy responses to the Covid-19 pandemic led to increases in public debt across the region. The World Bank expects the region's public debt burden to rise from 46 percent of GDP in 2019 to 54 percent of GDP by 2021, and debt of oil-importing developing countries to reach 93 percent.

- Having entered the crisis with chronic low growth, high debt and poor governance, the region's developing economies are facing difficult tradeoffs associated with the accumulation of debt. Institutional reforms and transparency can help chart a solid path to recovery..

I.1 The Ongoing Pandemic in MENA

The Covid-19 pandemic has plunged the world into a crisis. The virus has infected hundreds of millions of people, caused millions of deaths, and disrupted economies the world over. The MENA region had more than 5 million recorded cases of Covid-19 by the end of February 2021.

In the absence of a vaccine, countries have experimented with various non-therapeutic interventions, including lockdowns, widespread use of masks and social distancing. Early containment successes also relied on widespread use of testing, contact tracing and isolating (TTI) symptomatic and asymptomatic cases. An emerging literature has stressed the benefits of testing to save lives and livelihoods (Reed et al., 2021; de Walque et al., 2020). The ability to deploy testing and contact tracing on a large scale in turn depended on the strength of public health surveillance and clear and transparent communication from governments. Transparent and credible data release on the virus spread allowed citizens to adapt their behavior to decrease the chance of contagion. The availability of vaccines now offers hope that herd immunity can be achieved, thus averting additional deaths, restoring economic activity, and staving off the risks of future pandemics. A rapid scale up of vaccination, however, depends on the transparency and organizational capabilities of public health systems.

Yet, public health systems tend to be relatively weak in MENA. Countries in the region fare poorly in the Global Health Security (GHS) Index, which measures preparedness for epidemics and pandemics.[2] As of 2019, MENA ranked last among the world's regions in two components of the index that are critical to fighting a pandemic: "epidemiology workforce" and "emergency preparedness and response planning." Many countries have had limited public health financing for decades. According to data from the World Health Organization (WHO), countries such as Egypt and Iraq spent 5 percent or less of their government budget on health as of 2017[3].

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[2] The index was jointly developed by the Nuclear Threat Initiative, the Johns Hopkins Center for Health Security, and the Economist Intelligence Unit. Data were released in 2019. The index consists of six categories: prevention; detection and reporting; rapid response; health system; compliance with international norms; and risk environment.

[3] WHO Global Health Expenditure Database: *https://apps.who.int/nha/database/ViewData/Indicators/en*.

Nevertheless, some MENA health systems were well prepared, especially those in the Gulf Cooperation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). Bahrain and UAE rank among countries with highest testing per capita world-wide. The GCC countries, plus Lebanon and Jordan, have done more testing per capita than the rest of the MENA region (see Table I.1). Unfortunately, many MENA countries have either high positivity rates (when more than 5 percent of tests for Covid-19 come back positive, according to the WHO) or do not even have reliable testing or fail to report it (see Table I.1). In conflict economies, such as Syria and Yemen, weak testing capacity leads to unreported testing statistics and fewer reported positive cases, which paints a potentially misleading picture of low spread. This said, evidence from randomized anti-body testing high-income and developing countries indicate that the spread of Covid-19 is generally much higher than suggested by the official testing data due to unreported cases.[4]

TABLE I.1: Covid-19 Cases and Tests per Million People in MENA Countries

	Country	Tests/Million	Cases/Million	Cases/Tests (%)
Gulf Cooperation Council	**Qatar**	593,580	61,866	10.42
	United Arab Emirates	3,547,569	44,141	1.24
	Kuwait	455,811	50,772	11.14
	Bahrain	1,958,570	77,991	3.98
	Saudi Arabia	415,389	10,937	2.63
	Oman	298,120	29,004	9.73
Other Oil Exporters	**Libya**	117,877	21,850	18.54
	Iraq	187,298	19,426	10.37
	Iran	143,463	21,248	14.81
	Algeria	-	2,615	-
	Syrian Arab Republic	-	978	-
	Yemen	-	113	-
Oil Importers	**Lebanon**	498,091	64,610	12.97
	Jordan	533,072	52,108	9.77
	Djibouti	123,188	6,599	5.36
	West Bank and Gaza	262,956	43,123	16.40
	Morocco	157,616	13,209	8.38
	Tunisia	89,342	20,635	23.10
	Egypt	-	1,884	-

Source: MENA Crisis Tracker based on data from Worldometer (https://www.worldometers.info/coronavirus/).
Note: Data are as of March 21, 2021. "-" indicates that the country does not publicly report testing data. Data do not necessarily match official statistics reported by the governments. .

Countries in the MENA region face mixed prospects of a vaccine rollout. GCC countries gained access to vaccines earlier than most, with the UAE and Bahrain leading the way. As of March 21, 2021, 74 percent of people in the UAE and 38 percent of the population in Bahrain had been vaccinated, with the rest of the region trailing behind (see Table I.2). GCC countries have also been leveraging technology to facilitate their vaccination programs, such as apps to book mobile vaccination units in Bahrain. Some middle- and low-income MENA countries relied on international cooperation and support from global vaccine programs (such as COVAX).[5] Although the majority of developing MENA countries have signed contracts with vaccine providers, only Morocco has embarked on a vaccination program for a significant portion of population (see Table I.2).

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4   See MENA Crisis Tracker and related literature.
5   Covid-19 Vaccines Global Access, or COVAX, is a multilateral initiative to give poorer countries access to Covid-19 vaccines. Among the groups in COVAX are the Global Alliance for Vaccines and Immunization, the World Health Organization, and the Coalition for Epidemic Preparedness Innovations.

Vaccinations are expected to help a country control the spread of Covid-19, paving the way for an economic recovery. Preliminary evidence suggests a very large benefit from widespread vaccination. Rough calculations indicate that, in addition to the benefits in terms of lives saved, there is a roughly 78:1 benefit-to-cost ratio if MENA countries vaccinate 20 percent of their population at current COVAX prices (Ahuja et al., 2021). These calculations, however, are not flawless. The benefits are computed as the decline in expected GDP growth rates for 2020 and 2021 relative to pre-pandemic forecasts. Going forward, since non-trivial shares of the population have already been infected, the expected economic gains from vaccinations are probably slightly lower than implied by these calculations. Still, the benefits of effective vaccination campaigns relative to the costs of not vaccinating are probably huge.

TABLE I.2: Covid-19 Vaccination Programs in MENA

	Country	% of population	Cumulative Covid-19 vaccination doses administered	Vaccine Contracts	Vaccine clinical trial participation (Y/N)	Vaccine imports through COVAX Facility (Y/N)
Gulf Cooperation Council	**Qatar**	20.64%	594,613 by March 14	Pfizer-BioNTech and Moderna	N	Y
	United Arab Emirates	73.80%	7.3 million by March 14	Sinopharm and Pfizer	Y	Y
	Kuwait	8.43%	360,000 by March 8	1m doses Pfizer-BioNTech, AstraZeneca	N	Y
	Bahrain	38.39%	653,236 by March 17	Pfizer-BioNTech, Sinopharm, AstraZeneca	Y	N
	Saudi Arabia	9.16%	3.19 million by March 18	Pfizer-BioNTech	Y	Y
	Oman	2.15%	109,844 by March 17	370,000 Pfizer-BioNTech doses	N	N
Other Oil Exporters	**Libya**	-	-	$9.6 million of vaccines contracted with WHO	N	N
	Iraq	-	-	1.5m doses Pfizer-BioNTech, 1m Sputnik, Sinopharm	N	Y
	Iran	0.15%	124,193 by March 19	Sputnik V	N	N
	Algeria	0.60%	280,000 by March 14	Sputnik V, AstraZeneca, and Sinopharm	N	Y
	Syrian Arab Republic	-	-	5,000 doses received	N	Y
	Yemen	-	-	2.3 million doses with COVAX	N	Y
Oil Importers	**Lebanon**	2.03%	138,420 by March 20	2.1m Pfizer-BioNTech	N	Y
	Jordan	2.67%	272,648 by March 14	3m doses Pfizer-BioNTech	Y	Y
	Djibouti	-	-	Sputnik V	N	Y
	West Bank and Gaza	-	-	37,440 Pfizer-BioNTech and 24,000 AstraZeneca delivered through COVAX	N	Y
	Morocco	18.12%	6.69 million by March 20	65 million - Sinopharm and AstraZeneca	Y	Y
	Tunisia	<0.01%	12,496 by March 12	2m doses Pfizer-BioNTech, 1m Sputnik	N	Y
	Egypt	<0.01%	1,315 by Jan. 30	40m from Sinopharm, AstraZeneca	Y	Y

Source: World Bank, MENA Crisis Tracker based on data on vaccination from Our World in Data (https://ourworldindata.org/covid-vaccinations). *Data for Algeria are from WHO.
Note: Data are as of March 21, 2021. Data do not necessarily match official statistics reported by the governments.

I.2 Economic Consequences of the Pandemic

The virus not only claims lives. Its spread has had severe economic consequences. MENA countries have experienced negative supply and demand shocks (Arezki et al., 2020c). The negative supply shock came, first, from a reduction in labor supply — directly because workers get sick with Covid-19 and indirectly from travel restrictions, quarantine efforts, and workers staying home to take care of children or sick family members. Supply was also affected by a reduction in the supply of materials, capital, and intermediate inputs due to disruptions in transport and businesses in MENA countries. The negative demand shock was both global and regional. Economic difficulties around the world and the disruption of global value chains reduced demand for the region's goods and services—most notably oil and tourism. Regional demand also declined as a result of the abrupt reduction in regional business activity and concerns about infection—both of which reduced travel. In addition, uncertainty about the spread of the virus and the level of aggregate demand impeded the region's investment and consumption. Collapsing oil prices in 2020 further depressed demand in MENA, where oil and gas comprise the most important sector in many economies. As a consequence, the Covid-19 pandemic severely affected virtually all aspects of the regional economies. Output in 2020 contracted sharply. The expected rebound in 2021 is unlikely to bring the region back to the level of economic activity it had in 2019 and certainly not to the level the World Bank had expected before the pandemic.

Macroeconomic Impact

The pandemic and the associated collapse of oil prices severely hit MENA oil exporters. The benchmark Brent oil price fell from about $65-a barrel before the pandemic to close to $20-a-barrel in April 2020. Since then, it has only gradually climbed back to pre-pandemic levels. Revenue from oil exports, the main source of income for many oil producers in the region, was expected to contract 38 percent in 2020 (IMF's World Economic Outlook (WEO)- October 2020). This has been the trend, notwithstanding a recent jump in oil prices associated with conflict in the region.[6]

The pandemic was felt in all sectors, not just energy. MENA firms were severely affected (see Apedo-Amah et al. (2020) for an analysis on early impact and Mohammed et al. (2021) for a recent update). Overall exports from the MENA region fell sharply and have only partially recovered. After dropping 44 percent year-on-year in the second quarter of 2020, goods exports from the region continued year-on-year declines of 17 percent in the third quarter and 10 percent in the fourth quarter (UNCTAD, 2020, 2021). Sectors such as autos in Morocco, Tunisia, and Iran, and textiles in Jordan and Egypt have been hard hit by the pandemic and weakening global trade. Covid-19 transport and travel restrictions directly affect the services trade, including tourism, which is an important source of income for many MENA countries. For example, it was the equivalent of 25 percent of exports in Egypt and 41 percent in Jordan in 2018 (World Development Indicators). Available high-frequency data indicate that tourism and air traffic in the region completely collapsed in April 2020. They have slightly recovered since then, but for the four countries with available data (Morocco, Tunisia, Egypt and Saudi Arabia), tourism and air traffic were still 60 percent to 80 percent lower in February 2021 compared to February 2020. Data on Purchasing Managers' Index (PMI) available for a few MENA countries also paint a picture of an uneven and difficult recovery. A PMI above 50 represents an expansion over the previous month while a PMI below 50 represents a contraction. PMIs for UAE and Egypt have hovered around 50 since July suggesting the two economies have not rebounded from the trough in April 2020. PMIs for Qatar and Saudi Arabia are above 50 as of February 2021, indicating a slight rebound. Lebanon's PMI is below 45 as of February 2021, indicating a continuing economic contraction (see Figure I.1).

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6 CNBC, 2021

FIGURE I.1: Purchasing Managers' Index
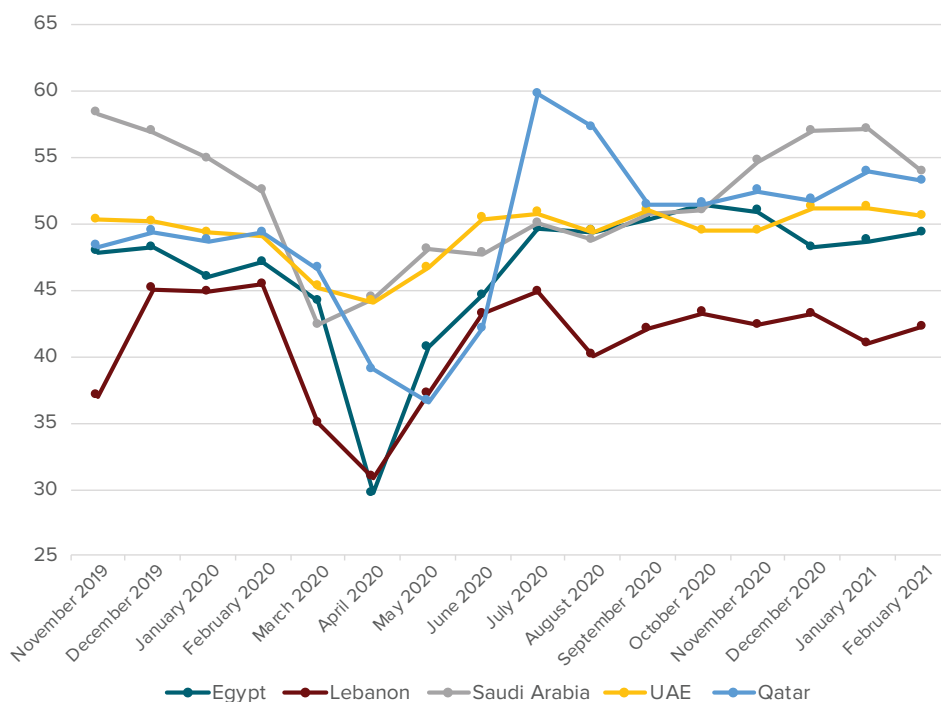
Source: Bloomberg, L.P.
Note: Markit PMI is for the whole economy, seasonally adjusted. A PMI above 50 represents an expansion over the previous month. A PMI reading under 50 represents a contraction.

World Bank economists estimate that the region's real output contracted 3.8 percent in 2020 (see Appendix Table B1 for country-specific estimates). This estimate is a 1.3 percentage point upgrade compared to the forecast released in October 2020 (see Panel B, Appendix Table B2). The upward adjustment in World Bank estimates for 2020 can be attributed mostly to a change in Iran's GDP growth, which was raised from a contraction of 4.5 percent in October 2020 forecasts to modest growth of 1.7 percent. Nevertheless, this regional growth estimate is 6.4 percentage points lower than the pre-pandemic growth forecast published in October 2019 (see Panel A, Appendix Table B2). The downgrade is arguably a measure of the cost of the pandemic in 2020, because it was the dominant development since October 2019. This amounts to 202 billion dollars.

World Bank economists forecast the region's real output to grow at a modest 2.2 percent in 2021. This is 0.3 percent higher than the forecast released in October 2020 (see Panel B of Appendix Table B2), on the back of a faster than expected recovery in oil prices[7] Nevertheless, the accumulated GDP losses due to the pandemic are substantial. By 2021, the regional economy is forecast to be 7.2 percent below the no-pandemic counterfactual GDP level, equivalent to 227 billion dollars (see Figure I.2).

GDP per capita is arguably a more precise statistic of the region's standard of living than GDP. The region's average real GDP per capita is estimated to decline 5.3 percent in 2020. The region's average real GDP per capita is forecast to increase by a meagre 0.6 percent in 2021. All in all, the region's real GDP per capita in 2021 would be 4.7 percent below the level in 2019.

Heavy GDP losses are observed across all MENA country groups. The GDP level in 2021 for developing oil importers is forecast to be 9.3 percent below the counterfactual GDP level without the pandemic (see Figure I.2). The counterfactual decline for

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7 In October 2020, World Bank economists forecast the region's economic growth in 2021 at 1.9 percent.

GCC countries is 7.7 percent and is 4.4 percent for developing oil exporters. The pandemic and the associated collapse in oil revenue, trade, and tourism have put MENA countries on a very difficult path. This severely affects people's welfare, puts immense pressure government budgets, and reduces fiscal space to fight poverty.

FIGURE I.2: GDP Level Forecasts

Panel A: MENA	Panel B: MENA Country Groups

MENA (Pandemic)
MENA (No Pandemic)

GCC (Pandemic)
GCC (No Pandemic)
Developing Oil Exporters (Pandemic)
Developing Oil Exporters (No Pandemic)
Developing Oil Importers (Pandemic)
Developing Oil Importers (No Pandemic)
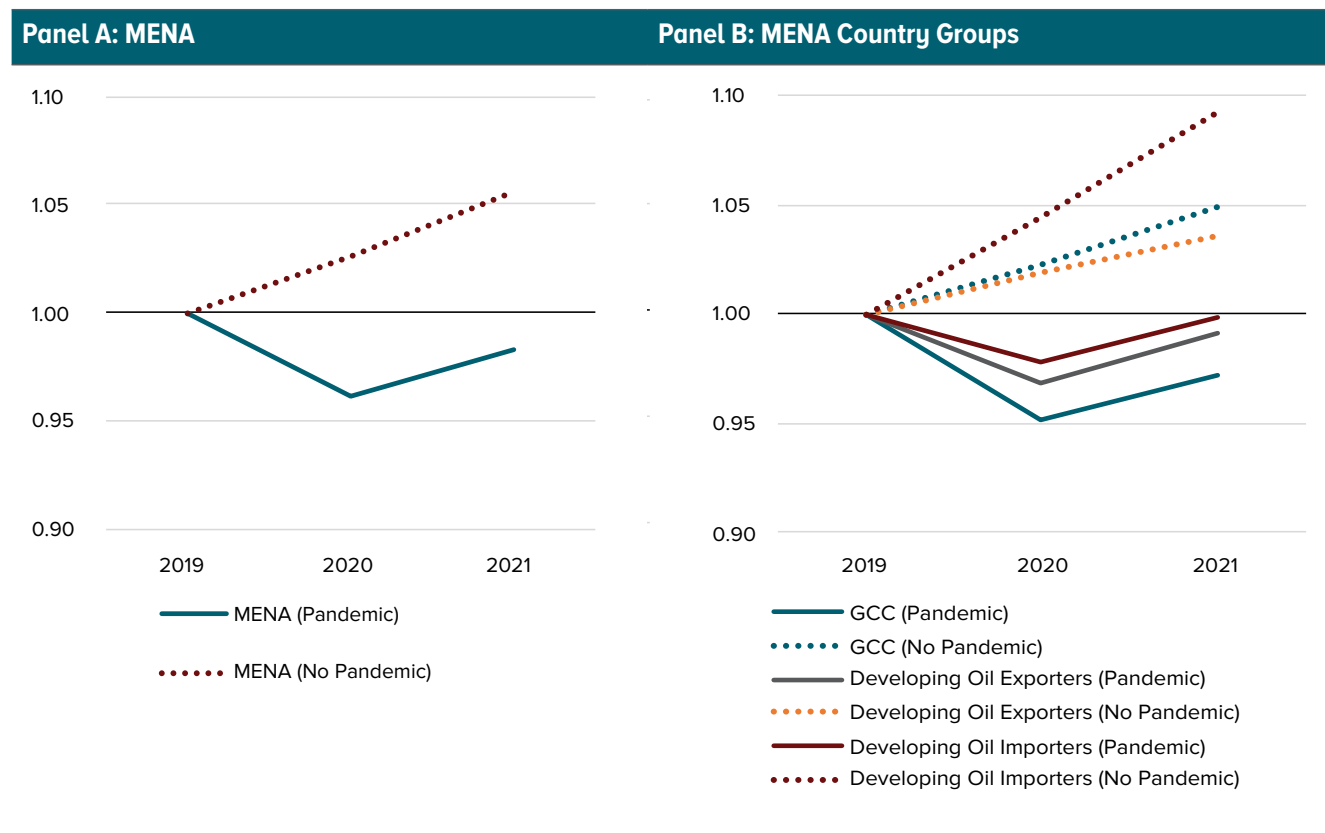
Source: World Bank, Macro and Poverty Outlook (in April 2021 and October 2019) and World Bank staff's calculation
Note: The dotted lines show forecast GDP levels in the counter-factual case of no pandemic (based on GDP forecasts in October 2019). The straight lines show forecast GDP levels in the case of pandemic (based on GDP forecasts in April 2021).

The collapse in output underscores the importance of mitigation measures. This report finds evidence that targeted efforts to control the pandemic can help reduce economic costs. For example, in a global sample, countries that have lower Covid-19 test positivity rates have lower growth downgrades in 2020. Test positivity rates are arguably a proxy for the spread of the Covid-19 virus (CDC, 2020), which could also reflect a country's effort to control the pandemic, through such efforts as masking, testing, and contact tracing. Econometric estimates suggest that a 10 percent reduction in a country's test posivitity rate is associated with 0.8 percent lower growth downgrades, after controlling for confounding factors (see Figure I.3). This finding suggests that investment in public health measures not only reduces the spread of the virus, but also mitigates the economic costs of the pandemic.

FIGURE I.3: Test positivity Rates and Growth Downgrades

Poverty, Distributional, and Long-Term Impacts

The pandemic has not only hurt economic activity, it has had a profound impact on poverty and income distribution in the MENA region. There are many pathways by which Covid-19 has painfully increased poverty. There is the direct effect from succumbing to the disease. Poor households are particularly at risk. Poor people are more likely to have preexisting health conditions, to live in crowded conditions with multigenerational households, and to have less access to soap and clean water. The indirect pathways that affect people's livelihoods include market disruptions that caused price increases and, at times, shortages of products. Moreover, because of lockdown policies and social distancing, many poor people, especially those in the informal sector, lost their ability to earn an income. The situation is particularly acute in Yemen. Rising food prices, declining remittances and reduced humanitarian assistance in a country devastated by years of conflict has pushed its population to the brink of starvation (IPC, 2020). Between January and June 2021, the number of people with famine-like condition could nearly triple from 16,500 to 47,000 people. In the same period, the numbers of people facing emergency food insecurity and risk of famine could increase from 3.6 million to 5 million (one-sixth of the population) (IPC, 2020).

Poverty is rising in the region. Based on the region's baseline growth forecasts, the number of poor people in the region—those making less than the $5.50 per day poverty line—is expected to increase from 176 million in 2019 to 192 million people by the end of 2021[8]. This forecast assumes that every household is equally affected and that the effect of Covid-19 is uniform over

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8 Thanks to the upward growth revisions, this poverty forecast is slightly lower than the forecast released in October 2020. Based on the region's growth forecasts in a downside scenario, World Bank economists in October 2020 forecast the number of people in poverty to reach 197 million by the end of 2021 (see Arezki et al., 2020c).

time. In reality, evidence from phone surveys in the first half of 2020, reported in Arezki et al. (2020c), strongly suggests that the poor were hit harder. They are more likely to have stopped working, to have lost income, and to have reduced consumption. Furthermore, in countries with high food-price inflation such as in Yemen but also in Lebanon, the distributional impacts have been even more severe because food inflation is regressive. It is likely, then, that far more than the forecasted 192 million people will be in poverty.

Several rounds of phone surveys conducted recently in Tunisia and Djibouti allow us to observe the recovery of the labor market after the initial months of the pandemic. In both countries, the impact of the pandemic was dramatic during the first surveys but was more moderate during subsequent ones (see Figure I.4). In the first wave of the survey (in April 2020 for Tunisia and July 2020 for Djibouti), a large share of respondents in both countries reported that they had stopped working. Poor households were more likely to lose jobs than less-poor households. This is clearer in Tunisia, where 49 percent of the bottom quintile reportedly stopped working, while only 29 percent of the top quintile did so. In subsequent surveys, the percentage of respondents reportedly without work gradually declined. In the most recent surveys (in October 2020 for Tunisia and Jan 2021 for Djibouti), the fraction of people that reported having stopped working was smaller than during the first surveys.

Nonetheless, it is probably premature to conclude that a labor market recovery is well underway. First, even in the latest surveys in Tunisia and Djibouti there is evidence of lingering job losses. Second, the epidemic is still raging and thus it is difficult to conclude that any job gains relative to earlier in 2020 will be long lasting. It is possible that if the spread of Covid-19 continues in these countries, job losses could continue to accumulate. Third, the available evidence is silent with respect to wages or income. Hence some jobs might have temporarily come back, but we do not know for how long or at what income level.

Regardless of the timing of the recovery, much of the impact of the pandemic unfortunately could be felt for decades to come. Disruption in core health services, drops in household income, school closures and persistent unemployment will likely carry long term costs in terms of slower human capital accumulation (Corral and Gatti, 2020). Simulations conducted with the Human Capital Index indicated that without concerted remediation, school closures alone, which at the height of the pandemic affected 1.6bn children worldwide (Azevedo et al., 2020), are likely to be associated with a drop in human capital for the cohort of children currently in school by 5%. This is the same order of magnitude of the average global gains in human capital in the past decade (World Bank, 2020c).

FIGURE I.4: Distributional Effects of Covid-19
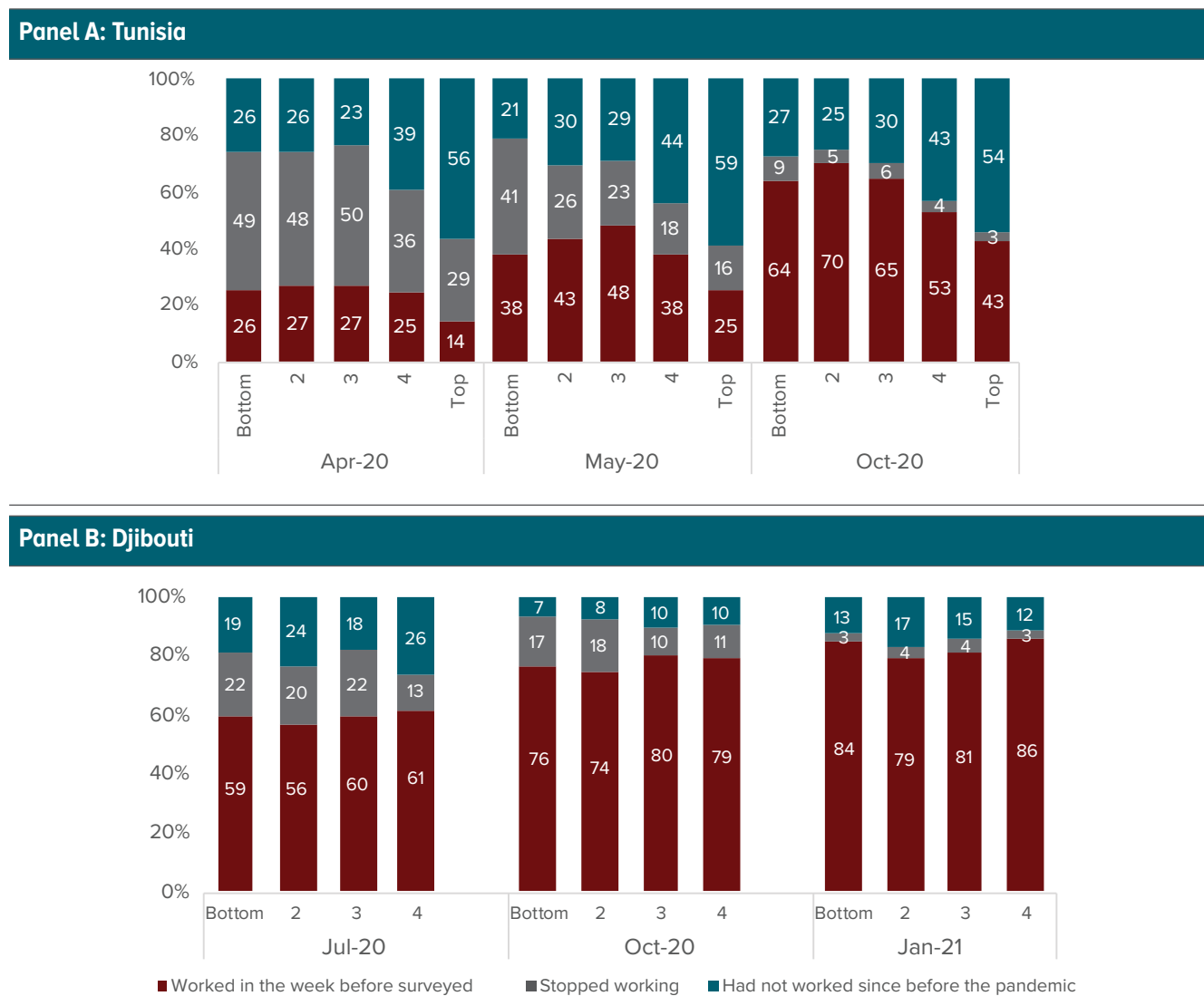
Source: COVID-19 Phone Surveys fielded in Djibouti (Waves 1-3) and Tunisia (Waves 1-5)
Note: The figure reports the share of people who continued to work, stopped working, or had not worked since before the pandemic, by quintile. The quintile breakdown is by income in Djibouti (the top quintile is not covered by the survey), and by consumption in Tunisia. The top (5th) quintile for Djibouti is not covered.

MENA countries have carried out unprecedented policy responses to assist firms and households (see IMF, 2021 for detailed policy responses). Social transfers are arguably one of the most important instruments in this crisis. If targeted well, social assistance is the most effective in supporting consumption of vulnerable households. Most of the 19 MENA countries have extended cash-based transfers as part of pandemic response. These cash transfers were mostly targeted towards supporting low-income households, the elderly, and workers in informal sectors. As another part of the social assistance programs, most MENA countries have provided baskets of food and hygiene kits and subsidized essential food products to the most vulnerable. Several MENA governments offered paid leave for workers in both private and public sectors, as well as free health treatments for individuals with Covid-19 as part of their social insurance plans. In their further attempt to support labor markets, about half of MENA governments have activated programs to subsidize wages of workers at private employers to partially alleviate financial burdens. Gentilini et al. (2020) provide a detailed update of country-specific social assistance measures.

Available data from early MENA phone surveys suggest that cash transfers are reasonably well targeted with much larger fractions of the poorest households being recipients than of households at the top of the distribution. Nevertheless, most of the poor households were not reached (Arezki et al., 2020c). Targeted cash transfers, even when targeting is imperfect, tend to be "progressive," that is, they disproportionately benefit the poor (see Joumard et al. (2012) for evidence in the OECD). This is because targeted cash transfers are more likely to reach poorer households and because the same amount of cash is more meaningful to poorer recipients than those that are better off. In times of crisis, imperfect targeting is expected because many countries in the region did not have in place well tested mechanisms that could ensure that benefits went to the intended recipients. In the medium term, refining targeting mechanisms including through strengthened social registries will remain an important element of the regional development policy agenda. Morocco has made good progress in setting up a digital registry, with World Bank support (World Bank, 2016). Without a good transfer targeting mechanism in place, countries may have to resort to less targeted measures such as subsidizing fuel or increasing public wages. Caution is warranted against subsidizing fuel or increasing public wages as a temporary support to households. These measures may end up supporting more well-off households, incur substantial budget costs and, in the case of fuel subsidies, increase environmental costs.[9]

Fiscal Balances and Public Debt

This section is dedicated to the analyses of fiscal balance and public debt, the focus of the report. The MENA region entered the Covid-19 crisis with chronic low growth, macroeconomic imbalances (Arezki et al., 2019) and weak governance, especially when it comes to transparency (Arezki et al., 2020b). The pandemic has put tremendous pressure on government fiscal positions. Real government revenue in 2020 is 24 percent less than in 2019. The sharpest declines were among the GCC and developing oil exporters, not surprising given the oil price collapse (see Figure I.5). Squeezed by declining revenue, government expenditure in the MENA also dropped compared to pre-pandemic expectations. The expenditure decline is smaller than the revenue fall-off, which reflects pressing demands to spend on policy responses to the pandemic. As a consequence, the region's average fiscal deficit in 2020 is estimated to be around 9.4 percent of GDP (see Appendix Table B1), compared to the pre-pandemic forecast deficit of 4.6 percent. MENA countries have had to borrow to finance the deficits. The pandemic is estimated to increase the region's public debt to about 54 percent of GDP in 2020, accelerating the rise in public debt during the past decade. The increases are observed across MENA country groups (see Figure I.6).

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9   Targeted cash transfers are arguably more progressive than previous tools used to assist the poor. Fuel subsidies, for example, tend to disproportionately benefit richer households given their substantial fuel consumption (see Del Granado et al., 2012 for a cross-country study and World Bank (2019) for a detailed study on Egypt).

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FIGURE I.5: Changes in Real Government Revenue and Expenditure in 2020
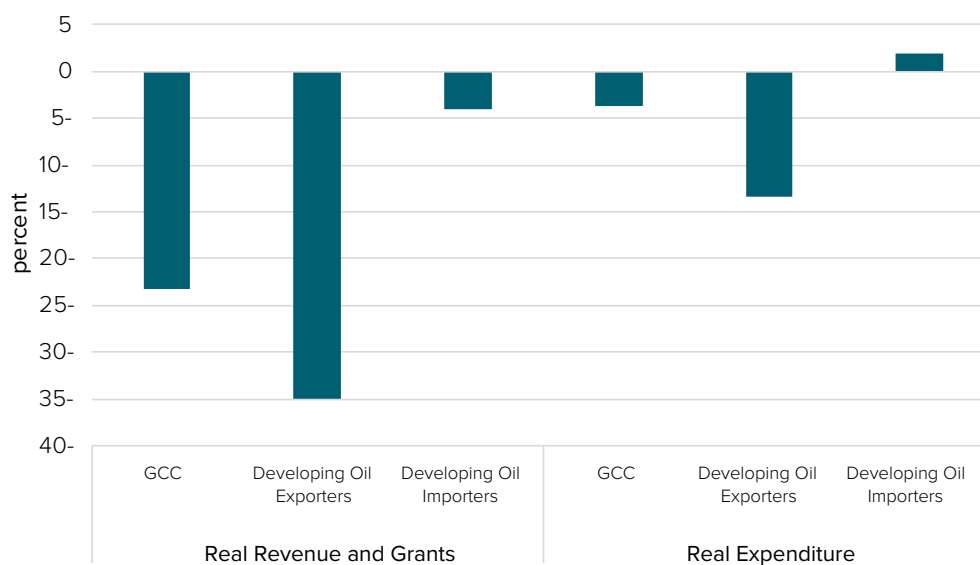
Source: World Bank, Macro and Poverty Outlook (April 2021).
Note: Bars represent percentage change of real government revenue and grants and real government expenditure in constant 2019 USD, from 2019 level.

FIGURE I.6: Median Public Debt by Country Group
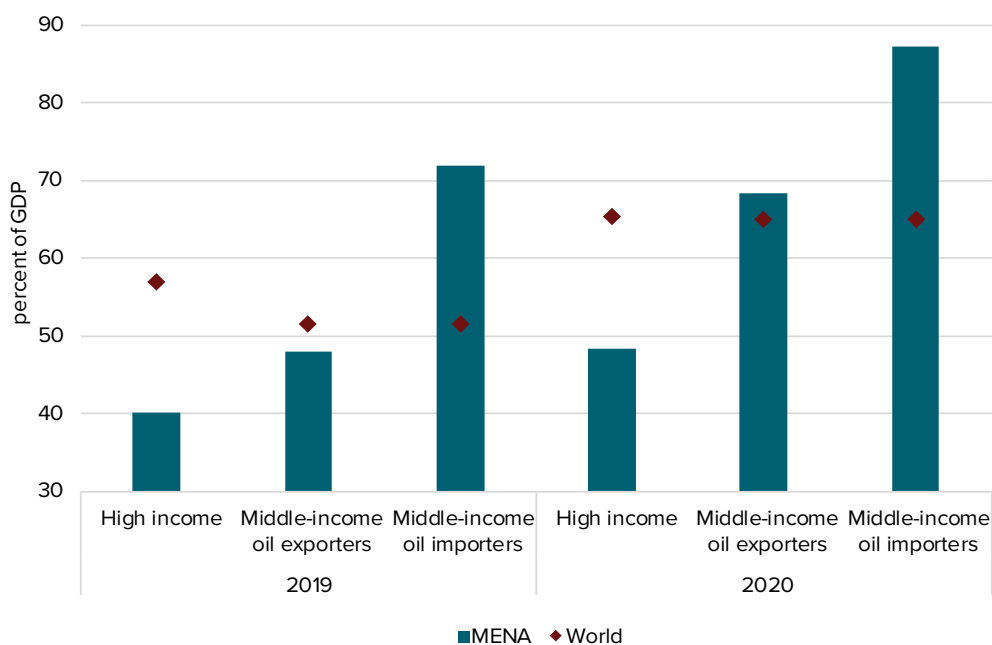
Source: World Bank, Macro and Poverty Outlook (April 2021)
Note: Country groups are represented by median observation of the group. The bars show median debt of MENA country groups. The diamonds show median debt of the corresponding world's income groups. Debt data are generally not available for MENA low income (Yemen and Syria). The high-income group in MPO is limited to only countries covered by the World Bank.

Before the pandemic, many MENA countries had large public debt positions relative to peers in the same income groups outside the region (see Figure I.6 for country group medians and Appendix Table B3 for country-specific debt data). Many of them are oil importers, although GCC countries Bahrain and Oman are two notable high-income oil exporters with a large stock of public debt.

This report analyzes factors that contributed to public debt changes in 2020 for selected MENA countries with debt levels exceeding 75 percent of GDP in 2020 (presented in Panel A of Figure I.7). Primary deficits (before interest payments are added) and interest rate-growth rate differential are the main contributors. Primary deficit significantly added to debt in 2020 for many of these countries (except for Egypt), given the decline in revenue and the increase in expenditure due to the pandemic.[10] The interest rate-growth rate differential also contributed much of the increase debt in 2020. Due to the pandemic, growth is slower for many MENA countries, contributing to larger interest rate-growth rate differential.

Primary deficits are still expected to drive up debt in 2021 (Panel B of Figure I.7). However, the interest rate-growth rate differential is expected to drive down debt moderately for most countries, since growth in 2021 is expected to recover slightly. Overall, primary balance and growth are the two key factors that could affect MENA's debt in the near term, according to the baseline forecasts.

FIGURE I.7: Decomposition of Changes in Public Debt in MENA, 2020 and 2021
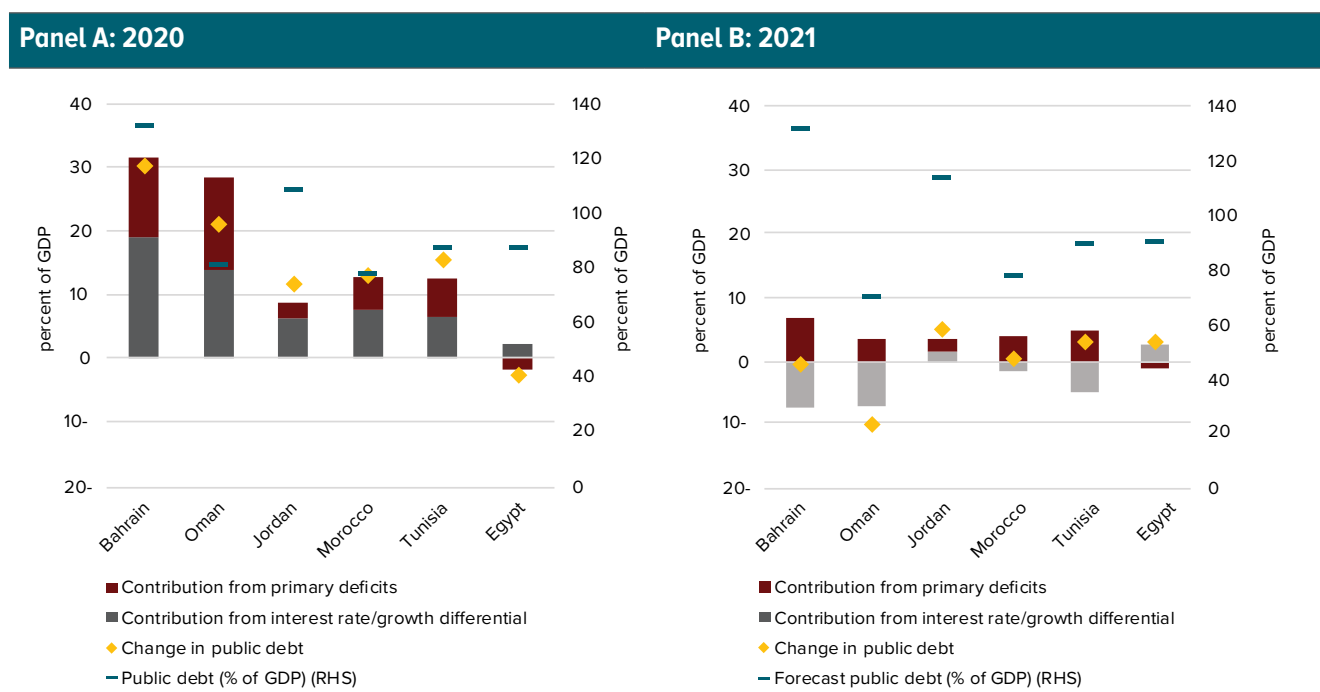
Source: World Bank, Macro and Poverty Outlook (April 2021) and World Bank staff calculations.
Note: The figure shows contributions to debt for selected MENA countries with debt above 75 percent of GDP in 2020. The diamonds indicate changes in public debt as percentage of GDP. The red bars represent primary deficits as a percent of GDP, and the gray bars represent contributions from interest rate-growth differential. The green lines represent public debt as a percent of GDP (right-hand side scale). Other debt-creating flows that are not presented in the chart include exchange rate depreciation, privatization receipts, recognition of implicit or contingent liabilities, due to lack of data.

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10 For Egypt, primary balance was in surplus. However, note that the Egypt's 2020 fiscal year goes from July 2019 to June 2020. Therefore, the 2020 fiscal data for Egypt reflect only partially the impact of the pandemic.

MENA's Creditworthiness

Given the debt trends described above, it is worth asking if a rebound in the global price of oil will help MENA countries. This is an important question due to the salient role played by oil prices for both oil-exporters and importers. The region's creditworthiness could be affected by oil-price fluctuations. And creditworthiness matters for debt. First, lenders would factor the probability of default into their computation of interest rates. Therefore, a deterioration in creditworthiness could contribute to rising interest rates and, as a result increase the debt-to-GDP ratio. In turn, high and increasing debt could jeopardize creditworthiness, especially in turbulent times, creating a vicious cycle between country's creditworthiness and its debt level.

MENA's creditworthiness can be evaluated by credit default risk. Sovereign credit default swaps (CDS), credit ratings, and sovereign bond spreads are available market-based measures of countries' default risk.[11] A rise in the CDS price implies higher default risk and lower creditworthiness. Figure I.8 presents the prices for CDSs of available MENA countries during the pandemic.[12] CDS prices rose sharply during the pandemic, indicating a deterioration of MENA's creditworthiness. Among the GCC countries, Oman and Bahrain's credit default risk rose the most significantly, consistent with the two countries' substantial debt levels. Among middle-income MENA countries, CDSs for Egypt, Tunisia and Iraq rose the most—and more than CDS increases of GCC countries. As of early March 2021, the CDS levels have returned to the pre-pandemic level, with some exceptions.

FIGURE I.8: **Credit Default Swaps for Available MENA Countries**

Panel A: GCC
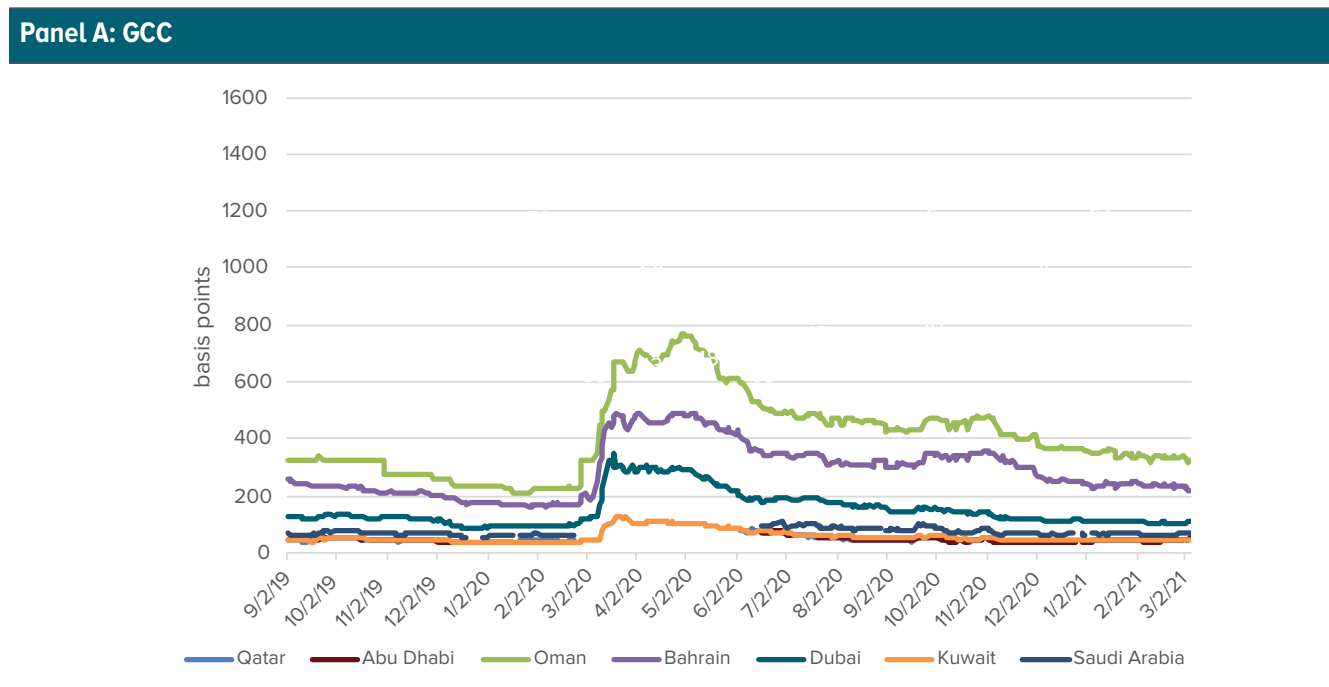
continues on next page >>

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11   A credit default swap is a financial derivative or contract that allows an investor to "swap" or offset his or her credit risk with that of another investor. To swap the risk of default, the lender buys a CDS from another investor who agrees to reimburse the lender in the case the borrower defaults. For example, a CDS of 100 basis points implies that the CDS costs the lender 1 percent of the loan to ensure that the lender can be reimbursed in the case of default. The price of the CDS is an insurance premium.

12   Note that a CDS markets exists only for a subset of MENA country's sovereign bonds. Bloomberg does not report CDS data for Lebanon, which defaulted in March 2020. The bond spread for Lebanon shows a gradual increase since July 2019 and a spike to 10000 basis points in March and April of 2020.

Panel B: Developing MENA
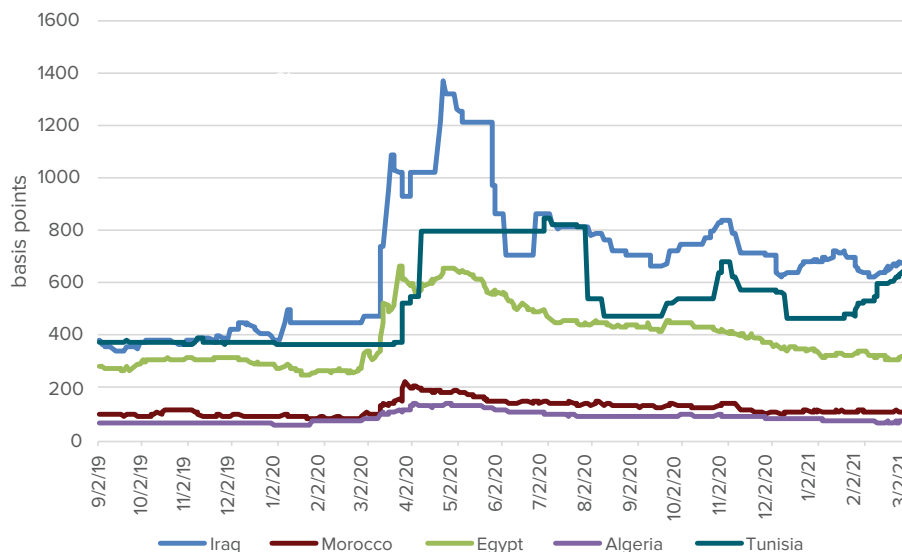
Source: Bloomberg.
Note: CDS data are from early September 2020 to March 5, 2021

This report examines what factors might have affected the sharp changes in MENA's default risk. In addition to the global factors, it also examines oil demand and supply shocks, which are important for the regional economies. Daily data from 2016 to 2020 of 12 MENA's CDSs are analyzed: for the region's oil exporters—Algeria, Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and UAE (with separate CDSs for Abu Dhabi and Dubai bonds) and the oil importers—Egypt, Morocco, and Tunisia. Results suggest that in addition to global factors, oil demand and supply shocks play a big role in 2020 (see Appendix A2 for a detailed description of data and econometric specifications).

The above findings can offer insights on the evolution of MENA's credit default risk in the near term, based on the forecasts of the oil market. Brent oil prices are expected to be stable in 2021 at around USD 65 to USD 70 a barrel, according to future Brent oil prices collected in the first week of March 2021 (Bloomberg). The U.S. Energy Information Administration (USEIA) forecasts that oil consumption and production will likely recover to their pre-pandemic level by end of 2021. As of February 2021, the USEIA expected oil consumption to rise 6.3 percent and production by 3.3 percent (see Figure I.9).

Even based on a set of large estimated effects of oil demand and supply fluctuations for 2020[13], the oil market recovery's impact on CDS will likely be small. Assuming that the oil demand shock in 2021 equals the USEIA's expected change in oil consumption (6.3 percent) and the oil supply shock in 2021 equals the expected change in oil production (3.3 percent), we estimate that MENA's oil exporters' CDSs will go down by only 2.2 basis points and MENA's oil importers' CDSs will go up by only 3.2 basis points. Even if the price of oil rises more than the February estimates of USEIA imply, the oil market recovery is not likely to significantly reduce borrowing costs for MENA countries, particularly for oil importers who would actually face higher default risks and thus borrowing costs as oil prices rise.

In brief, the pandemic has hit the regional economy hard, pushing many people into poverty. Fiscal positions are in distress and debt is piling up. And the recovery of oil prices is unlikely to significantly reduce borrowing costs. Thus, how can MENA resolve the tensions between the need to borrow to pay for short-term needs and the long-term risks of public debt? This is the subject of Chapter II.

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13 For the year 2020, a 1 percent decrease in oil demand significantly increases oil exporters' CDS by 0.48 basis points [coefficient=0.48]. The coefficient of oil supply shocks on oil exporters' CDSs is 0.22; of oil demand shocks on oil importers' CDS is 0.36; of oil supply shock on oil importers' CDS is -0.31. The impact of oil shocks on CDS before 2020 is much smaller and largely statistically insignificant. See Appendix A2 for a detailed description of data and econometric specifications.

FIGURE I.9: Expected Oil Production and Consumption
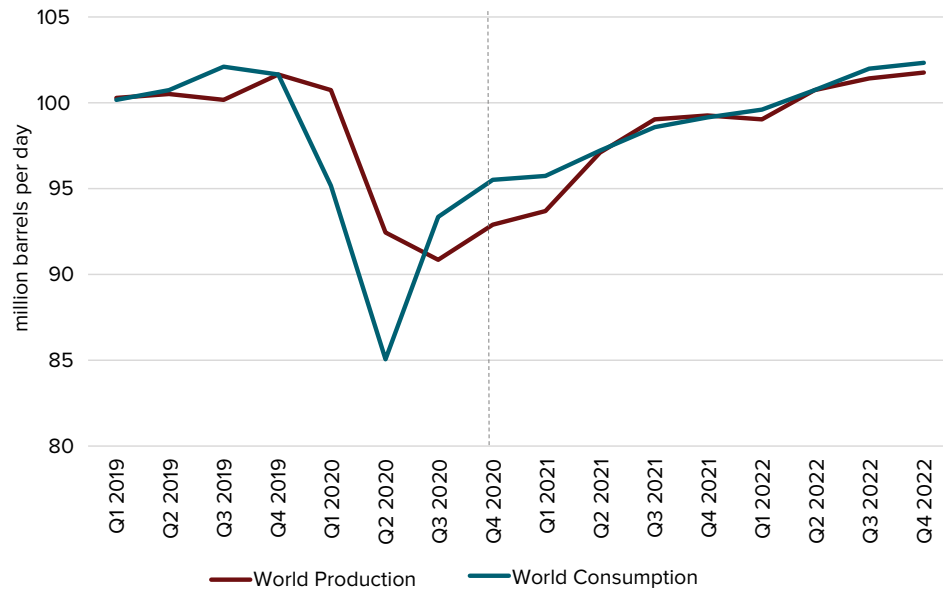
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2021.
Note: Data on and after Q4 2020 are projections.

CHAPTER II: How Institutions Can Chart a Path to Recovery for the Middle East and North Africa

CHAPTER II TAKEAWAYS:

- As MENA suffers the economic consequences of the pandemic, most countries will face tensions between short-term needs and the long-term risks of debt-financed government spending.

- During the pandemic, fiscal spending is best used to support vulnerable families and invest in public health—such as disease surveillance, data transparency, and vaccinations.

- As the pandemic subsides, some MENA countries with characteristics associated with ineffective fiscal stimulus can consider thoughtful consolidation early during the recovery, such as identifying and reducing low-return spending items.

- Governance and transparency can help during and immediately after the pandemic, as well as in the longer term, by reducing borrowing costs and accelerating growth.

The pandemic is forcing economies in the MENA region to borrow a lot. While addressing the immediate concerns of the pandemic is paramount, prudence requires economies in the region to assess the consequences of building up debt. This chapter takes stock of recent research and debates in the economics profession about debt and debt accumulation and applies it to the latest data available for the region.

II.1 Tensions between Short-run Needs and Long-run Costs of Debt-financed Spending

The Short-run Needs

Public debt can alleviate short-run financial constraints, allowing governments to increase or maintain public consumption and investment[14]. Governments, especially in developing countries, have many pressing spending options with potentially high returns, but may lack the resources to finance these activities. Public debt provides those financial resources. Theoretically, if the economic, social and environmental return on government spending exceeds the interest rate paid on the debt, it makes sense for governments to finance spending through debt.[15] In principle, governments, via taxation, can collect a portion of the total social return to pay back the debt that helps finance spending. As productivity increases over time, future generations are

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14 Taxes are generally not a substitute for public debt. Only in a world of perfect foresight, perfect capital markets and economic agents with infinite horizons (called Ricardian-Equivalence by economists) can debt-financing and tax-financing of government spending have equivalent economic effects (Barro, 1974). That is because in such a world people recognize that the debt will have to be repaid and set aside funds for future taxes. In reality, the proposition of perfect Ricardian equivalence is generally rejected (see Poterba and Summers, 1987). Therefore, debt-financed government spending can be more effective than tax-financed government spending because people do not fully consider the associated future tax liabilities of current borrowing. In addition, taxes are distortionary, which provides another rationale for relying on borrowing: it keeps tax rates constant (Barro, 1979).

15 For examples, investing in early education and in reducing air pollution have been shown to have very large benefit-cost ratios (see Heckman et al., 2010 and USEPA, 2011).

likely better off than older generations. Since public debt is akin to borrowing from tomorrow, it allows smoothing resources intertemporally.

Spending is needed now to limit the effects of the pandemic in the MENA region. This includes transfers to support the consumption of hardest hit families and health spending to cover testing, treatment, and vaccination. As the pandemic subsides, fiscal authorities must decide whether additional fiscal stimulus is warranted to raise aggregate demand to accelerate the recovery.

The Covid-19 pandemic is similar to a natural disaster, such as earthquakes and floods, in fundamental ways that are relevant to understanding analytically how public debt and economic growth interact. Both pandemic and natural disasters are rare and unexpected occurrences, and neither are directly caused by economic policies. Both result in economic contractions because people are unable to work (due to physical destruction or safety concerns). Given these similarities, this report examines trends in public debt and growth that occur around severe natural disasters to gain insights into how debt-financed fiscal expenditures can help the recovery of economies afflicted by disasters—and by analogy pandemics. In developing countries, after large natural disasters public debt does tend to rise to finance economic recovery (see Figure II.1). During the three years following a large natural disaster, growth in public debt is significantly higher than in countries that did not experience a disaster. Real (adjusted for inflation) GDP growth collapses in the year of a natural disaster but is statistically significantly higher than the baseline growth two years later. This finding provides an important empirical regularity that public debt does accumulate after disasters, and is likely to do so after this pandemic, possibly to support economic recovery.

Note that the economics of armed conflicts is not the same as that of natural disasters (see Box II.1). Public debt is found to increase during armed conflicts, but economic growth does not pick up after them, which suggests that government spending during conflicts might not be used to support economic growth.

FIGURE II.1: Public Debt and Output Growth around Natural Disasters

Box II.1: Conflicts, Debt and Growth

The economics of armed conflicts is different to that of natural disasters. Public debt increases around armed conflicts but is probably not used to support economic growth.

FIGURE BII.1: Public Debt around Armed Conflicts
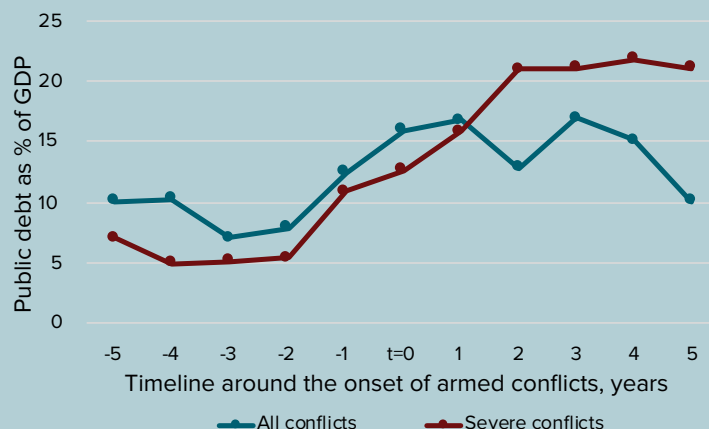
Source: Lederman and Rojas, 2018.
Note: The figure displays the evolution of public debt of conflict countries relative to non-conflict economies before, during and after armed conflicts. t=0 indicates the onset of armed conflicts. Severe conflicts are defined as having 1000 deaths per year at t=0. The sample includes 180 developing and developed countries (and 32 conflicts) between 1960-2015.

Armed conflicts and public debt: Lederman and Rojas (2018) shed light on the potentially long-lasting increases in the debt burden experienced by developing countries affected by armed conflicts. The authors find that public debt in conflict-afflicted economies tends to be higher than in non-conflict economies prior to the onset of conflicts, begins to rise further before conflict begins, and stays high afterward (see Figure BII.1). These findings suggest that developing economies experiencing conflicts finance the increased government expenditures by relying on public debt, particularly after the conflict starts. The weaker fiscal position under which conflict-affected countries entered the Covid-19 pandemic could severely affect not only their immediate but also their long-term ability to finance government expenditures.

Armed conflicts and GDP growth: The literature on the detrimental effects of conflicts on output is abundant and consistent. Collier (1999) distinguishes four common routes by which armed conflicts can hurt the economy. Conflicts:

- destroy physical and human capital
- disrupt internal social dynamics
- cause countries to divert public funds from activities that enhance output
- contribute to dissaving, which leads to economic deterioration.

The magnitude of the impact of conflict on output is also estimated by economic literature. Collier finds that the annual growth rate during civil wars is 2.2 percentage points lower than would have occurred had the war never happened. Growth during the five years that follow a one-year conflict is also about 2.1 percentage points lower than what would have occurred had the war never happened. This lack of a sustained post-conflict growth remains "even if countries successfully avoid relapsing back into conflict" (Carey and Harake 2017). Armed conflict can also generate important collateral damage to the output of neighboring economies. These negative spillover effects tend to amplify as the intensity of conflict increases (Murdoch and Sandler 2002 and 2004).

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The Long-Run Costs

Although public debt has an important role, it also carries risks. Public debt can be problematical if is used for unproductive ends. More precisely, if the economic and social returns to fiscal spending are lower than the realized interest rates paid for debt, the debt burden relative to national income will tend to grow over time. In many instances, governments can be overly optimistic in their estimates of the returns to fiscal spending.[16] Negative shocks (such as an unexpected recession) can reduce the returns to public investment and increase realized interest rates. For example, the social return of infrastructure projects can be dampened in recessions when the projects' utilization declines. In addition, currency depreciations in bad times would inflate debt if external debt is denominated in foreign currencies. In other instances, governments may enact permanent spending programs based on a revenue windfall that is only temporary (Végh, Lederman and Bennet 2017), forcing them to continue the spending even after interest rates rise. Kaminsky et al. (2004) show that fiscal policy was procyclical for many developing countries, although it has become more countercyclical for some of them in recent years (Frankel et al., 2013).

Even when the economic and social return of fiscal spending exceeds the interest rate on debt used to finance it, governments still need to be cautious about borrowing more when debt is already high. As governments borrow more, they may soak up available funds needed for private investment (Reinhart et al., 2012). Interest rates may also rise, which increases the cost of capital for the private sector. Effectively, the public sector may crowd out the private sector. Furthermore, there is also the prospect, at least in the short run, that an increase in debt raises expectations of future increases in tax rates to repay it, which dampens present consumption and investment, undermining any stimulative effect from debt-financed spending (Barro, 1974).

Empirically, public debt, which includes both public domestic and public external debt, is negatively correlated with private investment. This appears to be true across MENA, as shown in Figure II.2, as well as for typical developing and middle-income countries. This is consistent with the crowding out effects described above. Note that the correlation between public debt and private investment is more negative in most MENA countries than in a typical developing country, implying that the crowding out effect appears to be more severe in MENA. Of course, this does not mean that public debt can never reinforce private investment in some contexts. In fact, economic theory argues that public investment can in some instances raise private investment when it enhances the provision of public goods, resulting in higher overall income in the long run.

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16   Frankel (2011) examines growth forecasts made by 33 official government agencies and finds that optimism bias contributes to excessive deficits. More recently, Beaudry and Willems (2018) find that in a sample of 189 countries, optimism in real GDP growth forecasts increases the likelihood of future recessions and fiscal crises.

FIGURE II.2: Correlations between Public Debt, Interest Payments, and Private Investment
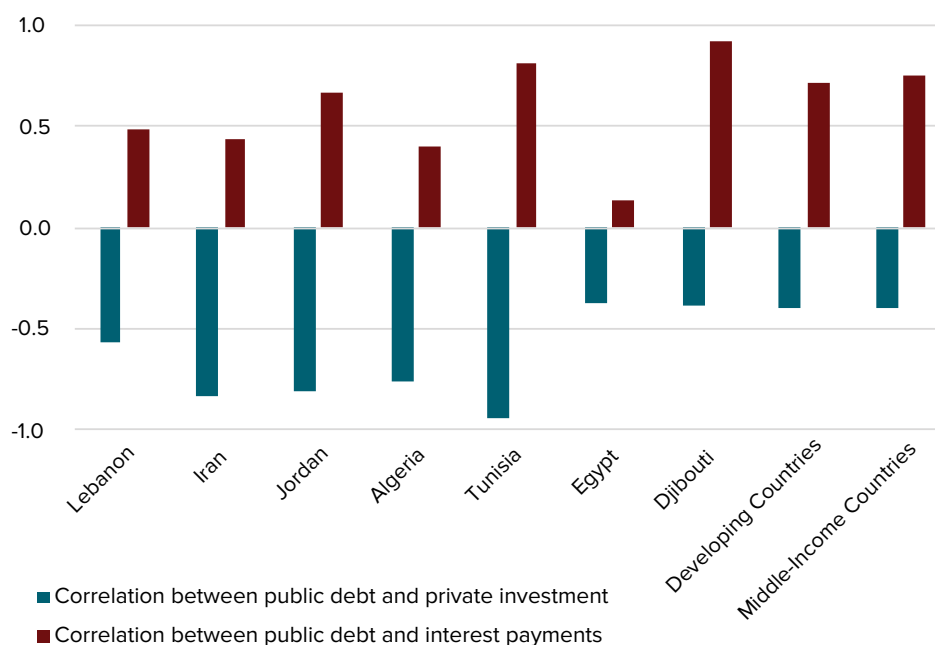
Source: World Bank, Macro and Poverty Outlook (October 2020)
Note: Correlations are derived from public debt (percent of GDP), private fixed investment (percent of GDP), and interest payments (percent of GDP). Data are from 2000-2020 for most countries. Country groups are represented by the median observation.

As interest payments rise with the stock of debt, they tend to increase their share in a government's fiscal outlays. Figure II.2 also shows that public debt and interest payments are positively correlated for MENA countries and for a typical developing or middle-income country. In two MENA countries, Egypt and Lebanon, interest payments have already reached around 10 percent of GDP and over 30 percent of total public expenditures in recent years (see Appendix Table B3). Such repayments may limit a government's ability to spend on important items such as infrastructure and human capital, which lowers growth prospects (Mahdavi, 2004).

Elevated debt can increase vulnerability to macroeconomic volatility for several reasons. As debt rises, it creates fear that governments will be unable to repay, resulting in a higher risk premia and therefore higher long-term real interest rates (Reinhart et al., 2012). The tools at the disposal of governments such as counter-cyclical fiscal policy is also severely weakened. Elevated debt reduces credit worthiness, restricting access to further financing and curbing the ability of economies to roll over (that is refinance maturing) debt. High levels of debt may be monetized, leading to inflation, currency depreciation, capital flight, and possibly debt or financial crises (Boskin, 2020). The ongoing economic and social crisis of Lebanon after the country defaulted in March 2020 can be interpreted as a vivid example of this type of situation.

At the extreme are economies that serially default. Such economies may achieve a status of debt intolerance, which means they are unable to take on even normal ranges of debt (Reinhart et al., 2003; Reinhart and Rogoff, 2009). The costs of defaulting on debt are significant for a country's trade, investment flows, and growth (Borensztein and Panizza, 2009; Asonuma and Trebesch, 2016). Defaulting on debt severely damages a country's financial systems (Reinhart et al., 2003).

Debt and Growth during 2000-2019: Evidence of Long-run Costs

Because public debt carries both costs and benefits, how public debt affects economic growth is an empirical question. There seem to be conceptual reasons to caution against elevated debt levels, as discussed above. The issue is the level of public debt that is considered "elevated." Is there a common threshold across countries above which public debt accumulation hurts growth? Starting from the seminal contribution of Reinhart and Rogoff (2010), many studies have investigated this relationship, attempting to identify to what extent debt accumulation has a detrimental effect on GDP growth. The literature seems to refute the idea of a common threshold across countries (Eberhardt and Presbitero, 2015; Chudik et al., 2017). But the literature does not rule out the possibility of country-specific debt thresholds—including ones in debt intolerant countries that result in "extreme duress" if crossed (Reinhart et al., 2003 and Reinhart and Rogoff, 2009). This threshold varies by country, depending on a country's default and inflation history, and in debt intolerant countries may be well below a level easily managed by an advanced economy.

Data suggest that countries with higher initial public debt levels in 2000 experienced lower long-run growth in GDP per capita in the following two decades (see Figure II.3). The top-left panel shows that in a sample of 158 countries, a median country with very high initial public debt in 2000 (that is, in the high debt tercile) on average grew slower than a median country with lower initial public debt levels (in the low and medium debt terciles) in the next two decades. Countries in the medium debt tercile have roughly similar average long-run growth as do countries in the low debt tercile. This suggests a non-linear role of debt. Nevertheless, there is a great variation in average growth within each tercile. For high-income economies, very high initial public debt in 2000 does not seem associated with lower long-run growth, which suggests that they are debt tolerant. For developing and middle-income economies (the bottom panels), the association between high initial public debt in 2000 and subsequent low growth is more striking. Developing economies in the top tercile of debt-to-GDP in 2000 typically grew about 1 percentage point per year lower in the following 20 years than those in the first and second debt terciles.[17]

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[17] A similar finding is obtained when considering the relationship between initial debt in 1980 and subsequent long-run growth in 1980-1999. Developing economies in the lowest tercile of debt-to-GDP in 1980 typically grew 0.8 percentage points per year lower in the next two decades than those in the second and the highest terciles. Developing economies in the middle debt tercile also had as low long-run growth as countries in the top debt tercile did. This might reflect a volatile environment during 1980-1999 with relatively high interest rates and more default episodes.

FIGURE II.3: Median Annual per Capita Growth During 2000-2019 across Countries Ranked by Central Government Debt in 2000
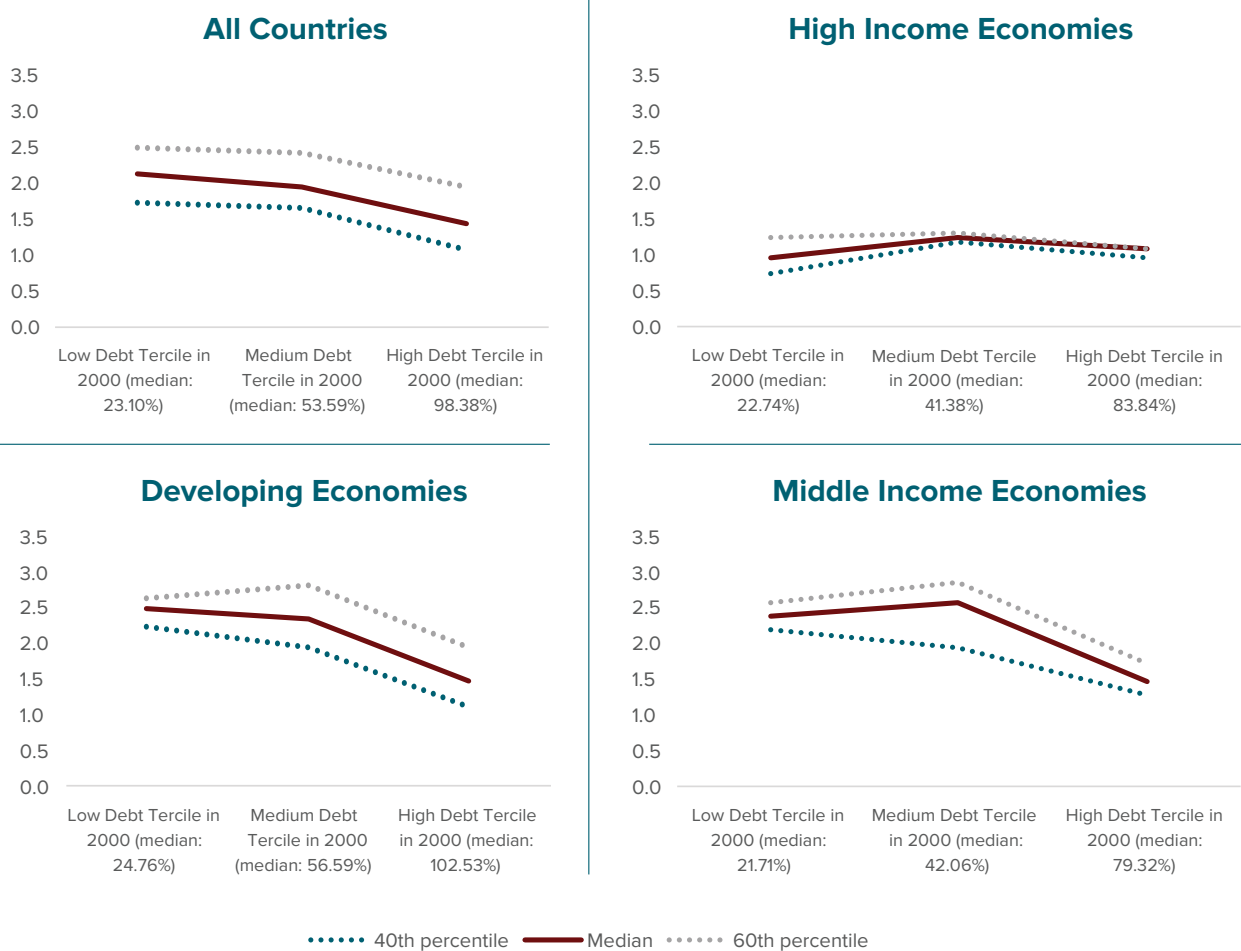
Source: World Bank, *World Development Indicators*; International Monetary Fund, *Global Debt Database*.
Note: Figure displays the real GDP per capita growth between 2000 and 2019 for each tercile of central government debt (percent of GDP) in 2000 by each country income group. The overall sample covers 158 economies—131 developing and 27 advanced economies, based on the 1987 World Bank income classification. The average annual growth rate is calculated between 2000 and 2019. The median real GDP per capita growth is presented for each of four groups: (i) all countries (ii) high income (iii) developing (including middle-income and low-income countries) and (iv) middle income. The debt terciles are in increasing order with the median of each tercile indicated in the horizontal axis. Growth rates for the median, 40th percentile and 60th percentile country are presented for each group.

The Tensions are More Severe for Developing Countries

The association between developing countries' high initial public debt in 2000 and their subsequent low growth supports the notion that the tension between short-term needs and long-term costs of debt-financing is more severe for developing economies than for advanced ones. For the developed world, accommodative monetary policy and rising savings are expected to keep interest rates low, favoring government borrowing. Advanced countries are also known to be less debt intolerant, so they can continue to borrow at relatively higher levels of public debt. For the developing world, including developing MENA, the tension is starker. Many MENA countries—such as Egypt, Jordan, and Bahrain—face relatively high borrowing costs, despite extremely low global interest rates (see Figure II.4). The borrowing, if not resulting in sufficiently high return fiscal spending in terms of GDP growth, will add to future debt burden. The default risk of many MENA countries rose sharply during the pandemic as

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shown in Figure I.8 in Chapter I. This is probably because many MENA countries entered the pandemic with high debt, chronic low growth, and weak governance—especially when it came to transparency. These existing vulnerabilities heighten the costs of their debt accumulation. It is noteworthy that historically, the probability of defaults and/or current account reversals in developing MENA was abnormally low, despite chronic low growth and persistent macroeconomic imbalances. This was possible because of the support of high-income GCC countries via FDI and official assistance (Arezki et al., 2019). However, secular oil price declines driven by technological changes in the energy sector have significantly reduced the GCC's willingness to continue to serve as a lender, thus changing market expectations about debt vulnerability in developing MENA.

FIGURE II.4: Coupon Rates of U.S. Dollar-denominated Debt Issuances during the Pandemic, by Maturity for MENA countries, Chile, and Brazil
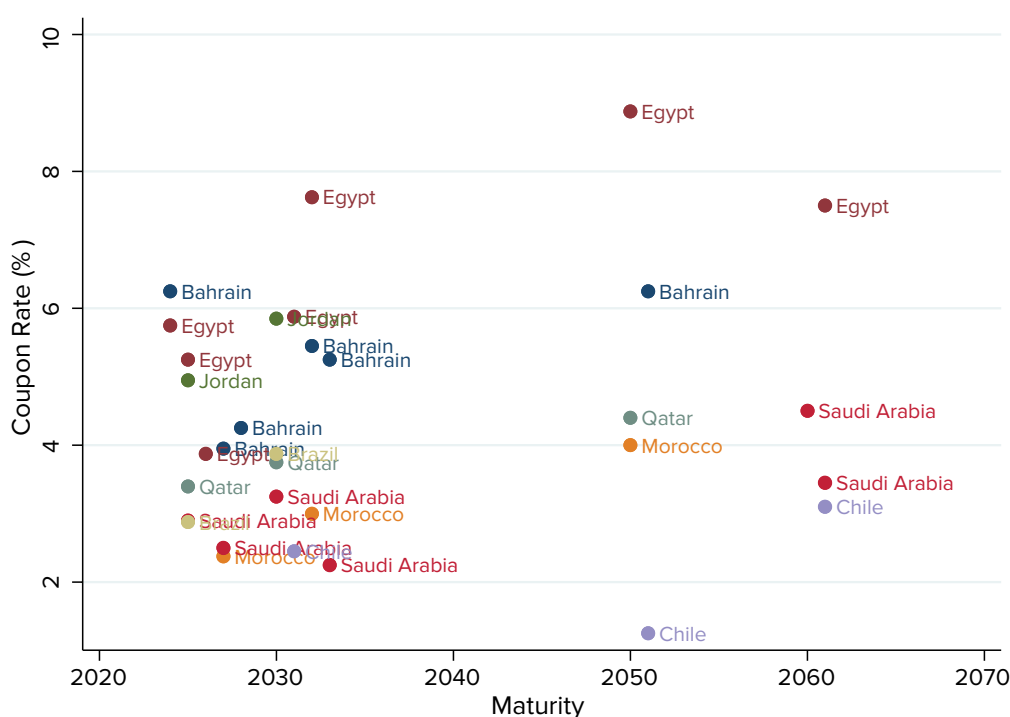
Source: Cbonds.com
Note: Data are from the beginning of 2020 to February 27, 2021. For comparability, only coupon rates of U.S. dollar-denominated debt issuances are displayed. Coupon rates of EURO-denominated debt issuances from the region are not displayed but the overall finding remains the same.

II.2 The Role of Institutions in Shaping the Tradeoff

What can MENA countries do to navigate the tensions between short-term objectives and long-term risks of rising public debt?

MENA countries can develop a transparent and credible multi-year fiscal and debt strategy to reduce the costs of public debt, to bring debt-to-GDP ratio to sustainable levels and to reduce uncertainty for creditors and other economic agents.[18] This section tackles this question by discussing policy options during three different phases of an economic recovery from the pandemic:

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18   A fiscal rule is an example of a transparent and credible plan that applies in short-term and long-term, in which a government provides clarity about when and to what extent it would conduct debt-financing fiscal spending (see Vegh et al., 2017)

■ expenditure priorities during the pandemic

■ fiscal stimulus immediately as the pandemic subsides

■ mitigating the potential costs of debt overhang in the medium term

Prioritizing Spending during the Pandemic - Transparency and Surveillance

Conventional wisdom advocates a strong counter-cyclical role of fiscal expenditure. Early studies suggest that fiscal multipliers are generally larger during bad times (Corsetti et al., 2012; Riera-Crichton et al., 2015; Auerbach and Gorodnichenko, 2012), although recent research casts doubt on this wisdom (Ramey, 2019). Nevertheless, it is important to note that unlike in previous recessions, fiscal policies are not designed primarily to boost aggregate demand during the Covid-19 pandemic, because the collapse in aggregate demand in the pandemic was mainly driven by health concerns associated with the exposure to Covid-19 and not by underlying economic issues. Social distancing has been shown to take place whether or not a government imposes restrictions, such as lockdowns, to slow the spread of the virus (Maloney and Taskin, 2020; Gupta et al., 2020). The collapse in demand is concentrated in sectors that require travel and face-to-face interactions—such as airlines, tourism, hotel and restaurants, brick-and-mortar retail, and personal services.[19] As long as the risk of Covid-19 exposure remains, stimulating aggregate demand is likely to be elusive.

There are two main roles of fiscal spending during the pandemic: to protect the welfare of vulnerable families and to invest in public health. As Chapter I discusses, poorer households in MENA have been disproportionately hurt. Supporting the consumption of the hardest hit households is an essential objective for fiscal spending. MENA countries have taken unprecedented actions to support the most vulnerable. The good news is that cash transfers are reasonably well-targeted. A bigger portion of the poorest households are beneficiaries than those at the top of the distribution, evidence from phone surveys in the region suggests. Yet, there is room to improve since social transfers have been able to reach only a small portion of the families most in need.

Public health investment as a short-term response to the pandemic could bring large long-term social returns such as better access to healthcare for the poor. To contain the pandemic, authorities could boost health spending—to produce or acquire personal protective equipment, testing kits, and contact tracing systems, and to mobilize and pay health workers. Scaling up testing and contact tracing for Covid-19 as well as improving data transparency are especially important because these steps enable authorities to determine the dimensions of the infection, to detect and isolate cases and to encourage the population to take appropriate social distancing measures. The Gulf Cooperation Council (GCC) countries—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates—have relatively high testing per capita. As vaccines become available, health spending can be allocated toward an immunization infrastructure—including, among other things, procurement of vaccines, clear and effective communication to generate awareness of and demand for vaccination, and building networks of local vaccination providers. An effective vaccination campaign can both speed up the roll-out of vaccines, which would pave the way for economic recovery, and reinforce the foundation of public health infrastructure. Simple calculations of the costs and benefits of investing in vaccination programs indicate that the benefit-cost ratio is very large, around 78:1 if MENA vaccinates 20 percent of its population at the current prices envisioned by COVAX, the multilateral initiative to make Covid-19 vaccines available to low- and middle-income countries (Ahuja et al., 2021).

Investing in testing and public surveillance of the outbreak also appears to reduce the economic costs of the pandemic. Preliminary evidence suggests that countries with a high level of tests coming back positive (a high test-positivity rate) suffered larger growth downgrades (see Figure I.3 in Chapter I). A high test-positivity rate reflects a relatively uncontrolled pandemic,

19   For example, see Georgetown University's job tracker https://cew.georgetown.edu/cew-reports/jobtracker/ for sectoral job losses in the United States.

which might reflect a limited outreach of testing as a public health surveillance tool. Unfortunately, many MENA countries have either high positivity rates (above the 5 percent benchmark set by the World Health Organization) or do not report reliable test results. But some high-income countries in the MENA region have been at the global forefront of using testing for disease surveillance and rolling out vaccination programs (see Table I.2 in Chapter I).

The Effectiveness of Public Investment Depends on Governance

MENA countries will have to decide whether additional fiscal stimulus is warranted after the public health emergency.

On the one hand, certain factors caution against embarking on additional stimulus in MENA. First, **fiscal stimulus might not be needed because the recovery could be aided by rebound growth from demand** for goods and services that could not be satisfied during the health emergency. Because of this pent-up demand, consumer and business spending will rise after it becomes clear that health risks have subsided (Krugman, 2020; Lee, 2020). The pent-up demand rebound depends on the duration of the crisis. The longer the crisis goes, the more likely firm liquidity constraints will result in solvency issues, which might limit the upside of the recovery. This scenario again underscores the importance of a rapid rollout of vaccines. Moreover, the extent of this pent-up demand rebound for the MENA region—especially from important external sources of demand such as tourism—depends on the effectiveness and transparency of pandemic surveillance. People will not likely resume traveling or spending on personal services if uncertainty regarding Covid-19 persists.

Second, **fiscal stimulus can be ineffective or even counterproductive in MENA countries with elevated debt**, such as many oil importers (see Appendix Table B4). Published research indicates that in an environment of high public debt, the so-called fiscal multiplier from additional spending can be zero (Ilzetzki et al., 2013). Huidrom et al. (2020) estimate that two-year fiscal multipliers can range from zero when government debt is high (in the 90th percentile of their sample, that is, above 92 percent of GDP) to 0.6 when government debt is low (in the 10th percentile, or less than 17 percent of GDP). Two channels could cause negligible response to fiscal stimulus in economies with high public debt. In one, households reduce consumption when the fiscal stimulus is implemented, in anticipation of future fiscal adjustments (such as tax increases or fiscal austerity) to finance the stimulus. This is referred to as the Ricardian equivalence channel, after Robert Barro's seminal research in 1974. In the second, called the interest rate channel, concerns about sovereign credit risk raise interest rates and hence reduce aggregate demand (Huidrom et al., 2020).

Third, **even though public investment can bring short and long run gains, caution is warranted in countries with poor governance.** Public investment such as infrastructure projects is usually understood to have larger long-run effects than public consumption and social transfers (Auerbach and Gorodnichenko, 2012; Végh et al., 2018). Unlike government consumption, public investment directly improves the economy's productive capacity by increasing the marginal product of private capital and labor. As time progresses, this generates positive effects both on private investment and private consumption (Leduc and Wilson, 2013). In addition, countries with a low initial stock of public capital (as a proportion of GDP) have significantly higher public investment multipliers than countries with a high initial stock of public capital (Izquierdo et al., 2019). Eden and Kraay (2014) report that in low-income countries, on average, an extra dollar of government investment raises private investment by roughly two dollars, and output by 1.5 dollars. Nevertheless, public investment may have a more limited short-term multiplier because of delayed implementation (Ramey, 2020). More important, the economic gains from public investment projects can be hindered by poor governance, which reduces the efficiency of public investment. For example, public projects with

low economic and social return are selected when governance is poor. At least, this appears to be the case even for a large sample of European countries (Izquierdo et al., 2019). In countries with the lowest institutional capacity and transparency, the multiplier of public investment can be close to zero in both the short- and long-term. Unfortunately, governance is one area in which the MENA region trails its world peers (see Appendix Table B4). This concern reinforces the need to work on reforms to improve the governance of public investment decisions.

On the other hand, many countries in MENA rely on fixed exchange rate regimes (see Appendix Table B4), which can boost fiscal multipliers (Corsetti et al., 2012; Ilzetzki et al., 2013). As described by Ilzetzki et al. (2013), "the initial effect of a fiscal expansion is to increase output, raise interest rates, and induce an inflow of foreign capital, which creates pressure to appreciate the domestic currency. Under predetermined exchange rates, the monetary authority expands the money supply to prevent this appreciation. Such monetary policy accommodation serves to accommodate the rise in output. Under flexible exchange rates, however, the monetary authority keeps a lid on the money supply and thus allows the real exchange rate appreciation to reduce net exports. Output does not change because the increase in government spending is exactly offset by the fall in net exports." Table II.1 summarizes the literature on country characteristics and the size of fiscal multipliers.

TABLE II.1: **Country Characteristics and the Size of Fiscal Multipliers**

Size of Fiscal Multipliers	Public Debt	Output Gap	Governance	Exchange Rate Regime
LARGE	Low	Large	Strong	Pegged
SMALL	High	Small	Weak	Flexible
Sources	Ilzetzki et al. (2013); Huidrom et al. (2020)	Corsetti et al. (2012); Riera-Crichton et al. (2015); Auerbach and Gorodnichenko (2012)	Izquierdo et al. (2019)	Corsetti et al. (2012); Ilzetzki et al. (2013)

Note: See Appendix Table B4 for the corresponding positions of MENA countries.

The arguments for and against demand-stimulating fiscal actions after the pandemic do not rule out the usefulness of targeted fiscal spending. Focusing on economic impacts of the crisis with potentially long-lasting consequences can be a helpful guide. Consistent with the existing literature, this report labels these as "scarring effects" (Portes, 2020; Baldwin and Weder di Mauro, 2020; Arellano-Bover, forthcoming). For example, financial constraints might prevent firms from making the initial investment to re-enter the market. Or workers who became unemployed or under-employed during the crisis might face long-term reductions in the chances of finding employment and even lower wages—and thus need retraining and job search assistance. School closures interrupt students' skill accumulation[20]. For example, without targeted remediation, the human capital of children who are now in school is likely to be reduced by almost 5%, which is the order of magnitude of the average improvement in human capital globally in the past ten years (World Bank 2020c). Government spending, such as subsidized loans, job training and resources for schools to make up for the loss of learning, can mitigate these "scarring" effects.

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[20] If the return to an additional year of education is approximately 8-10 percent, and the average student misses one quarter of the school year, then one might estimate a permanent impact on earnings of 2 percent to 2.5 percent (Portes, 2020).

Mitigating the Costs of Public Debt after the Pandemic with Transparency and Governance

The costs of elevated debt are likely to manifest themselves eventually, perhaps even in the short term. To help, in April 2020 the so-called Group of 20 advanced economies initiated a Debt Service Suspension Initiative (DSSI), which suspended interest and principal payments for the poorest countries from May 1 through December 31, 2020. It was later extended to June 30, 2021. While this is a helpful respite, DSSI does not reduce debt value (see Box II.2).

Box II.2: The Debt Service Suspension Initiative (DSSI)

With the support of the World Bank Group and the International Monetary Fund (IMF), the so-called Group of 20 advanced economies (G20) is allowing 73 low- and lower-middle-income countries to temporarily suspend debt service payments—both interest and principal—owed to their official bilateral creditors. The suspension is designed to temporarily ease the debt pressure on poorer countries and free up resources that can be used to fight the pandemic and support vulnerable people. The G20 has also called on private creditors to participate in the initiative on comparable terms. The Debt Service Suspension Initiative (DSSI) originally was to run from May 1, 2020 through December 31, 2020, but was extended through the end of June 2021 (World Bank, 2020b)

Two MENA countries are eligible from the DSSI—Djibouti and Yemen. In the latest Debt Sustainability Analysis (DSA) conducted in May 2020 by the World Bank and the IMF, Djibouti is considered to be at high risk of external debt distress and at high risk of overall debt distress because of the impact of the Covid-19 on macroeconomic prospects (World Bank and IMF, 2020). The government of Djibouti has participated in the DSSI. Potential DSSI savings for Djibouti amounts to 1.7 percent of GDP during May-December 2020, and 2 percent of GDP during January-June 2021 (World Bank, 2020b). Yemen is also participating in the DSSI. However, because of external arrears, Yemen's benefit from the DSSI is notional.

The DSSI is helping poorest countries by allowing payment delay. The initiative does not reduce the debt stock nor the total amount that the debtors are expected to pay to the creditors. The DSSI also does not restructure debt. Restructurings encompasses actions that reduce the debt stock, and/or extend maturities, and/or reduce interest rates.

Soon after the pandemic, countries in the region may have to take action to reduce the share debt represents of GDP, even when economic output remains below potential. To do so, governments can:

- Raise economic growth

- Undertake thoughtful fiscal consolidation

- Use inflation to erode the value of domestic debt

- Refinance (roll over) maturing debt on more favorable terms

- Default or restructure debt.

- Some options are more beneficial and feasible than others, with transparency and governance playing a key role.

Raising economic growth: increasing economic output remains the most sustainable way to reduce debt. Boosting economic growth in MENA requires much-needed deep structural reforms to raise the productivity of the existing workforce and put idle working-age people in jobs. Unemployment in the MENA region is high and is concentrated in young people and the educated. The region's female labor force participation rate is the lowest in the world. A powerful way to put more people to work and enhance the productivity of the current workforce is to promote fair competition (Arezki et al., 2020a) and adopt digital technology—especially in finance and telecommunication. These enhancements would be especially important to the informal sector, which would gain access to services and markets previously accessible only to the privileged few and to state-owned enterprises. In some countries, where the both telecommunication and digital payment infrastructure are underdeveloped, removing barriers to entering and leaving markets is important.

Undertake thoughtful fiscal consolidation: After the pandemic, steps to reduce fiscal deficits (called fiscal consolidation) can also be considered by MENA countries that have such conditions as high debt and weak governance that impedes the effectiveness of fiscal stimulus. Fiscal consolidation does not mean indiscriminate spending reduction. Rather, this can be achieved by prioritizing the most effective spending items, coupled with improved spending decisions. In highly indebted countries, thoughtful fiscal consolidation, such as reducing low-return spending items, might have a small negative impact or could even be welcomed by private sector. This is consistent with the finding that the fiscal multiplier is close to zero or negative in such countries (Ilzetzki et al., 2013; Huidrom et al., 2020). Over the medium term, MENA countries can aim to gradually reduce heavy subsidies and expand the formal private sector to increase the tax base. MENA's labor market currently consists of a large informal sector that gives workers virtually no social protections and produces little tax in tax revenue (World Bank, 2014; Gatti et al., 2014).

Using inflation to erode domestic debt: Although historically inflationary episodes have reduced the value of domestic debt, inflation is unlikely to be a deliberate policy tool to reduce debt. High inflation is well-known to be very costly—hurting long-run economic growth (Bruno and Easterly 1998) and putting depreciation pressure on exchange rates. High inflation also has important distributional costs, as it disproportionately hurts the poor (Easterly and Fischer, 2001; Bulir, 2001) and people living on fixed income such as retirees. Unlike most poor people, the rich have access to real and financial instruments and can protect themselves against inflation. Inflation can also cause social unrest. Anecdotal evidence suggests that inflation, especially in food and fuel prices, can trigger protests (NPR, 2011; Washington Post, 2015). Arezki and Bruckner (2011) systematically find that increases in food prices cause anti-government demonstrations and riots in poor countries. In sum, inflation is not likely a policy tool. Rather, it is usually a sign of difficult economic conditions, as demonstrated by two MENA countries with high inflation—Lebanon and Iran.

An alternative approach, financial repression, can only work to gradually reduce public debt over time and carries costs. Financial repression consists of controlled domestic interest rates, captive domestic lenders that provide credit to the government, and positive inflation rates (McKinnon 1973, and Reinhart and Sbrancia, 2015). These factors can generate negative real interest rates and gradually reduce existing domestic public debt. Financial repression was an important factor in the debt reduction of advanced countries in the decades after World War II.[21] The early literature found that because of government interventions in pricing and funding allocation, financial repression hurts financial development (Demetriades and Luintel, 1997) and long-run growth (Roubini and Sala-i-Martin, 1992). In addition to their downsides, financial repression policies take time to substantially reduce the debt-to-GDP ratio.

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[21]   For example, for the United States and the United Kingdom the annual liquidation of debt via negative real interest rates amounted on average to 2 and 3 percent of GDP *a year* during the post-war period (Reinhart and Sbrancia 2015).

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Rolling over debt with more favorable terms: To reduce debt, MENA countries can also aim to refinance maturing debt on more favorable terms. The good news is that global interest rates are expected to remain low. The U.S. Federal Reserve has set its policy interest rate goal at or near zero to achieve maximum employment and will allow inflation to moderately go above the 2 percent target rate for some time (Federal Reserve FOMC Statement, December 2020)[22]. The Federal Reserve forecasts that interest rates will remain near zero at least through 2023 (Federal Reserve Economic Projections, December 2020)[23]. The European Central Bank's overnight deposit rate has been negative and declining since 2014 (European Central Bank, 2021). Given these monetary policy goals for two of the world's most important central banks, global interest rates are likely to remain low for some time, although that could change due to pent-up demand.

However, interest rates for MENA's new debt will not necessarily be low, given the region's high debt and low growth. The coupon rates paid by many MENA countries—such as Egypt, Jordan and Bahrain—were high during the pandemic for debt issuances denominated in hard currencies, even when interest rates were extremely low globally (see Figure II.4). But MENA countries with low levels of public external debt (such as Qatar, Saudi Arabia and Morocco) could issue debt with lower coupon rates. In addition, it is not certain that after the pandemic interest rates will remain so low. Partly because of favorable global liquidity conditions fostered by central banks in advanced markets, private capital outflows have been moderate, and many middle-income countries were able to continue borrowing in global capital markets. After the pandemic, the unprecedented liquidity support by advanced countries' central banks will probably stop. Many emerging markets with synchronized rises in debt levels might have to compete for liquidity to roll over their debt. A less liquid global scenario added to the high debt, reduced oil prices, chronic low growth and the external imbalances that beset many MENA countries means that the region might face considerable challenges competing for liquidity.

To access more favorable terms, MENA countries need to enhance their growth prospects. Economic growth can directly reduce debt as a share of GDP and help MENA countries roll over existing debt on good terms. If MENA countries are to be able to roll over their debt and gradually get on a sustainable debt dynamic, it is crucial that they achieve the stable macroeconomic conditions necessary for growth.

MENA countries can work to enhance debt reporting transparency and monitor financial market vulnerabilities. Such measures can lower rollover costs. Studies have shown that greater data transparency can lower the costs of external borrowing (Cady, 2005; Choi and Hashimoto 2018). This is probably because when investors are unsure about a country's debt profile, they demand a higher risk premium. More broadly, studies have found positive correlations between data transparency and governance (Islam, 2006 and Williams, 2009) and growth (Arezki et al., 2020b). MENA countries can improve public debt reporting, including debt borrowed from China.[24] Improving debt reporting is important because hidden public debt, such as debt of SOEs, can become exposed, usually in distressed times, and is added to the total tally of public debt precisely at the moments public debt needs to be brought under the control the most (Reinhart, 2015). A potential mechanism to mitigate hidden debt is to develop a secondary market for private debt, including non-performing loans.

This report updates MENA's public debt reporting first documented in Arezki et al., (2020b), providing an overall reporting of different categories of public debt such as state and local government, extra budgetary funds and SOE liabilities. The transparency of public debt reporting is largely unchanged between 2019 and 2020, with notable improvements in Tunisia

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22 https://www.federalreserve.gov/newsevents/pressreleases/monetary20201216a.htm
23 https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20201216.htm
24 Horn and others (2020) find that 50% of China's lending to developing countries is not reported to the IMF or World Bank. These "hidden debts" distort policy surveillance, risk pricing, and debt sustainability analyses.

and Jordan (see Appendix Table B5). Closely monitoring financial market vulnerabilities, such as non-performing loans held by banks, is also important to improve investor confidence and reduce borrowing costs.

Defaulting or Restructuring Debt: If MENA countries cannot roll over debt, they may risk costly debt restructurings. Debt restructuring is a process wherein a country experiencing financial distress and liquidity problems refinances its existing debt obligations in order to gain more flexibility in the short term and make its debt load more manageable overall. There are two types of debt restructurings—preemptive and post-default. In preemptive restructurings a country decides to restructure its external debt before it misses any payments. In a post-default restructuring, a country is forced to enter into debt negotiations because it has missed payments (that is, defaulted).

FIGURE II.5: GDP Growth in Lebanon and Jordan
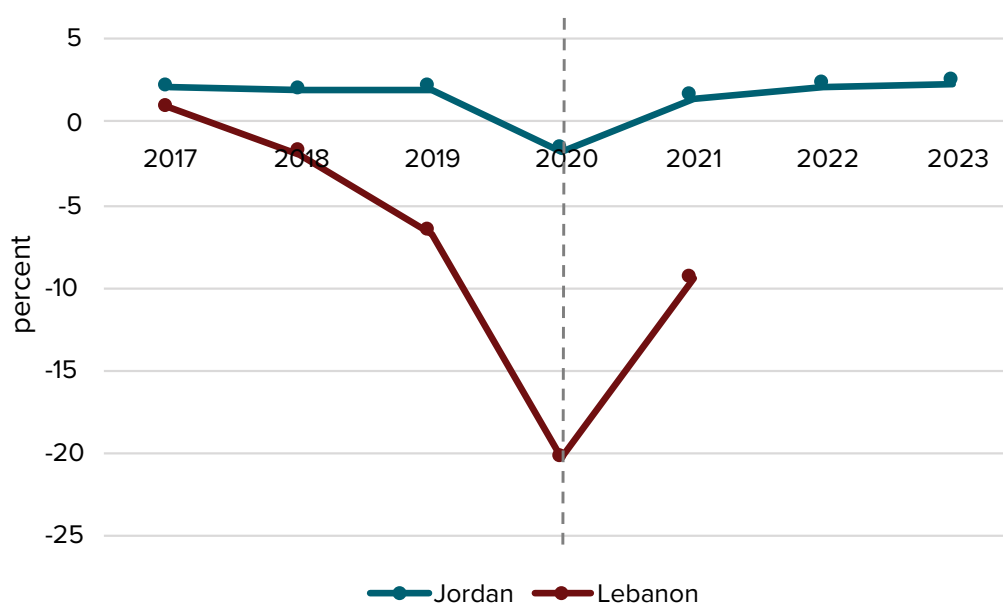
Source: World Bank, Macro and Poverty Forecasts (April 2021).
Note: Data for 2021, 2022 and 2023 are forecasts. Forecasts for Lebanon's GDP growth in 2022 and 2023 are not available. Lebanon defaulted in March 2020.

Defaults are costly, as the default of Lebanon shows. On March 7, 2020, the Lebanese government defaulted on a $1.2 billion Eurobond payment, in its first sovereign default. The Lebanese Lira depreciated sharply and with heavy fluctuations. The Eurobond default precludes access to international markets for foreign financing. The domestic banking sector is impaired because of the exposure to the government debt. The lack of bank credit coupled with exchange market pressures choke trade and corporate finance in the highly dollarized economy, constraining the capital and final goods imports (World Bank, 2020a). The current account deficit was sharply reduced from a deficit of 21 percent of GDP in 2019 to a deficit of 11 percent of GDP in 2020, mainly because imports dried up. A year into the economic crisis, there have been limited policy responses by the authorities. The political situation is volatile. Lebanon lacks a fully functioning executive authority and as of early March 2021 is trying to form its cabinet .

The warning signs of Lebanon's economic collapse were ominous. Lebanon's GDP growth gradually declined in the years leading up to the default (Figure II.5). Real GDP contracted by 1.9 percent in 2018 and 6.7 percent in 2019, respectively. In 2020, real GDP is estimated to contract 20.3 percent and in 2021, it is expected to shrink another 9.5 percent. This performance is in stark contrast to a neighbor, Jordan, which is expected to record positive economic growth in 2021.

To systematically understand restructurings, we study the evolution of growth, external debt and governance around restructurings for developing countries, using the restructuring dataset constructed and maintained by Asonuma and Trebesch (2016). The dataset provides information on the occurrence and duration of restructurings with private external creditors from 1978 (see Appendix A3 for detail).[25] The cases are differentiated into two categories: preemptive restructurings and post-default restructurings.

Highly indebted countries are more likely to enter either type of debt restructuring when they experience low growth and weak governance. In Figure II.6, the blue bars show that countries that default or preemptively restructure have lower growth and weaker governance quality in the five years preceding the event than do countries with no restructurings. Several MENA countries entered 2020 with deficits in both dimensions, as shown in the red bars. The deficits are most striking for Lebanon, which defaulted in 2020, and to a lesser extent, for MENA middle-income countries. The good news for MENA middle-income oil importers, the group of countries with relatively high public debt, is that the gaps in growth and governance are more modest than those in other MENA middle-income countries.

In addition, there seems to be a systematic difference in governance quality between countries that default and countries that preemptively restructure. In the five years before the event, countries that default have governance scores than average 0.2 points lower than countries that do not restructure, while countries that preemptively restructure have an average governance score 0.1 points lower—suggesting that institutions play a role in restructuring decisions.

FIGURE II.6: Growth and Governance before Restructurings

Panel A: Difference in GDP Growth (percentage)
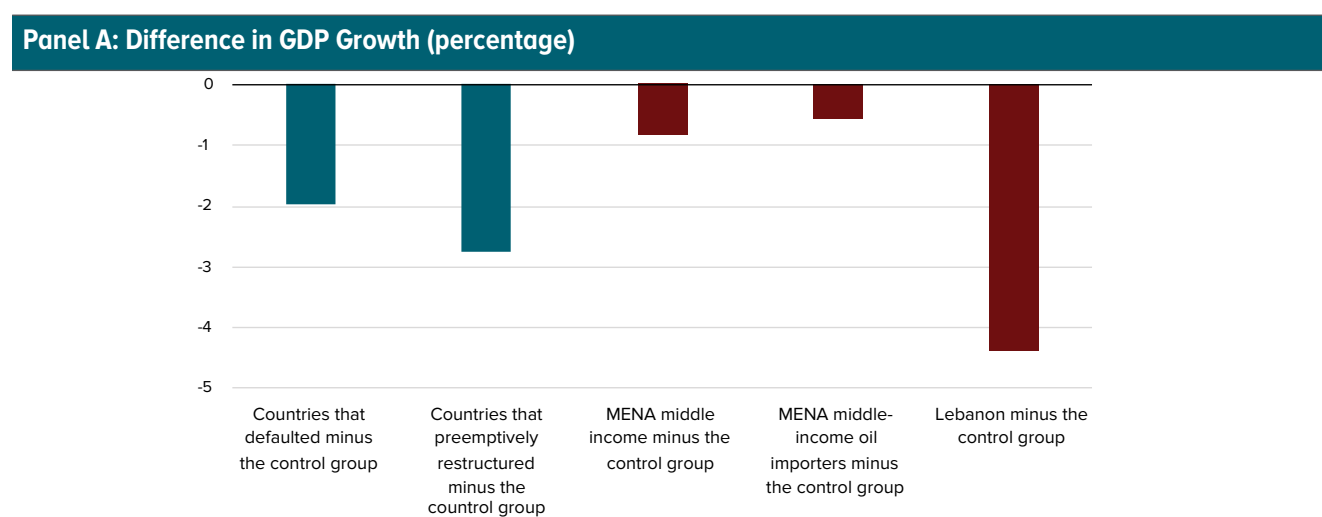
Source: World Bank staff calculation
Note: The first bar from the left shows 5-year average annual GDP growth before a post-default restructuring minus that before non-restructuring periods (referred to as average growth of the control group, or *agcg*). The second bar shows 5-year average annual GDP growth before a preemptive restructuring minus *agcg*. The third bar shows the average annual GDP growth during 2014-2019 for MENA middle-income countries minus *agcg*. The fourth bar shows the average annual GDP growth during 2014-2019 for MENA middle income oil importers minus *agcg*. The fifth bar shows the average annual GDP growth during 2014-2019 for Lebanon minus *agcg*.

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25   See Schlegl et al. (2019) for a study on restructurings of debts owed by foreign governments. Multilateral institutions such as the IMF, the World Bank and other regional banks are the most "senior" creditors, meaning their loans get repaid first.

Panel B: Difference in Governance (score)
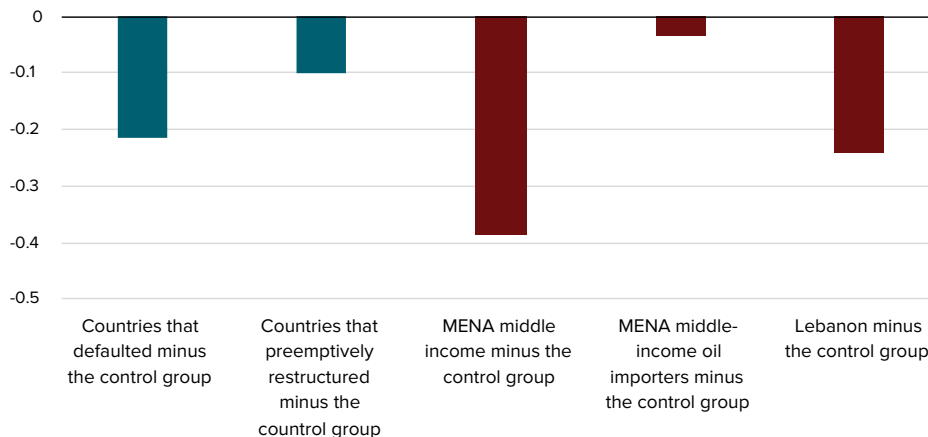
Source: World Bank staff calculation

Note: Governance is simple average between rule of law, regulatory quality and government effectiveness (with a range from -2.5 (worst) to 2.5 (best)).The first bar from the left shows 5-year average governance before a post-default restructuring minus that for non-restructuring periods (referred to as average governance of the control group, or *agocg*. The second bar shows 5-year average governance before a preemptive restructuring minus *agocg*. The third bar shows average governance during 2014-2019 for MENA middle-income countries minus *agocg*. The fourth bar shows average governance during 2014-2019 for MENA middle-income oil importers minus *agocg*. The fifth bar shows average governance during 2014-2019 for Lebanon minus *agocg*.

While both forms of restructurings with private external creditors are costly, preemptive restructurings are less so. They are shorter and most importantly associated with lower output cost than post-default restructurings. Countries that preemptively restructure are able to re-enter borrowing markets sooner than those that default (Asonuma and Trebesch, 2016). To gain further understanding of the extent to which pre-emptive restructurings might be preferable to post-default debt restructuring, this report estimates the impact of such events on both growth and debt. We focus on three years before, the year of the announcement of a restructuring, and three years after the start of a restructuring. For both types of episodes, the estimates are relative to the performance of countries that did not experience a debt restructuring. Details of the analysis are in Appendix A3.

Our analyses show that both types of restructurings are costly in terms of output growth, but preemptive restructurings are less costly than defaults. Panel A of Figure II.7 show before they restructure, debtor countries experience lower growth relative to countries that do not restructure. This is the case for both preemptive and post-default restructurings. However, after the first year of restructuring, growth starts to recover for preemptive restructurings, but remains depressed for post-default restructurings.

In addition, restructurings help slow debt accumulation. Panel B of Figure II.7 shows that during the first two years after a restructuring starts (that is t=1,2), debt growth is significantly lower in both preemptive and post-default restructurings compared to the countries that did not restructure. This could reflect the exclusion of restructuring countries from international debt markets and the reduction in debt granted by creditors during the restructuring negotiations.

FIGURE II.7: Output Growth and Debt Growth around Restructurings

| Panel A: Output Growth around Restructurings | Panel B: External Debt Growth around Restructurings |

Pre-emptive restructurings — Post-default restructurings
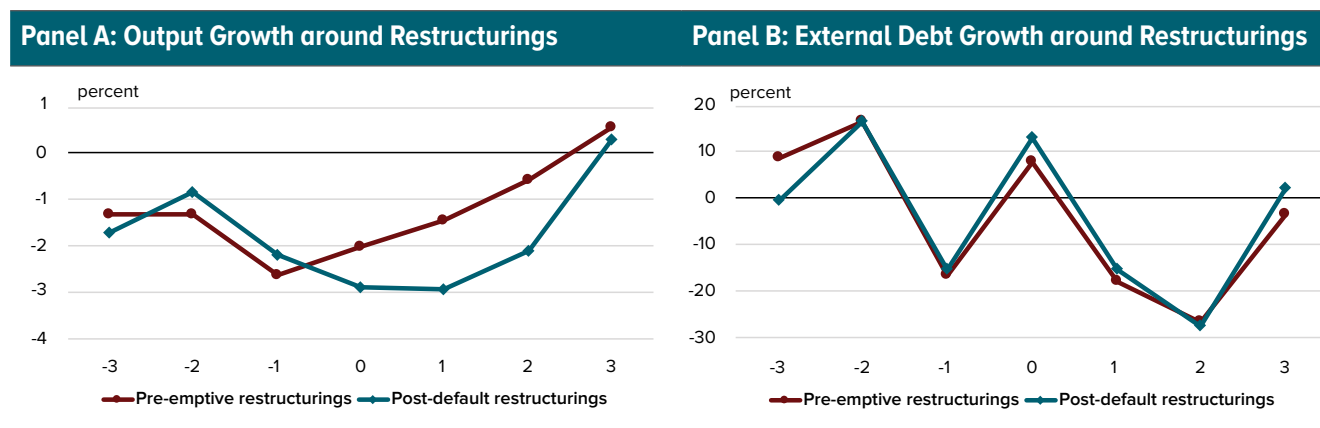
Source: World Bank's staff estimates (see Appendix A3 for details).
Note: Difference-in-difference approach; t=0: onset of a restructuring. t=-3,-2,-1 indicate the years before restructurings; t=1,2,3 indicate the years after a restructuring starts. Data consists of 197 restructurings to private external creditors between 1981 and 2019 and are collected and updated by Asonuma & Trebesch (2016). Panel A: The coefficient at t=-1 is statistically significant at 10% level for preemptive restructurings. The coefficients at t=-1,1,2 are statistically significant at 10% level for post-default restructurings. Panel B: The coefficients at t=1,2 are statistically significant at 10% level for preemptive restructurings. The coefficient at t=2 is statistically significant at 10% level for post-default restructurings.

II.3. How Institutions Shape the Recovery

Economic growth remains the most sustainable way to reduce debt. Boosting economic growth requires deep structural reforms to raise the productivity of the existing workforce and to put idle working-age people in jobs. Many MENA countries that have characteristics associated with ineffective fiscal stimulus, such as high public debt and poor governance, could consider fiscal reforms early in the recovery from the pandemic. Rolling over debt with more favorable terms is an important way for countries to gradually reduce debt. This also requires debt transparency and financial market monitoring. If they are unable to roll over maturing loans, countries risk costly debt restructurings. Our evidence suggests that many MENA countries share certain characteristics with countries that entered costly debt restructurings, namely low growth and poor governance. Institutions can play an important role in mitigating the long-term costs of public debt.

Improvements in governance and transparency also help during the pandemic and when it subsides. Investing in testing, disease surveillance, and data transparency can reduce the economic costs of the pandemic. As the pandemic subsides, effective and transparent pandemic surveillance in the region would help boost demand from domestic and foreign sources—such as the arrival of foreign tourists. Good governance in public investment decisions can raise the economic gains of public investment projects.

Institutional reforms to improve governance and transparency can address the tradeoff between the short-term needs and long-term costs of public debt. They can be implemented with limited fiscal costs. They also hold the promise of boosting long-run growth. Looking forward, institutions might be the key to helping MENA build back better, with or without fiscal consolidation.

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Appendix

Appendix A1: Debt and Output Growth After Natural Disasters

Epidemics are not new to modern societies. According to the Centre for Research on the Epidemiology of Disasters, and its Emergency Events Database (EM-DAT), between 1900 and 2020 the world has had 15,563 natural disasters, of which 1,492 were epidemics, making them the fourth most common natural disaster after floods, storms, and earthquakes (see Figure A1.1).[26] Our objective is to estimate the impact that natural disasters of large magnitude, like the Covid-19 pandemic, have on public debt and GDP growth in developing economies[27]. To achieve this, our empirical strategy is based on a difference-in-difference estimator.

Data

Data on natural disasters are from EM-DAT. The pool of natural disasters included in EM-DAT fulfils at least one of the following outcomes in the country affected: 10 or more people dead, or 100 or more people affected, or a declaration of a state of emergency, or a call for international assistance.

FIGURE A1.1: Natural Disasters 1900-2020
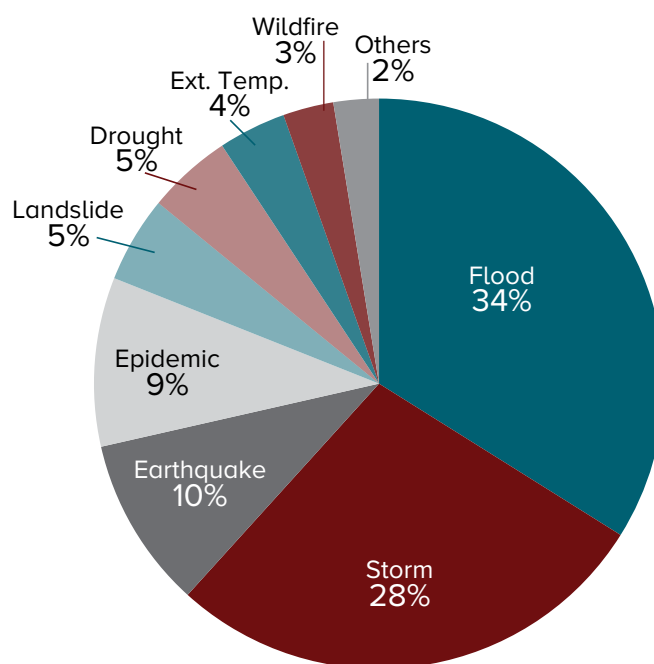
Source: World Bank's staff calculations based on EM-DAT database

Since we are interested in analyzing macroeconomic trends in developing countries, all developed countries (identified by the World Bank's Historical Income Classification in 1987) have been excluded from the analysis. If a country was created after 1987, its classification is based on the income classification the year it was created. The final sample has 142 countries.

Not all disasters generate damages large enough to change the macroeconomic dynamics of a country. To filter events with discernable macroeconomic effects our research weights the magnitude of the damages produced by a disaster by the overall size of the economy of the affected country. More specifically, our econometric analysis focuses on natural disasters of high intensity that generated damages that are equivalent to at least 1 percent of the GDP of the country affected that year (based on the total estimated damages reported by EM-DAT[28]). Using those filters, we end up with 324 natural disasters that occurred in 90 developing countries between 1960 and 2019. They include flood, earthquake, droughts, storm, landslide, volcanic activity, extreme temperature and wildfire.

We rely on two macroeconomic indicators. The first, GDP annual growth, comes from the World Bank's *World Development Indicators*. The second comes from the IMF's *Global Debt Database* (GDD), Central Government Debt.

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26   According to the EM-DAT database, from the 691 catastrophes registered for Middle East and North Africa Region between 1900 and 2020, the most common natural disasters are floods (323 episodes, 46.7 percent of the total), earthquakes (167 episodes, 24.2 percent), storms (72 episodes, 10.4 percent), and epidemics (39 episodes, 5.6 percent).

27   Our question is close to Fomby and others (2013) although their study does not examine debt.

28   According to EM-DAT, this is a value of all damages and economic losses directly or indirectly related to the disaster.

Econometric strategy

To systematically analyze the macroeconomic impacts of natural disasters in developing economies, we rely on a difference-in-difference estimator. This method estimates the effect of a treatment (the onset of a natural disaster) on an outcome (GDP growth and public debt accumulation). This is done by comparing the average change over time of these variables for the treatment group (economies affected by a natural disaster), with the average change over time for the control group (non-affected economies).

The econometric strategy that aims to identify these potential effects is the following difference-in-difference estimator:

$$y_{c,t} = c_0 + \mu_c + \mu_t + \beta_{c,t-n} D_{c,t-n} + \delta GDP_{c,t} + \theta Calamities_{c,t} + \epsilon_{c,t}$$

The subscripts c and t denote countries and event years respectively. $y_{c,t}$ represents the macroeconomic variable of interest (GDP growth, annual percent; Debt growth, annual percent). The inclusion of country fixed effects (μ_c) along with time fixed effects (μ_t) implies that we will be comparing within-country macroeconomic trends of affected economies and non-affected economies during each year in the sample.

$D_{c,t-n}$ is a dummy variable that identifies the year of the onset of a disaster. c_0 represents the constant term, and $\epsilon_{c,t}$ is the error term. β is the coefficient of interest to be estimated, which we allow to vary over the course of the episodes of natural disasters. The subscript n denotes the duration of each episode covering, as mentioned above, seven years around the onset of disasters. Therefore, n ranges from -3 to +3. This setup implies that we are tracing pre-disaster trends as well as post-onset trends, which allows for inferences about whether the differential trends, if any, predate the onset of a natural disaster. Additional controls in the regression include $Calamities_{c,t}$ which is a control for the number of natural disasters during the previous six years that cause damages that cost more than 1 percent of GDP; and in the regression for public debt, $GDP_{c,t}$ which is the annual change in GDP. We clustered the errors at the country level.

Results

Figure II.1 plots the coefficients for the estimated mean differences between countries affected by natural disasters that generated damages of at least 1 percent of their GDP and the contemporaneous control group of non-affected countries for public debt and GDP growth. The double asterisks highlight the coefficient estimates that are statistically significant at the 10 percent level. Both figures analyze the same 324 natural disasters.

Debt growth significantly increases in countries affected by natural disasters that generated damages of at least 1 percent of their GDP, relative to those countries who did not experience such natural disasters (see Figure II.1). GDP growth is higher in the post-disaster period in countries affected by large natural disasters relative to those countries who did not experience them. In the year of the disaster, GDP growth in affected economies is significantly

lower relative to the control group. But GDP growth is 0.9 higher in the first year after the onset of a high intensity natural disaster and 0.83 percentage points higher in the second year in affected counties relative to non-affected countries. In sum, although natural disasters that generated damages of at least 1 percent of a country's GDP cause a strong economic contraction in the year they occur, GDP tends to bounce back the three years following the event, reaching a rate of growth that is, on average, almost one percentage point higher than in non-affected economies.

Appendix A2: Oil Shocks and MENA's Creditworthiness

We adopt the methodology followed by Ready (2018) to decompose oil shocks into supply and demand shocks. This decomposition allows us to examine the impact of both oil supply and demand shocks at daily frequency. Ready (2018) classifies and decomposes three types of oil shocks:

Demand shocks: the residuals of a contemporaneous regression where returns on the global index of oil producing firms are regressed against unexpected changes in the log of VIX index (that is, the uncertainty index).

Supply shocks: the residuals of a contemporaneous regression where changes in oil prices are regressed against demand shocks and unexpected changes in the VIX index.

Risk shocks: After obtaining oil supply and demand shocks, we adopt a conventual model setup in the literature to examine the impact of oil shocks on sovereign default risk, measured by credit default swaps (CDS).

$$\Delta CDS_{i,t} = \beta_{0,i} + \beta_1 \Delta CDS_{i,t-1} + \sum_{j=1}^{n} \beta_{2,j} DOMESTIC_{j,i,t-1} + \sum_{j=1}^{m} \beta_{3,j} GLOBAL_{j,t-1} +$$

$$\gamma Demand_{t-1} + \delta Supply_{t-1} + \varepsilon_{i,t}$$

where $\Delta CDS_{i,t}$ is the daily change in sovereign CDS spread of countries, denoted by i over days, denoted by t. $DOMESTIC_{j,i,t-1}$ contains the set of domestic control variables: the daily return on each country's stock market (St. Return), and the daily change in the exchange rate of each country's currency against the U.S. dollar (ΔFX Rate). $GLOBAL_{j,t-1}$ is the set of global control variables: the daily change in the Chicago Board Options Exchange volatility index (ΔVIX), the daily S&P 500 index return (S&P500 Return), the daily change in the German 10-year Bond yield (ΔGerman Bond), the daily change in the effective Federal Funds rate (ΔFedFund), the daily change in the European Repo rate (ΔEuro. Repo), and the daily change in the 10-year U.S. Treasury yield (ΔTreasury). Demand$_{t-1}$ is the one-day lagged shock to the demand side of oil, and Supply$_{t-1}$ is the one-day lagged shock to the supply side of oil, both shocks constructed as in Ready (2018). Export$_i$ is an invariant dummy variable that takes the value of 1 if a country is net oil-exporter at the beginning of the sample period and 0 otherwise. Year2020 is a dummy variable that takes the value one in days of year 2020 and zero otherwise. The sample period is from January 2016 to October 2020. Countries included in the analysis are MENA oil exporters Algeria, Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates (Abu Dhabi and Dubai); and oil importers Egypt, Morocco, and Tunisia. The impact of oil shocks may differ based on the energy status of a country (Cashin et al., 2014; Rafiq et al., 2016). Table A2.1 shows the baseline results for our analysis.

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TABLE A2.1: Impacts of Global Factors and Oil Shocks on MENA's Credit Default Swaps

Dependent variable: $\Delta CDSi,t$	Estimated Coefficients
$\Delta CDSi_{t-1}$	0.0133
	(0.0101)
St. Return$_{i,t-1}$	0.0707
	(0.480)
ΔFX Rate$_{i,t-1}$	-46.20
	(60.89)
ΔVIX$_{t-1}$	-0.158*
	(0.0848)
S&P500 Return$_{t-1}$	-0.492***
	(0.165)
ΔGerman Bond$_{t-1}$	9.513**
	(3.774)
ΔFedFund$_{t-1}$	-2.138
	(2.399)
ΔEuro. Repo$_{t-1}$	70.70
	(72.48)
ΔTreasury$_{t-1}$	0.141
	(3.081)
Demand$_{t-1}$	-0.158
	(0.163)
Supply$_{t-1}$	0.00538
	(0.110)
Supply$_{t-1}$ * Export$_i$	-0.281**
	(0.137)
Demand$_{t-1}$ * Export$_i$	0.147
	(0.197)
Year2020	1.103***
	(0.343)
Supply$_{t-1}$ * Year2020	-0.318**
	(0.129)
Demand$_{t-1}$* Year2020	0.518**
	(0.203)
Supply$_{t-1}$ * Export$_i$*Year2020	0.369**
	(0.163)
Demand$_{t-1}$ * Export$_i$*Year2020	-0.985***
	(0.247)
Demand$_{t-1}$ * Export$_i$*Year2020	-0.477***
	(0.101)

Demand$_{t-1}$ * Export$_i$	-0.010
	(0.123)
Supply$_{t-1}$ * Export$_i$*Year2020	-0.224***
	(0.56)
Supply$_{t-1}$ * Export$_i$	-0.276***
	(0.083)
Demand$_{t-1}$ * Import$_i$*Year2020	0.360***
	(0.129)
Demand$_{t-1}$ * Import$_i$*Year2020	-0.312***
	(0.068)
Constant	-0.183
	(0.253)
Country Effects	Yes
Year Effects	Yes
Observations	9,999
R-squared	0.012
Number of Countries	12

Appendix A3. Debt and Output Growth Around Restructurings

To understand the impact of restructurings on external debt and GDP growth in developing economies, we studied the restructuring dataset constructed first by Asonuma and Trebesch (2016).

Data on restructurings

Asonuma and Trebesch (2016) provide information on the occurrence and duration of 204 restructurings globally starting in 1978, 197 of which have been completed. The cases are further differentiated into two categories: preemptive restructurings and post-default restructurings. In preemptive restructurings, governments renegotiate with lenders while they are still current on their loan payments. In post-default restructurings, governments unilaterally default, then start to renegotiate their debt. Among the 197 finished restructurings, 81 were preemptive and 116 were post-default. Many countries have multiple restructurings. Among 74 countries that had completed restructurings, five are from MENA region.

To analyze the macroeconomic impact of restructurings before, during and after the restructurings started, we apply an event study approach, transforming calendar years into event years. We focus on the three years before, the year of the onset, and the three years after a restructuring (analyzing seven years in total). In this new timeline, year zero corresponds to the year a restructuring began. As in Appendix A1, our sample is all countries not classified as a high-Income in 1987 in the World Bank's Historical Income Classification dataset.

Data on GDP growth and external debt

The two outcome variables are annual growth in real GDP and the annual growth rate of the external debt in U.S. dollars. Both are from the IMF's World Economic Outlook (October 2020), with data starting from 1981. By focusing on the change of external debt level, the difference-in-difference estimator can show the differential level of acceleration of debt accumulation between affected and non-affected countries in the years before, during and after restructuring started.

Econometric strategy

To systematically analyze the macroeconomic impacts of restructurings in developing economies, we rely on a difference-in-difference estimator (similar to the approach Appendix A1). The baseline econometric strategy that aims to identify these potential effects is the following difference-in-difference estimator:

$$y_{c,t} = c_0 + \mu_c + \mu_t + \beta R + \sum_{n=-3}^{-1} \beta_n B_n + \sum_{m=1}^{3} \beta_m A_m + \epsilon_{c,t}$$

where $y_{c,t}$ represents the macroeconomic variable of interest (annual growth of real GDP and annual growth of debt level) of country c at year t; μ_c is the country fixed effects; μ_t is year fixed effects; R is a dummy variable that takes the value of 1 for the onset of restructuring years, that is, the first year of the restructuring, and 0 otherwise. n is the number of years before the first year of restructuring (going from 3 years before the default (-3,-2,-1). B_n is a dummy variable that takes a value of 1 if it is n year before the restructuring, and 0 otherwise. m is the number of years after the first year of restructuring (going from 1 to 3 years after the first year of restructuring (1,2,3). A_m is a dummy variable that takes a value of 1 if it is m years after the onset of restructuring, and 0 otherwise. The coefficients of interests are β (what happens when restructuring starts); β_n (n=1 to 3) what happens 3 years before the restructuring; β_m (m=1 to 3) what happens after restructuring starts.

To control for overlapping events, we have added frequency indicators in all regressions. For each of the seven years on the timeline, there are three different counts: (1) how many windows of three years before a restructuring overlap with that specific year; (2) how many events starts on the same year; and (3) how many windows of three years after a restructuring overlap with that specific year. These construct three counts for each year on the timeline of an event, resulting in a total of 21 variables.

In an extension, to see if the macroeconomics respond differently to preemptive restructurings and post-default restructurings, we extended the baseline regression with a different set of dummies between the two categories.

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Results

Restructurings are costly to output growth, and even costlier in post-default restructurings. In addition, restructurings seem to slow debt growth. Panel A of Figure II.7 shows that countries experience lower growth relative to the baseline in the years preceding restructurings—whether preemptive or post-default. However, after the first year of restructuring, growth starts to recover for preemptive restructuring, but remains depressed for post-default restructurings. Panel B of Figure II.7 shows that during the first two years after the restructuring starts, debt growth is significantly lower in both preemptive and post-default cases, relative to countries without restructurings. This could reflect the defaulting countries' exclusion from the international debt market and the reduction in debt granted by creditors during restructuring negotiations.

Data Appendix

APPENDIX TABLE B1: World Bank's Growth, Current Account and Fiscal Account Forecasts

	Real GDP Growth *percent*				Real GDP per capita Growth *percent*				Current Account Balance *percent of GDP*				Fiscal Balance *percent of GDP*			
	2019	2020e	2021f	2022f	2019	2020e	2021f	2022f	2019	2020e	2021f	2022f	2019	2020e	2021f	2022f
MENA	0.0	-3.8	2.2	3.5	-1.3	-5.3	0.6	1.9	2.1	-3.8	-0.9	0.7	-4.2	-9.4	-6.6	-4.6
Developing MENA	-0.8	-2.8	2.3	3.7	-1.6	-4.1	0.6	2.1	-2.1	-4.6	-4.6	-3.5	-4.7	-7.6	-7.5	-6.4
Oil Exporters	-0.8	-4.2	2.3	3.4	-2.1	-6.0	0.5	1.7	3.8	-3.7	0.1	2.0	-3.6	-9.8	-6.3	-3.9
GCC	0.7	-4.9	2.2	3.3	-1.5	-6.3	0.6	1.9	6.2	-2.9	2.4	4.4	-3.6	-11.3	-5.7	-3.0
Qatar	0.8	-3.2	3.0	4.1	-1.0	-4.8	1.3	2.4	2.4	-2.5	1.7	2.7	1.0	-3.6	-2.3	2.7
United Arab Emirates	1.7	-6.3	1.2	2.5	0.2	-7.4	0.2	1.5	6.5	-1.5	2.9	4.9	-1.0	-8.0	-0.5	1.7
Kuwait	0.4	-5.4	2.4	3.6	-6.0	-6.2	0.8	2.2	16.4	-2.7	8.2	11.7	-9.8	-26.2	-22.6	-19.3
Bahrain	2.0	-5.4	3.3	3.2	-2.5	-8.8	0.6	1.1	-2.1	-9.5	-6.9	-4.6	-9.3	-17.5	-11.6	-9.4
Saudi Arabia	0.3	-4.1	2.4	3.3	-1.3	-5.6	0.9	1.9	6.6	-2.7	2.6	4.5	-4.2	-11.3	-5.6	-3.0
Oman	-0.8	-6.3	2.5	6.5	-3.7	-8.7	0.2	4.5	-5.5	-10.4	-8.1	-5.2	-9.0	-17.4	-6.8	-4.6
Developing Oil Exporters	-3.1	-3.1	2.4	3.6	-4.2	-5.1	0.6	1.8	0.0	-5.0	-4.9	-3.2	-3.6	-7.5	-7.6	-6.1
Iraq	2.4	-11.9	1.9	8.4	1.5	-14.9	-1.6	4.7	6.1	-12.9	-11.3	-5.6	1.4	-4.4	-5.4	-1.0
Iran, Islamic Rep.	-6.8	1.7	2.1	2.2	-7.9	0.5	1.0	1.1	0.6	-0.8	0.8	1.1	-3.7	-6.3	-6.7	-7.0
Algeria	0.8	-5.5	3.6	2.3	-1.2	-6.9	2.1	0.9	-10.0	-14.4	-12.1	-11.4	-9.6	-16.4	-12.1	-10.0
Developing Oil Importers	3.2	-2.2	2.2	4.0	1.7	-3.0	0.5	2.5	-5.6	-3.9	-4.3	-3.8	-6.6	-7.7	-7.5	-6.7
Lebanon	-6.7	-20.3	-9.5	..	-6.8	-19.9	-8.8	..	-21.2	-11.0	-6.7	..	-10.5	-4.9	-2.8	..
Jordan	2.0	-1.8	1.4	2.2	0.5	-2.7	0.8	1.9	-2.1	-7.2	-7.0	-6.0	-4.6	-6.7	-6.4	-5.4
Djibouti	7.8	0.5	5.5	6.0	6.1	-0.9	4.0	4.5	14.9	20.1	-1.5	-0.8	-0.5	-1.7	-1.9	-1.7
West Bank and Gaza	1.4	-11.5	3.5	3.2	-1.2	-13.7	0.9	0.4	-10.4	-6.5	-8.1	-8.3	-4.5	-7.6	-6.4	-5.7
Morocco	2.5	-7.0	4.2	3.7	1.2	-8.1	3.0	2.6	-4.1	-3.0	-3.5	-3.9	-3.6	-7.7	-6.5	-6.4
Tunisia	1.0	-8.8	4.0	2.6	-0.1	-9.8	3.0	1.7	-8.5	-6.8	-9.2	-9.0	-3.1	-10.0	-8.6	-6.8
Egypt, Arab Rep.	5.6	3.6	2.3	4.5	3.5	1.6	0.4	2.6	-3.6	-3.0	-3.4	-2.8	-8.1	-8.0	-8.2	-7.0
Memorandum																
Libya	2.5	-31.3	66.7	..	1.0	-32.2	64.6	..	11.6	-46.4	-6.2	..	1.7	-64.4	-9.0	..

Sources: Authors' calculations based on data from World Bank Macro and Poverty Outlooks, April 2021.
Note: e=estimate, f=forecast and NP=not presented. GDP is at market prices. Data are rounded up to a single digit. Data for Egypt correspond to its fiscal year (July-June). Libya, Syria and Yemen are not included in the regional and sub-regional averages due to lack of data. Lebanon and Libya are not forecasted beyond 2021, due to high uncertainty.

APPENDIX TABLE B2: Magnitude of Revisions to Macro Forecasts by the World Bank

Panel A: Between April 2021 and October 2019						
	Real GDP growth (April 2021 - October 2019)		Current Account Balance (April 2021 - October 2019)		Fiscal Balance (April 2021 - October 2019)	
	2020e	2021f	2020e	2021f	2020e	2021f
MENA	**-6.4**	**-0.6**	**-4.6**	**-1.7**	**-4.8**	**-2.3**
Developing MENA	**-5.8**	**-0.8**	**-0.3**	**-0.4**	**-1.7**	**-1.8**
Oil Exporters	**-6.3**	**-0.1**	**-6.2**	**-2.3**	**-5.7**	**-2.5**
GCC	**-7.1**	**-0.5**	**-8.6**	**-3.7**	**-8.0**	**-2.9**
Qatar	-6.2	-0.2	-7.9	-3.0	-5.6	-5.0
United Arab Emirates	-8.9	-1.8	-7.6	-2.8	-7.0	0.1
Kuwait	-7.9	-0.4	-11.3	-0.7	-20.4	-16.9
Bahrain	-7.5	1.0	-6.1	-3.2	-9.8	-4.0
Saudi Arabia	-5.7	0.2	-9.8	-5.3	-6.8	-1.5
Oman	-9.8	-1.5	-1.4	-1.1	-8.0	0.2
Developing Oil Exporters	**-5.0**	**0.7**	**-1.6**	**-1.3**	**-2.1**	**-2.1**
Iraq	-16.9	-0.8	-8.9	-7.2	-1.0	-2.3
Iran, Islamic Rep.	1.6	1.2	-0.3	1.1	-0.4	-0.7
Algeria	-7.4	1.4	-3.8	0.4	-9.2	-4.9
Developing Oil Importers	**-6.6**	**-2.4**	**1.5**	**0.9**	**-1.2**	**-1.3**
Lebanon	-20.6	-9.9	10.4	14.6	4.9	7.0
Jordan	-4.1	-1.1	-0.9	-0.6	-4.3	-4.4
Djibouti	-6.9	-2.5	1.2	-23.9	-1.1	-2.7
West Bank and Gaza	-10.4	3.9	3.4	1.6	4.2	5.0
Morocco	-10.5	0.7	0.7	-0.2	-4.2	-3.1
Tunisia	-11.0	1.4	3.9	0.9	-5.0	-3.9
Egypt, Arab Rep.	-2.2	-3.7	-0.4	-0.8	-0.4	-1.2

Sources: Authors' calculations based on data from World Bank Macro and Poverty Outlook.
Note: Libya, Syria and Yemen are not included in the regional and sub-regional averages due to lack of reliable data. The changes are in percentage points. Lebanon is not forecasted beyond 2021.

Panel B: Between April 2021 and October 2020									
	Real GDP growth (April 2021 - October 2020)			Current Account Balance (April 2021 - October 2020)			Fiscal Balance (April 2021 - October 2020)		
	2020e	2021f	2022f	2020e	2021f	2022f	2020e	2021f	2022f
MENA	**1.3**	**0.3**	**0.4**	**1.1**	**2.3**	**2.3**	**0.7**	**1.3**	**1.1**
Developing MENA	**1.9**	**0.2**	**0.0**	**1.1**	**-0.1**	**0.1**	**2.0**	**1.1**	**0.9**
Oil Exporters	**1.6**	**0.4**	**0.6**	**0.9**	**2.9**	**2.9**	**0.8**	**1.6**	**1.6**
GCC	**0.8**	**0.4**	**0.7**	**1.1**	**4.2**	**3.8**	**-0.8**	**1.3**	**1.0**
Qatar	-1.2	0.0	1.1	-1.5	0.8	0.8	0.0	1.5	1.4
United Arab Emirates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kuwait	2.5	1.4	0.7	2.5	9.1	9.5	1.5	0.4	-3.9
Bahrain	-0.2	1.1	0.7	-1.6	-0.4	0.8	-4.1	-1.6	-0.7
Saudi Arabia	1.3	0.4	1.1	2.1	7.0	6.2	-1.3	2.2	2.7
Oman	3.1	2.0	-1.4	4.0	4.6	1.0	0.7	9.8	6.3
Developing Oil Exporters	**3.0**	**0.3**	**0.5**	**0.7**	**-0.5**	**0.1**	**3.2**	**1.9**	**2.1**
Iraq	-2.4	-0.1	1.1	-0.7	-3.3	-1.1	12.4	8.5	9.4
Iran, Islamic Rep.	6.2	0.6	0.5	-0.2	0.2	0.4	0.3	-0.1	-0.1
Algeria	1.1	-0.2	0.2	-1.0	3.6	3.2	-0.6	0.9	-0.4
Developing Oil Importers	**0.0**	**0.1**	**-0.6**	**1.7**	**0.4**	**0.2**	**0.5**	**0.1**	**-0.7**
Lebanon	-1.1	3.7	..	-6.6	-11.1	..	9.6	12.0	..
Jordan	3.7	-2.3	0.0	0.4	-0.6	-0.8	1.5	-0.8	-0.5
Djibouti	1.5	-1.6	-1.2	4.2	-17.8	-17.4	0.6	1.1	0.5
West Bank and Gaza	-3.6	1.2	0.8	2.8	2.0	1.8	-3.2	-2.1	-1.6
Morocco	-0.7	0.9	0.2	6.9	3.0	1.3	-0.1	-1.2	-2.2
Tunisia	0.4	-1.9	0.7	0.3	-2.9	-2.6	-1.9	-3.0	-2.1
Egypt, Arab Rep.	0.1	-0.1	-1.3	1.1	1.0	0.5	0.2	0.2	-0.1

Sources: Authors' calculations based on data from World Bank Macro and Poverty Outlook.
Note: Libya, Syria and Yemen are not included in the regional and sub-regional averages due to lack of reliable data. The changes are in percentage points. Lebanon is not forecasted beyond 2021.

APPENDIX TABLE B3: Overview of MENA's Debt

		Public Debt		Public Domestic Debt		Public External Debt		External Debt to Official Debtor	Public & Private External Debt		Interest Payments for Public Debt		Moody's Rating: Foreign Currency Long Term Debt	
		World Bank's MPO		World Bank's MPO		World Bank's MPO		World Bank's IDS	IMF's WEO		World Bank's MPO			
		2019	2020	2019	2020	2019	2020	2019	2019	2020	2019	2020	1/1/2020	1/21/2021
Gulf Cooperation Council	Qatar	57	64.1						131.4	161.3	1.6	1.8	Aa3	Aa3
	United Arab Emirates	20.1	25						76.7	97.5	0.3	0.3	Aa2	Aa2
	Kuwait	20.3	22.5						48.8	64.5	0.3	0.8	Aa2	A1
	Bahrain	102.3	132.4						226.4	254.6	4.5	4.9	B2u	B2u
	Saudi Arabia	23.1	32.8						23.2	29.9	0.8	1.2	A1	A1
	Oman	60.1	81.2						92.4	121.5	2.3	2.8	Ba1	Ba3
Other Oil Exporters	Libya	48.8	137.1											
	Iraq	48.2	69.3	23.3	34.4	24.9	35		30.9	40.5	1.2	1.1	Caa1	Caa1
	Iran	47.9	50.3					0.1	1.7	1.7	0.7	1		
	Algeria	45.6	51.4	45.0	50.8	0.6	0.6	0.8	2.3	1.9	0.6	0.6		
	Yemen	52.7		22.7		30		27.4	24.3	25.6	3.8			
Oil Importers	Lebanon	171	186.7	107.6	87.8	63.4	99	3.6	197.8	482.8	10	2.2	Caa2	C
	Jordan	97.4	109	58.3	64.1	39	44.9	19.0	68	77.6	3.5	4.1	B1	B1
	Djibouti	66.9	70.2	0.4	0.2	66.4	69.9	64.4	66	70.2	1.3	1.2		
	West Bank and Gaza	16.3	24.2	9.2	15.4	7.1	8.8				0.3	0.4		
	Morocco	64.9	77.8	50.9	58.4	14	19.4	19.8	33.1	39.2	2.3	2.5	Ba1	Ba1
	Tunisia	71.8	87.2	22.3	27.9	49.5	59.3	41.1	99.4	97.2	2.7	3.8	B2	B2
	Egypt	90.2	87.5	72.5	68.6	17.8	19	19.0	36	34.4	10	9.8	B2	B2
	World Median	51.9	63.2	19.6	22.7	26.8	30.3	20.0	50.5	59.2	1.6	1.9		
	High-income median	56.9	65.3	26.6	34.9	19.1	23.3		88.5	101.7	2.1	2.3		
	Middle-income median	51.5	64.9	20.0	23.0	27.4	32.4	19.0	47.3	54.3	1.8	2.1		
	Low-income median	52.5	50.5	17.6	18.7	26.8	29.7	24.4	31.4	32.1	1.1	1.3		

Source: World Bank's Macro and Poverty Outlook (April 2021), World Bank's International Debt Statistics, IMF's World Economic Outlook
Note: Debt and interest payments are in percent of GDP. Official external debt includes debt held by international organizations (multilateral loans) and by foreign governments (bilateral loans).

APPENDIX TABLE B4: Characteristics of MENA Economies

|		Public Debt (% of GDP)		Output Gap (percentage points)	Governance (score)	Inflation (percent)		Exchange Rate Arrangement
		World Bank's MPO		World Bank's MPO	World Bank	World Bank's MPO		IMF
		2019	2020	2020	2019	2019	2020	2019
Gulf Cooperation Council	Qatar	57	64.1	-4.9	0.7	-0.9	-2.6	Conventional peg
	United Arab Emirates	20.1	25	-9	1.1	-1.9	-1.6	Conventional peg
	Kuwait	20.3	22.5	-5.5	0.1	1.1	0.9	Conventional peg
	Bahrain	102.3	132.4	-8.2	0.4	1	-2.6	Conventional peg
	Saudi Arabia	23.1	32.8	-5.6	0.1	-1.2	3.4	Conventional peg
	Oman	60.1	81.2	-8.3	0.4	0.1	-1	Conventional peg
Other Oil Exporters	Libya	48.8	137.1		-2	-3	-2	Conventional peg
	Iraq	48.2	69.3	-18.3	-1.4	-0.2	0.6	Conventional peg
	Iran	47.9	50.3	1.1	-0.9	41.3	36.9	Stabilized arrangement
	Algeria	45.6	51.4	-7.5	-0.9	2.3	2.1	Crawl-like arrangement
	Yemen	52.7		2.9	-1.9	10	26.4	Stabilized arrangement
Oil Importers	Lebanon	171	186.7	-19.1	-0.7	2.9	84.3	Stabilized arrangement
	Jordan	97.4	109	-3.9	0.1	0.8	0.3	Conventional peg
	Djibouti	66.9	70.2	-6.7	-0.8	3.3	1.8	Currency board
	West Bank and Gaza	16.3	24.2	-14.8	.	0.8	-0.7	
	Morocco	64.9	77.8	-10.1	-0.2	0.2	0.7	Stabilized arrangement
	Tunisia	71.8	87.2	-10.4	-0.2	6.7	5.6	Crawl-like arrangement
	Egypt	90.2	87.5	-1.2	-0.6	13.9	5.7	Stabilized arrangement
	World Median	51.9	63.2	-6.7	-0.1	2.8	3	
	High-income median	56.9	65.3	-8.6	1.1	1.1	1.5	
	Middle-income median	51.5	64.9	-7.3	-0.4	2.8	2.6	
	Low-income median	52.5	50.5	-4.1	-0.4	3.1	5.9	

Sources: World Bank, Macro Poverty Outlook (October 2020) and World Governance Indicators; International Monetary Fund, Annual Report on Exchange Arrangements and Exchange Restrictions.
Note: Output gap = growth in 2020 minus average growth from 2015 through 2019); Governance is the average of Regulatory Quality, Government Effectiveness and Rule of Law. A lower score represents lower governance quality.

APPENDIX TABLE B5: Public Debt Reporting in MENA

	Algeria	Bahrain	Djibouti	Egypt Arab Rep.	Iran Islamic Rep.	Iraq	Jordan	Kuwait	Lebanon	Libya	Morocco	Oman	Qatar	Saudi Arabia	Syria	Tunisia	United Arab Emirates	West Bank and Gaza	Yemen
Central government	√	√	√	√	×	√	√	√	√	√	√	√	√	√		√	√	√	
State and local government	n/a		√	√	×	√	√	n/a			√	n/a	n/a	n/a		n/a	√	×	×
Other elements of the general government	×	√	×	√				×								√	×	×	
o/w social security fund	n/a	√	×	√			√	×								√	×	n/a	
o/w extra budgetary funds	×	√	×	n/a				×						×		√	×		×
Guarantees (to other public and private sector, including to SOEs)	×	×	√	√		√	√			√	√	×	×	×		√	√	×	n/a
Central bank (borrowed on behalf of the government)	n/a		n/a		√	√	×	√		n/a	√			n/a		√		n/a	
Non-guaranteed SOE debt	×	×	×	×	×						×	×	×	×		√	×	n/a	n/a

Source: World Bank staff.
Note: Table follows the public debt reporting template of World Bank-IMF's Debt Sustainability Framework (see IMF, 2017). √ indicates the country reports the type of debt (for both domestic and external debts); × indicates the country has the type of debt but does not report it; n/a = not applicable and indicates that the country might not have this type of debt; blank cells indicate that World Bank economists do not have information regarding whether the country has the type of debt but does not report it, or that the country does not have the type of debt, or that the debt might be included in total government debt. Debt reporting is as of 2020. Red cells indicate changes between 2019 and 2020
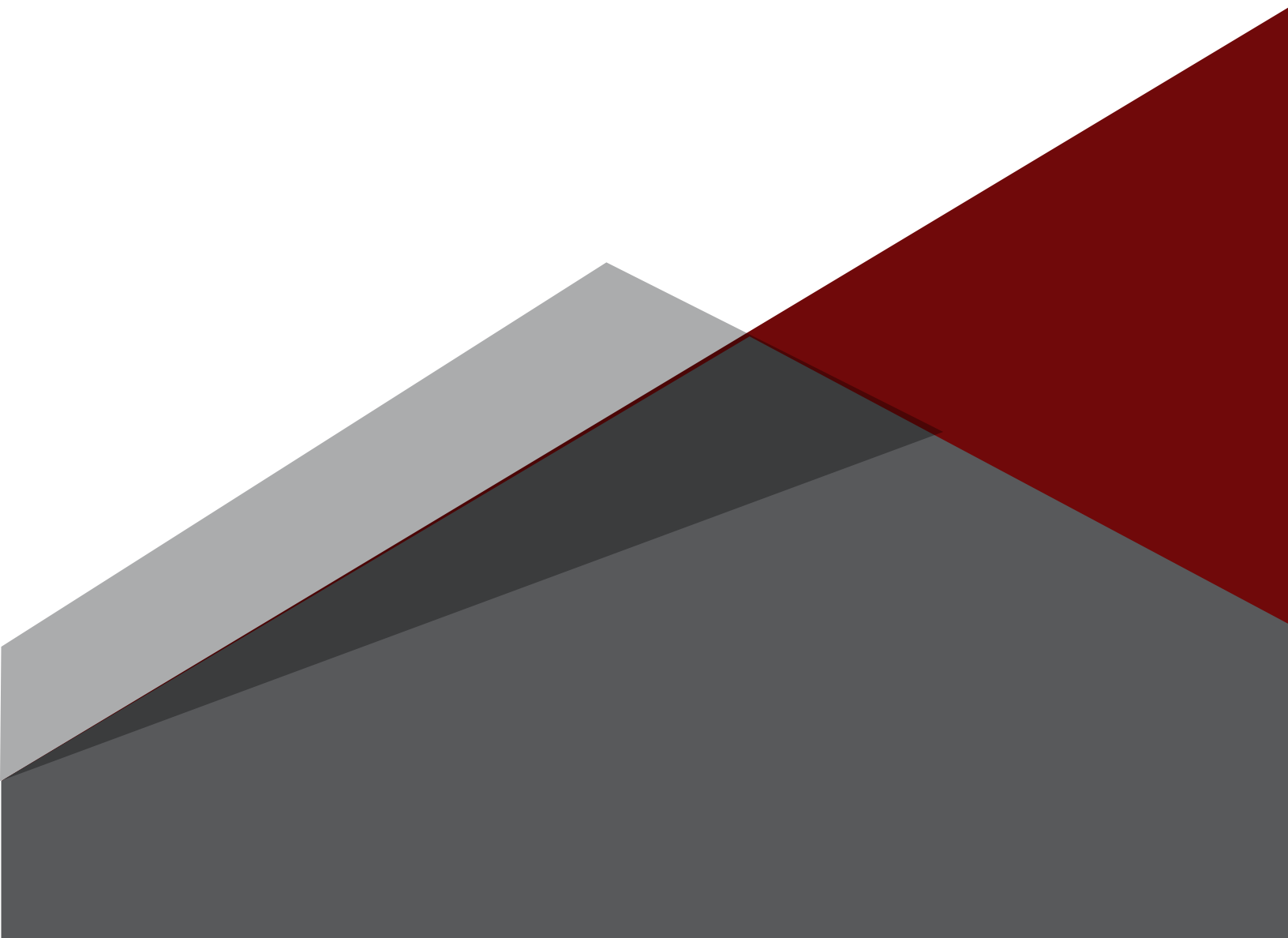
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