CONFLICT AND DEBT IN THE MIDDLE EAST AND NORTH AFRICA

Roberta Gatti, Federico Bennett, Hoda Assem,
Rana Lotfi, Gianluca Mele, Ilias Suvanov, Asif M. Islam

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Abbreviations

%	Percent		NA	Not Available
ACAPS	Assessment Capacities Project		No.	Number
ACLED	Armed Conflict Location and Event Data Project		Nov	November
AEIR	Average Effective Interest Rate		NP	Not Presented
Apr	April		OAG	Official Airline Guide
Avg	Average		OAT€i	Fungible Treasury Bonds index to the Euro Zone consumer price index (Obligations Assimilables du Trésor indexée sur l'indice des prix à la consommation de la zone euro)
bps	Basis points			
CDS	Credit Default Swap			
COVID	Coronavirus disease of 2019			
COVID-19	Coronavirus disease of 2019		OATi	Fungible Treasury Bonds index to the French consumer price index (Obligations Assimilables du Trésor indexée sur l'indice des prix à la consommation en France)
CPI	Consumer Price Index			
e	Estimated			
EA-19	Euro Area comprising of 19 countries			
EDP	Excessive Deficit Procedure		Oct	October
EGP	Egyptian Pound		OECD	Organisation for Economic Co-operation and Development
EMBI	Emerging Markets Bond Index			
EMDE	Emerging Markets and Developing Economies		OLS	Ordinary Least Squares
EU	European Union		OPEC	Organization of the Petroleum Exporting Countries
EU-27	European Union comprising of 27 countries			
f	Forecast		OPEC+	OPEC and other oil-producing countries
FCS	Fragile and Conflict-Affected Situations		PA	Palestinian Authority
FCU	Foreign Currency Units		PCBS	Palestinian Central Bureau of Statistics
FE	Fixed Effects		PMI	Purchasing Managers' Index
ft	Foot (unit of measurement)		p.p.	Percentage Points
FX	Foreign Exchange		PPP$	Purchasing Power Parity Dollars
FY	Fiscal Year		S&P	Standard & Poor
GCC	Gulf Cooperation Council		SAR	Synthetic Aperture Radar
GDP	Gross Domestic Product		SDGT	Specially Designated Global Terrorist
HIC	High Income Countries		SFA	Stock Flow Adjustments
ICRC	International Committee of the Red Cross		SOEs	State-Owned Enterprises
ICT	Information and Communications Technology		SRDSF	the Sovereign Risk and Debt Sustainability Framework
IDPs	Internally Displaced Persons			
IMF	International Monetary Fund		SWF	Sovereign Wealth Funds
IPC	Integrated Food Security Phase Classification		TEUs	Twenty-foot Equivalent Unit
IPSOS	Institut Public de Sondage d'Opinion Secteur		U.S.	United States of America
IRG	Internationally Recognized Government		UAE	United Arab Emirates
IQR	Interquartile Range		UN	United Nations
ITC	International Trade Center		UNCTAD	United Nations Conference on Trade and Development
JCPOA	Joint Comprehensive Plan of Action (Iran nuclear deal)			
			UNDP	United Nations Development Programme
LCU	Local Currency Units		US$	United States Dollar
MENA	Middle East and North Africa		USAID	United States Aid (?)
MMBtu	Million British thermal units		VAT	Value Added Tax
MSC Cruises	Mediterranean Shipping Company Cruises		WASH	Water, Sanitation and Hygiene
MSCI	Morgan Stanley Capital International		WFP	World Food Program
MW	Mega-Watts		WHO	World Health Organization
			YER	Yemeni Riyal
			y/y	Year-on-year
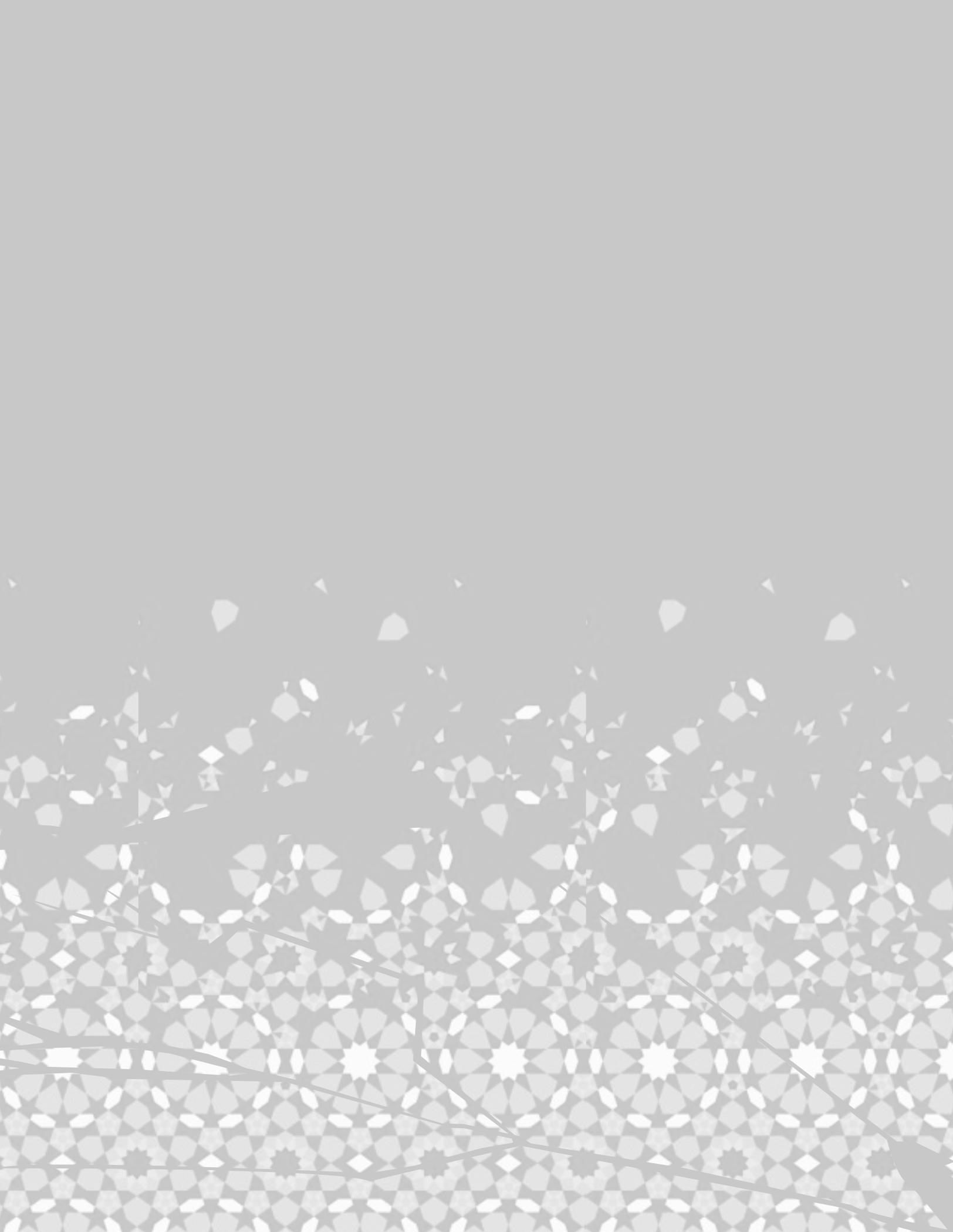
CHAPTER I   INTRODUCTION AND OVERVIEW OF FINDINGS

The conflict in the Middle East and North Africa (MENA) region has resulted in a massive loss of life, unprecedented destruction of infrastructure and forced displacement in the Gaza Strip. According to the recent Interim Damage Assessment, tens of thousands of lives have been lost, of which the majority are women and children.[1] About 1.7 million people, 75 percent of the population of Gaza, are internally displaced. A devastating humanitarian crisis has unfolded with widespread food and water insecurity. Nearly every resident of Gaza now lives in poverty. Famine is imminent. At least one in four Gazans is experiencing catastrophic hunger. Projections indicate that parts of northern Gaza are likely to be classified in the Integrated Food Security Phase Classification (IPC) as Phase 5 (Famine) in the coming months.[2] Families are running out of ways to cope . Hunger and famine will have devastating consequences on the future of the children in Gaza. In the West Bank, restrictions on movement of people have been tightened, affecting daily life and livelihoods while the effectiveness of social protection programs are hampered by severely limited fiscal capacity, leading to deteriorating conditions. The conflict will leave a lasting impact beyond any economic assessment.[3] The magnitude of the conflict's regional and global impact is still unfolding and will depend on whether the conflict expands and on the resilience of neighboring economies.

The conflict in the Middle East is taking place in a global economy that is in its third year of a growth deceleration, following the recovery from the COVID pandemic. Emerging Market and Developing Economies (EMDE's), excluding MENA, are expected to grow around 4.4 percent in 2023 and 3.9 percent in 2024, while inflation and oil prices trend downward. After muted growth in 2023, GDP in the MENA region is forecast to grow 2.7 percent in 2024. MENA oil exporters and importers will grow at similar rates. The conflict in the Middle East has increased uncertainty regionally, at the same time when existing issues—especially a rising debt burden—have curtailed the ability of many countries in the region to navigate shocks. On average, over the past half century, armed conflict has been associated with slowing growth and rising debt; the same could happen in the Middle East if the current situation were to escalate.

In addition to examining the economic outlook for the region, this MENA Economic Update unpacks one of the key economic vulnerabilities in the region—the dynamics of public debt. The findings paint a complex, at times somber, picture. Oil importers in the MENA region are grappling with high debt—with limited prospects of either growing out of it or even inflating it away. This is largely due to the contributions to rising debt stocks of exchange rate fluctuations and extrabudgetary factors—often called stock-flow adjustments (SFAs). Because SFAs can be sizeable and hidden, they play a significant role in impairing debt transparency, making it hard to gauge the actual drivers behind increasing debt stocks.

Preventing uncertainty is hard, but preparing for it is possible. Among others, this report highlights the need to address debt transparency. Keeping primary balances in check is important, but only to the extent that they capture the true state of government finances—which they may not if spending is off-budget. Hence the need to properly account for extrabudgetary items.

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1 Gaza Strip Interim Damage Assessment, April 2024 (https://thedocs.worldbank.org/en/doc/14e309cd34e04e40b90eb19afa7b5d15-0280012024/original/Gaza-Interim-Damage-Assessment-032924-Final.pdf, accessed on April 2, 2024).

2 https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Gaza_Strip_Acute_Food_Insecurity_Feb_July2024_Special_Brief.pdf.

3 The MENA Economic Update covers economies in the MENA region and does not discuss developments in Israel.

The tale of two MENAs ends

Low growth afflicted the MENA region long before the recent barrage of global shocks—the COVID pandemic, Russia's invasion of Ukraine, high inflation and tight policy rates globally, and the recent conflict in the Middle East. Real GDP growth in the decade before these shocks (2010–2019) was on average 1.5 percentage points lower in MENA than in other EMDEs.

The surge in oil prices that followed Russia's invasion of Ukraine in 2022 boosted oil-exporting economies in MENA, while economic growth in the rest of the world—including MENA oil importers—slowed. The tale of two MENAs—the divergent growth patterns of oil exporters and oil importers—saw its end in 2023 and is not expected to return in the coming years. For 2024, the difference between forecast growth between the oil exporters in the Gulf Cooperation Council (GCC, comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates) and developing oil importers excluding Egypt (Djibouti, Jordan, Morocco, Tunisia, West Bank & Gaza) is 0.9 percentage point. That contrasts with 2022, when the GCC grew 5.6 percentage points faster.

The MENA region is forecast to grow at 2.7 percent in 2024—a return to pre-pandemic levels, although still less than the rest of the world. Other EMDEs are forecast to remain well below pre-pandemic growth levels, but to outpace the MENA region by 1.2 percentage points in 2024. It remains to be seen whether MENA economies can emerge stronger than before the overlapping crises of the last four years, but in the short-term, forecasts suggest they will not.

The impact of the conflict in the Middle East

The conflict in the Middle East has virtually halted economic activity there. In the fourth quarter of 2023, GDP in the Gaza Strip was 86 percent lower than it was in the final three months of 2022. This translates into a 25 percent slowdown in real GDP growth on a yearly basis, which is comparable to some of the worst periods of conflict in recent history. The decline in output does not capture the human toll of the conflict—deaths, displacements and the vast numbers of Gazans who are now living in poverty and facing high levels of acute food insecurity. Moreover, it only hints at the destruction of infrastructure and devastation of services that will have long-lasting effects on economic and human recovery.

The regional economic effects of the war are uncertain in magnitude and depend somewhat on how or whether the conflict expands. One key channel of impact has been tourism, especially in neighboring countries. Oil and food prices have, in fact, been declining, which helps oil-importing economies in the region. There have also been global ripple effects since, as the conflict unfolded, commercial vessels in the Red Sea were attacked. The attacks reduced traffic through the Bab El-Mandeb strait and the Suez Canal, as shippers rerouted vessels. Diversion of trade is costly as more ships and fuel are required to sustain the same flow of goods for longer routes. Insurance and shipping rates in the region have gone up and container shipping spot rates have gone up globally, especially for routes from the East to Europe. As of this writing it is hard to predict whether the situation will escalate or deescalate and what the consequence of either scenario might be.

Increasingly uncertain times

There is broad consensus that the overlapping crises that have recently hit the world increased uncertainty, making policymakers' jobs harder. Uncertainty in MENA has been higher than in other regions, even before the COVID pandemic.

There are many dimensions to uncertainty. A widely used proxy is the level of disagreement among economic forecasters—as measured by the dispersion of individual forecasts. By this measure, uncertainty across all regions spiked in 2020 because of the global pandemic but began to moderate at the end of 2021. In 2022, forecast dispersion in other EMDEs was briefly higher than it was in MENA. But dispersion has returned rapidly to pre-pandemic levels in EMDEs and high-income countries and is now well below MENA, where instead it has remained high at pre-pandemic levels, most likely due to the uncertain evolution of the conflict in the Middle East.

The uncertain prospects for the region, exacerbated by the conflict, add to pre-existing vulnerabilities—one of which is high debt-to-GDP ratios.

Burgeoning debt in oil-importing MENA economies

Oil importers in the MENA region have significantly higher levels of public debt than other economies with comparable income levels. Over the past 10 years, debt-to-GDP ratios in Emerging Market and Developing Economies (EMDEs), including those in MENA have increased from about 40 percent to almost 60 percent of GDP.

Even before the global pandemic in 2020, the debt-to-GDP ratio was rising in MENA. By 2019, 16 out of 19 MENA economies had a higher debt-to-GDP ratio than they did in 2013. In MENA, the median economy's debt-to-GDP ratio increased by more than 23 percentage points over the period, or almost 4 percentage points per year. The pandemic made things worse. Declines in revenues together with pandemic support spending increased financing needs for many countries. In the median MENA economy, debt-to-GDP ratios rose more than 11 percentage points in 2020. There are large differences among countries, however—particularly between oil-importing economies and oil exporters. On average, debt-to-GDP in oil-importing MENA countries was almost triple that of MENA oil exporters and was 50 percent higher than the average EMDE in 2023.

High debt-to-GDP ratios can have important economic consequences. When governments borrow, they may crowd out private sector investment because rising interest rates may increase the cost of capital for the private sector. In addition, high levels of debt may be accompanied by costly interest payments that gradually reduce the ability of governments to make other growth-enhancing public investments. Moreover, the effect of additional fiscal spending on GDP—the so-called fiscal multiplier—is smaller when public debt is high.

There is no free lunch when it comes to getting out of debt. Growing and inflating out of debt have been floated as hopeful scenarios. But for oil importers in the region, this is a mirage.

Growing out of debt and inflating debt away

Oil-importing economies in MENA have been unable to "grow out of debt" or "inflate debt away." On their own, real GDP growth and inflation can bring down the debt-to-GDP ratio. But MENA oil-importing economies have found it harder to do so because, over the past 10 years, episodes of higher growth or higher inflation have coincided with faster debt accumulation, which pushes the debt-to-GDP ratio back up. For every additional percentage point decrease in the debt-to-GDP ratio attributable to real GDP growth, almost half is offset by increasing nominal debt stocks. This contrasts with the case of other oil importing EMDEs, where this offsetting pattern is absent. In MENA oil importing economies, GDP

growth did not reduce debt-to-GDP ratio largely because of extrabudgetary factors and of the effect of exchange rate fluctuations on the value of debt denominated in foreign currencies.

Recent spikes in inflation are unlikely to have alleviated the debt burden for MENA oil importers. For every percentage point decrease in the debt-GDP ratio attributable to inflation, almost all of it—more than 80 percent—is undone by increases in the nominal quantity of debt. Again, the key drivers behind this are the effect of exchange rate fluctuations, which have been substantial in a country like Egypt, and other extrabudgetary factors such as off-budget expenditures and asset accumulation.

Borrowing against an uncertain future

Oil importers in the MENA region have little room to maneuver if significant economic threats were to appear. They are borrowing against an uncertain future. Their inability to grow out of debt over the past 10 years is a further reason for concern. Even worse, in many countries the degree of debt vulnerabilities is obscured by extra-budgetary outlays. GDP growth can ease indebtedness, but it must come hand in hand with fiscal discipline, including curbing extrabudgetary expenditures. Improving the quality and availability of data will not only serve debt transparency, it will also help mitigate uncertainty—which historically has been high in MENA.

CHAPTER II   REGIONAL MACROECONOMIC OUTLOOK

- Global economic growth will decelerate for a third consecutive year in 2024, with diverging growth trends between advanced economies and Emerging Market and Developing economies (EMDEs).

- Global inflation has eased following cycles of monetary tightening, but inflation remains above targets in most advanced economies and many EMDEs.

- Oil prices have declined since October 2023 and are expected to continue to fall in 2024 as global growth weakens and oil production increases.

- The Middle East and North Africa (MENA) is projected to grow at 2.7 percent in 2024 and 4.2 percent in 2025, in a return to the low growth that prevailed in the decade before the global pandemic.

- GDP growth rates of oil importers and exporters were comparable in 2023 and is expected to remain this way in 2024 and 2025, marking the end of the 'tale of two MENAs'.

- The recent conflict in the Middle East has heightened geopolitical risks, both in the region and outside it. Private sector growth forecasts across the region were revised down as uncertainty increased.

World economic context: A global growth slowdown

Global economic growth will slow for a third consecutive year in 2024. According to the World Bank January 2024 forecast, global economic growth will decelerate to 2.4 percent in 2024 from 2.6 percent in 2023 (World Bank, 2024a), a slowdown largely reflecting monetary tightening to rein in decades-high inflation, restrictive credit conditions, and weaker global trade and investment. Growth is expected to pick up to 2.7 percent in 2025 as inflation continues to ease, interest rates start to decline, and trade picks up.

Growth trends differ between Hight Income Countries (HICs) and Emerging Market and Developing Economies (EMDEs). Growth in HICs (excluding MENA countries) is expected to further remain at 1.6 percent in 2024, from 1.5 percent in 2023. The moderate growth follows a rapid post pandemic recovery, which had been sustained by expansive fiscal policies. In EMDEs (excluding MENA countries), growth is forecast to be 3.9 percent in 2024, slightly lower than the 4.4 percent estimated for 2023. Within EMDEs, China's growth is forecasted to slow significantly—to 4.5 percent in 2024, from 5.2 percent in 2023. The slowdown in China is largely due to a downturn in the property sector, weak consumer confidence, and feeble external demand. EMDEs excluding China are projected to grow 3.3 percent, a slight acceleration from 3.2 percent in 2023. All country groups are expected to grow more slowly in 2024 than they did in the decade preceding the pandemic. The most pronounced slowdown is in China, which grew at an average rate of 7.7 percent between 2010 and 2019 (World Bank, 2024a).

The conflict in the Gaza Strip has heightened geopolitical risks, both in the MENA region and outside it. There may be global ramifications if the conflict expands and disrupts economic activity and commodity markets worldwide. However, current forecasts of growth for 2024 (Table II.1) are made under the assumption that the conflict will not worsen. In fact, growth projections for the MENA region were revised upward by 0.4 percentage point from those made in October 2023 (Gatti et al., 2023a) because of stronger-than-expected global growth in 2023. So far, the conflict has had little effect on commodity prices—which have weakened but remain above pre-pandemic levels.

Global inflation and interest rates

Global inflation has declined from the high levels of 2022 (Figure II.1). However, inflation remains above target in most advanced economies. In EMDEs, inflation is higher than target in half of the countries that have them. Inflation rates are expected to remain above 2015–2019 levels for at least the next two years (World Bank, 2024a). The easing in global inflation can be partly attributed to tight monetary policy, which has shown signs of winding down, at least in advanced economies. Overall, real interest rates are still expected to remain higher than pre-pandemic levels as inflation continues its gradual decline (World Bank, 2024a). The negative impact of high interest rates on economic growth has been mitigated somewhat by household and firm savings, a strong willingness to take risks, extended maturities on existing stocks of low-cost debt, and, in some instances, expansionary fiscal policy—most notably in the United States. But the situation is precarious as EMDEs with high debt must cope with higher real interest rates and financing costs.

Figure II.1 Inflation

Panel A. Global and MENA

Median inflation rate, percent

Panel B. MENA country groups

Median inflation rate, percent
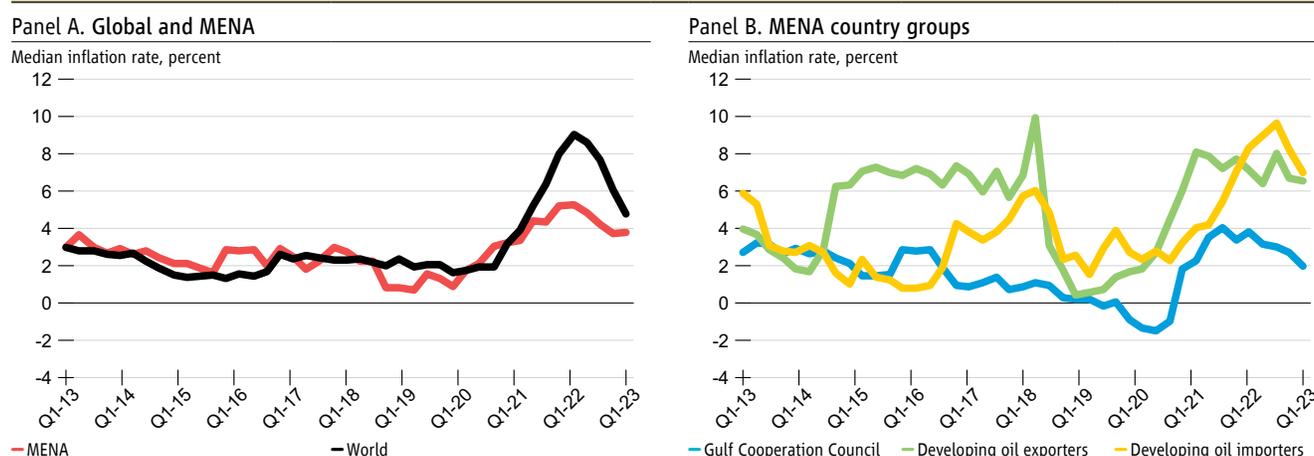
Sources: Authors' calculations based on International Monetary Fund, *International Financial Statistics*.
Notes: All groups, MENA, World, Gulf Cooperation Council, Developing oil exporters and Developing oil importers, are balanced panels (include the same countries for each period). World includes 132 countries, including 15 MENA countries. MENA = Middle East and North Africa, and includes Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia and West Bank and Gaza. Gulf Cooperation Council, and includes Bahrain, Kuwait, Oman, Qatar and Saudi Arabia. Developing oil exporters, and includes Algeria Iran, Iraq, Libya. Developing oil importers, and includes Egypt, Jordan, Lebanon, Morocco, Tunisia, and West Bank & Gaza.

Oil production and global demand

Oil prices have declined by 9.5 percent since October 2023 and are expected to continue to do so in 2024, as global growth weakens and oil production increases (Figure II.2, Panel A). Oil futures indicate generally higher medium-term prices compared to those in June and December 2023, but lower than those in September 2023, with futures trading at US$71.41 per barrel for the end of 2026. Natural gas prices have also declined—by 36 percent—since October 2023 (Figure II.2, Panel B). Natural gas futures generally indicate lower medium-term prices than in futures in 2023. Gas futures are trading at US$ 4.42 per 10,000 million British thermal units. Metal prices are also expected to continue declining due to slower growth in China. Food prices are expected to decline amid ample supplies for the major crops but remain higher than before the pandemic.

Figure II.2 Hydrocarbon spot prices and futures

Panel A. Generic Brent crude oil
US$ a barrel

Panel B. Generic natural gas
U.S. dollars per 10,000 MMbtu

Legend: Spot — Jun-23 — Sep-23 — Dec-23 — Latest
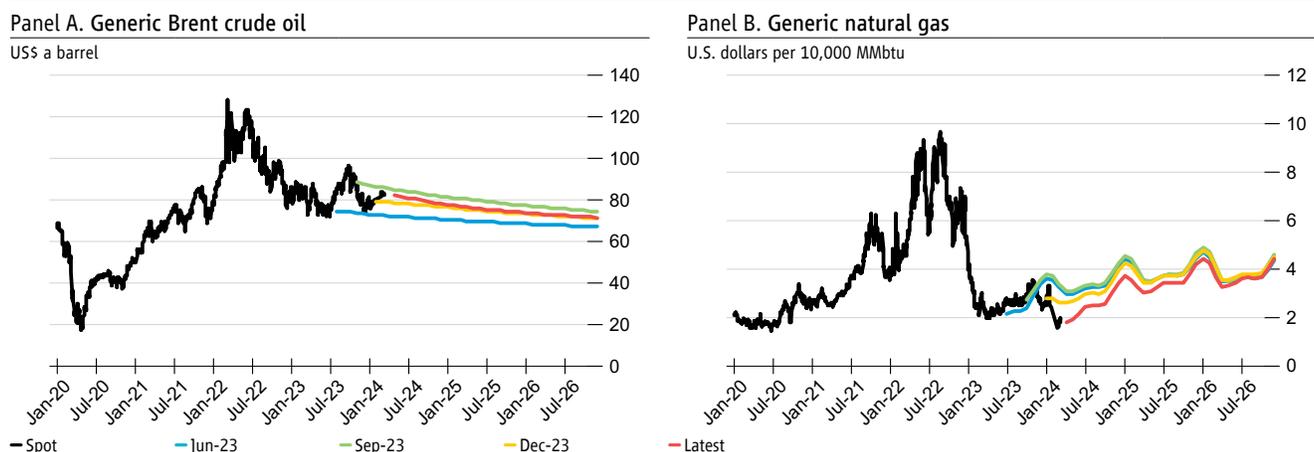
Sources: Authors' calculations based on Bloomberg, L.P.
Note: MMBtu = million British thermal units. The black lines indicate the daily closing spot price of generic Brent crude oil (Panel A) and generic natural gas (Panel B) through March 8, 2024. The colored lines show the closing futures prices of Brent crude oil (Panel A) and natural gas (Panel B) of the date specified in the legend, all in 2023, except for the latest observation, which was on March 8, 2024).

The 'tale of two MENAS' ends with the return of low growth

Persistent low growth in the MENA region (Belhaj et al., 2022; Gatti et al., 2023b) long preceded the recent barrage of global shocks—the COVID pandemic, Russia's invasion of Ukraine, high inflation and tight policy rates, and the conflict in the Middle East that began in early October 2023. Average real GDP growth in the decade before these shocks (2010–2019) was 1.5 percentage points lower in MENA than in other EMDEs.

The effects of recent global shocks were felt differently in MENA than they were in EMDEs as a whole, but experiences also varied within the region. The global pandemic led to a deeper economic contraction in 2020 and a more tepid recovery in 2021—particularly among MENA oil exporting economies (Figure II.3).

Figure II.3 Real GDP growth since 2020

Panel A. MENA, HICs, and EMDEs
Percent

Panel B. MENA Country Groups
Percent

Panel A legend: MENA — EMDE (ex-MENA) — HIC — MENA (2010–19 avg) — EMDE (ex-MENA 2010–19 avg) — HIC (ex-MENA 2010–19 avg)

Panel B legend: Gulf Cooperation Council — Developing oil exporters — Developing oil importers ex-Egypt — Egypt
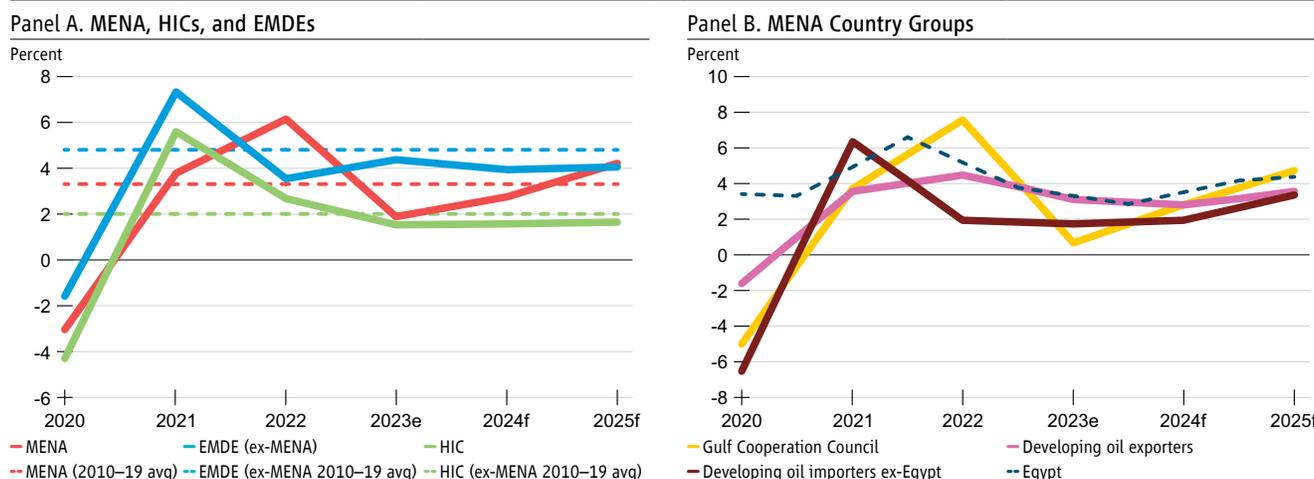
Sources: Authors' calculations based on the World Bank's *Macro Poverty Outlook*, April 2024.
Note: MENA = Middle East and North Africa. EMDE (ex-MENA) = Emerging Market and Developing Economies, excluding MENA countries. Gulf Cooperation Council and includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. Developing Oil Exporters includes Algeria, Iran, Iraq. Developing Oil importers ex-Egypt includes Djibouti, Jordan, Morocco, Tunisia, West Bank & Gaza. In Panel A, the dashed lines represent average real GDP growth rates from 2010 to 2019 for MENA, EMDE (Ex-MENA) and HIC (Ex-MENA) respectively. In Panel B, data for Egypt are for fiscal years (beginning on July 1 and ending June 30).

Table II.1 Actual and projected real GDP growth, real GDP per capita growth, current account balance, and fiscal balance in the Middle East and North Africa, by economy, 2022–25

	Real GDP Growth (percent)				Real GDP per capita Growth (percent)				Current Account Balance (percent of GDP)				Fiscal Balance (percent of GDP)			
	2022	2023e	2024f	2025f	2022	2023	2024f	2025f	2022	2023e	2024f	2025f	2022	2023e	2024f	2025f
MENA	6.1	1.9	2.7	4.2	4.5	0.5	1.3	2.8	10.5	5.2	3.6	4.0	2.7	-1.3	-2.3	-1.9
Middle-Income MENA	4.7	3.1	2.7	3.7	3.3	1.8	1.3	2.3	3.5	0.8	-1.4	-1.8	-1.2	-3.7	-5.3	-5.3
Oil Exporters	6.5	1.5	2.8	4.3	4.6	0.2	1.4	2.9	13.9	6.7	5.1	5.5	4.7	-0.4	-1.5	-1.2
GCC	7.6	0.7	2.8	4.7	4.2	-0.9	1.0	3.0	15.6	8.4	7.5	8.6	5.5	0.5	0.1	0.7
Qatar	4.2	1.8	2.1	3.2	-2.3	0.6	-2.3	1.2	26.6	16.1	13.3	12.3	10.4	6.1	4.9	4.1
United Arab Emirates	7.9	3.1	3.9	4.1	7.0	2.3	3.1	3.3	11.7	9.1	8.4	8.3	10.8	5.6	5.1	4.8
Bahrain	4.9	2.6	3.5	3.3	4.2	1.7	2.6	2.4	15.4	6.7	7.3	6.6	-6.2	-5.1	-3.2	-6.5
Saudi Arabia	8.7	-0.9	2.5	5.9	4.0	-2.8	0.5	3.8	13.7	4.0	4.2	6.6	2.6	-2.1	-2.4	-0.6
Kuwait	7.9	-0.1	2.8	3.1	7.4	-1.0	1.9	2.2	32.1	29.3	22.7	21.9	2.2	-6.8	-6.3	-8.0
Oman	4.3	1.4	1.5	2.8	3.0	-0.1	0.0	1.3	5.0	2.8	2.9	2.6	10.1	5.6	3.8	4.3
Developing Oil Exporters	4.5	3.1	2.8	3.6	3.1	1.8	1.5	2.3	9.7	2.7	0.0	-0.8	2.5	-2.4	-5.1	-5.3
Iran, Islamic Rep.	3.8	5.0	3.2	2.7	3.0	4.3	2.5	2.1	3.4	2.9	2.7	2.3	-1.9	-2.0	-2.2	-2.4
Algeria	3.6	3.5	2.7	3.5	1.9	1.9	1.2	2.1	8.6	3.1	-0.3	-2.2	-2.5	-6.5	-9.2	-9.3
Iraq	7.6	-2.5	1.6	6.1	5.2	-4.7	-0.7	3.8	20.4	2.2	-4.0	-4.2	13.6	0.9	-5.4	-6.1
Developing Oil Importers	5.0	3.1	2.5	3.9	3.5	1.7	1.0	2.4	-4.3	-1.8	-3.4	-3.4	-5.9	-5.5	-5.7	-5.3
Egypt, Arab Rep.	6.6	3.8	2.8	4.2	5.0	2.2	1.0	2.3	-3.5	-1.2	-3.2	-3.3	-6.2	-6.0	-6.5	-6.4
Tunisia	2.6	0.4	2.4	2.4	1.8	-0.4	1.5	1.6	-8.7	-2.7	-2.4	-2.3	-6.7	-6.4	-5.6	-4.6
Jordan	2.4	2.6	2.5	2.6	1.2	2.1	2.1	2.1	-7.7	-6.8	-6.4	-5.7	-5.6	-5.2	-5.6	-5.4
Morocco	1.3	2.8	2.4	3.7	0.2	1.8	1.4	2.7	-3.5	-0.4	-2.0	-2.4	-5.4	-4.3	-4.1	-3.5
West Bank and Gaza	3.9	-6.4	-6.5	5.5	1.4	-8.1	-8.4	3.3	-15.0	-14.7	-19.2	-16.3	-1.4	-3.0	-2.9	-2.7
Djibouti	3.7	6.7	5.1	5.1	2.3	5.2	3.6	3.7	17.9	15.6	13.0	12.3	-1.4	-1.9	-1.3	-1.4
Memorandum																
Libya	1.3	-1.7	4.8	5.3	0.2	-2.8	3.7	4.2	22.1	24.6	26.3	28.0	2.1	-0.1	-0.1	-0.7
Lebanon	-0.6	-0.2	0.5	NP	1.2	2.4	3.1	NP	-32.7	-11.0	-10.4	NP	-2.9	0.5	0.0	NP
Syria	-0.1	-1.2	-1.5	NP	-3.7	-5.8	-6.0	NP	NP	NP	NP	NP	-8.4	-8.2	-8.0	NP
Yemen	1.5	-2.0	-1.0	1.5	-0.7	-4.1	-3.2	-0.7	-17.8	-19.3	-24.5	-22.9	-2.7	-3.9	-3.4	-3.5

Sources: Authors' calculations based on data from the World Bank's *Macro and Poverty Outlooks*, April 2024.
Note: e=estimate, f=forecast and NP=not presented. Countries are ordered in descending 2022 GDP per Capita (constant 2017 PPP) within each category. Data are rounded up to a single digit. Data for Egypt correspond to its fiscal year (July-June). Lebanon, Libya, Syria, and Yemen are excluded from MENA regional and sub-regional averages due to uncertain values and are classified as memorandum countries. Middle Income MENA includes Iran, Algeria, Iraq, Egypt, Tunisia, Jordan, Morocco, West Bank & Gaza and Djibouti. GCC includes Qatar, United Arab Emirates, Kuwait, Saudi Arabia, Bahrain, and Oman. Oil exporters includes GCC, Iran, Algeria and Iraq. Developing oil exporters includes Iran, Algeria and Iraq. Developing oil importers includes Egypt, Tunisia, Jordan, Morocco, West Bank & Gaza and Djibouti. Real GDP growth regional and sub-regional weighted averages are calculated using previous year real GDP as weights. Real GDP per capita growth regional and sub-regional weighted averages are calculated by finding real GDP per capita for each category, then calculating yearly growth rates. Current account balance and fiscal balance regional and sub-regional averages are calculated using current year nominal GDP levels as weights.

In 2022, the surge in oil prices that followed Russia's invasion of Ukraine boosted oil-exporting economies in MENA while economic growth in MENA oil importers decelerated—as it did in the rest of the world. The divergent growth paths between oil importers and exporters in 2022 was reminiscent of a "tale of two MENAs" where one part of the region prospered while the other foundered.

But in 2023, as oil prices fell and OPEC+ member countries cut production—roles were reversed in MENA. Growth in the region's oil-exporting economies decelerated sharply—from 6.5 in 2022 to 1.5 percent in 2023—while growth in oil importers in the region, excluding Egypt, decreased from 2.0 percent in 2022 to 1.7 percent in 2023—or to about the same rate as oil exporters.[4] The slowdown in growth was the sharpest in GCC economies where growth declined to 0.7 percent in 2023 down from 7.6 percent in 2022. In Saudi Arabia, the economy grew at -0.9 percent in 2023 down from 8.7 percent in 2022. The decline in growth was driven by the hydrocarbon sector contracting at 9.2 percent. Growth in the non-oil sector was robust but was not enough to compensate for the decline in oil activities.

The MENA region is forecasted to grow 2.7 percent in 2024, which represents a return to the low growth in the decade before the global pandemic. In 2025, the MENA region is expected to grow at 4.2 percent. In the GCC economies (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates), growth will improve to 2.8 percent in 2024 and 4.7 percent in 2025. The pickup in growth is mainly driven by higher oil output due to the phasing out of oil production cuts and robust growth in the non-oil sector linked to diversification efforts and reforms. Developing oil exporters will grow 2.8 percent in 2024, down from 3.1 percent in 2023 while growth in developing oil importers is forecasted to decrease to 2.5 percent in 2024, down from 3.1 percent in 2023. For example, Morrocco is forecast to grow at 2.4 percent in 2024, down from 2.8 percent in 2023 reflecting a sharp deceleration in the agricultural sector which would contract by almost 3 percent in 2024 as unusually dry and warm condition compromise key crops. Growth across country groups is expected to be much less disparate in 2024 and 2025 than in recent years. For 2024, the difference between forecasted growth for the GCC economies and developing oil importers, excluding Egypt (Djibouti, Jordan, Lebanon, Morocco, Tunisia, West Bank & Gaza) is almost a percentage point.[5] This is in stark contrast to 2022 where the difference between these two country groups was 5.6 percentage points.

With the end of the 'tale of two MENAs', the region returns in 2024 to pre-pandemic growth levels that are still projected to be well below—over a percentage point—non-MENA EMDEs. Whether MENA economies emerge from the overlapping crises of the last four years stronger than before is unclear, but in the short term, forecasts suggest they will not.

Low growth brings tepid improvements in living standards

Real GDP per capita growth arguably better reflects changes in living standards than real GDP growth. In the MENA region, GDP per capita is expected to grow a modest 1.3 percent in 2024, which is an improvement from the 0.5 percent rate in 2023. This increase is driven almost entirely by the Gulf Cooperation Council (GCC) economies (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates), whose GDP per capita growth in 2024 is projected to be 1.0 percent, a significant improvement from the 0.9 percent decline in GDP per capita in 2023.

Among GCC economies, GDP per capita is projected to grow in 2024 by 0.5 percent in Saudi Arabia and 1.9 percent in Kuwait—sharp improvements over the previous year's 2.8 percent contraction in Saudi Arabia and 1.0 percent decline in Kuwait. In Saudi Arabia, the non-oil private sector is forecast to grow by 4.8 percent as the fiscal authority takes

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4   OPEC+ comprises the member countries of the Organization of the Petroleum Exporting Countries (Algeria, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates, Venezuela) and a number of non-OPEC oil producers including Russia, Mexico, Oman, and Kazakhstan.

5   For Egypt, which is shown separate from other oil-importing economies in MENA, growth in its fiscal year 2024—which runs from July 2023 to June 2024—is expected to be 2.8 percent and 4.2 percent in fiscal year 2025. Setting aside the differences of calendar-year and fiscal-year forecasts, projections for Egypt are in line with the expected levels of aggregate regional growth which are forecasted to be around 2.7 in 2024 and 4.2 percent in 2025.

an expansionary stance. In Kuwait, the oil sector is projected to grow 3.6 percent because of an expected ramp up in production, while the non-oil sector is expected to grow 2.1 percent.

Among developing oil exporters in the region, Iran's GDP per capita is expected to grow 2.5 percent in 2024, down from 4.3 percent the year before and in Algeria GDP per capita is forecast to grow 1.2 percent in 2024, compared with 1.9 percent in 2023. In Iraq, a rebound in the oil sector would improve real GDP per capita growth from a 4.7 percent contraction in 2023 to a projected 0.7 percent decline in 2024. For the group as a whole, GDP per capita will grow 1.5 percent in 2024, slightly below the 1.8 percent growth in 2023.

Growth in real GDP per capita is expected to decelerate in oil-importing MENA economies to 1.0 percent in 2024 from 1.7 percent in 2023. The largest change is expected in Djibouti, where per capita GDP growth would moderate to 3.6 percent in 2024 from 5.2 percent in 2023. Slowing real GDP growth in Egypt, would result in a 1.0 percent growth in GDP- per-capita in fiscal year 2024, compared with 2.2 percent the previous year.

Moderating current account and fiscal balances for MENA oil exporters

Oil production cuts and a moderate price of oil in 2024, relative to 2022, are expected to keep surpluses in current accounts and fiscal balances in most MENA oil-exporting countries well below the high levels of 2022.

For economies in the GCC, the average current account balance—the sum of net income from abroad, net transfers, and the balance of trade—is forecast to be in surplus by 7.5 percent of GDP in 2024 down from 8.4 percent of GDP in 2023. The smaller average surplus reflects a decline in Kuwait's current account surplus to 22.7 percent of GDP in 2024 from 29.3 percent of GDP in 2023, which reflects increased payments to international contractors engaged in the country's Vision 2035 development plan—outlays that were partially offset by gains from a recovering tourism sector. Current accounts in most other GCC economies are expected to change little in 2024.

Among GCC economies, fiscal balances (the net of a government's revenues and spending) are projected to barely be in a surplus of 0.1 percent of GDP in 2024, down from a surplus of 0.5 percent of GDP in 2023—despite improvements in the fiscal deficit in Bahrain and Kuwait. Forecasts for Saudi Arabia's fiscal balance indicate a worsening deficit of 2.4 percent of GDP in 2024 from a 2.1 percent deficit in 2023. The worsening of the Saudi Arabia's fiscal deficit reflects an expected drop in oil receipts due to lower prices and production levels and increased government spending. Surpluses in other GCC countries are projected to shrink slightly.

Current account surpluses in developing oil exporters are expected to drop in 2024 to 0.0 percent of GDP from 2.7 percent in 2023. In 2022 these countries as a group posted a current account surplus of 9.7 percent. Algeria's current account surplus is expected to be in a slight of 0.3 percent in 2024, after being in surplus by 3.1 percent of GDP in 2023—a consequence of declining global oil prices, quota cuts and rebounding equipment-led imports. In the case of Iraq, despite higher projected oil exports, a sharp fiscal expansion would fuel consumption and push the current account into a 4.0 percent deficit in 2024 from a 2.2 surplus the year before.

The fiscal balances of developing oil-exporting economies in MENA are also projected to deteriorate—to an average deficit of 5.1 percent of GDP in 2024 from a 2.4 percent deficit in 2023. The bulk of this deterioration is expected to come from Iraq and Algeria—driven in both cases by expected increases in government spending.

Twin deficits for MENA developing oil importers

Virtually all oil-importing economies in MENA are expected to continue to run both fiscal and current account deficits—so called twin deficits—into 2024, with the lone exception of Djibouti, which is expected to post a current account surplus in 2024 of 13.0 percent of GDP because of increased trade and logistics demand from Ethiopia.

The current account deficit of MENA oil importers is expected to increase to 3.4 percent of GDP in 2024 from 1.8 percent in 2023. This deterioration reflects worsening current accounts in four out of the six countries in the group. Notably, Jordan will continue to run a sizeable current account deficit, but at a projected 6.4 percent of GDP in 2024, slightly smaller than the 6.8 percent deficits in 2023. These projections assume that the conflict in the Middle East will not expand. If fighting were to worsen or continue for a protracted period, external account deficits in countries neighboring Gaza could be exacerbated by declining tourism. Egypt would likely take an additional hit from lower revenues from the Suez Canal because more shipping would reroute from the Red Sea.

Forecasts indicate that the average fiscal deficit in MENA oil-importing economies will slightly widen to 5.7 percent of GDP in 2024 from 5.5 percent in 2023. The deterioration is driven by an increase in Egypt's fiscal deficit—from 6.0 percent of GDP in 2023 to 6.5 percent in 2024—as tax revenue shrinks from a slowing economy while interest payments rise because of a devalued currency and monetary tightening. Jordan's fiscal deficit is also projected to widen by 0.4 percentage points to 5.6 percent of GDP in 2024. The fiscal deficit of Tunisia would decrease by 0.8 percentage points in 2024 to 5.6 percent of GDP, as would the fiscal deficit of Djibouti from 1.9 percent of GDP to 1.3 percent.

Easing Inflation in MENA

Inflation in MENA countries was lower in 2023 than in the preceding year. The year-on-year change in the consumer price index (CPI) on January 2024 was lower than a year before in nine out of fourteen MENA economies.[6] In fact, in a majority of these fourteen countries—for which data are available—inflation was below 5 percent on January 2024—this was the case for Bahrain, Iraq, Jordan, Kuwait, Morocco, Oman, Qatar, and Saudi Arabia. During 2023, inflation decelerated in Bahrain, Jordan, and Qatar, primarily due to lower commodity prices and tighter monetary policies, while Oman benefited from subsidies on basic food and domestic petroleum. Kuwait and Saudi Arabia contained inflation through tight monetary policies and extensive subsidies on food and energy, reflecting a broader trend towards easing inflation in the region. As noted in previous work, inflation has been lower in countries with currency pegs and currency depreciations have been important determinants of inflation for countries such as Egypt and Lebanon (Belhaj et al., 2022; Gatti et al., 2023a).

Although easing, inflation remains elevated at 6.4 percent in Algeria and 7.8 percent in Tunisia. Inflation in both countries seem to be fueled by higher food prices, particularly higher fresh produce prices. Higher food prices hurt the more vulnerable the most as food accounts for a significant part of the spending of lower income households (Gatti et al, 2023a).

In Egypt and the West Bank and Gaza, inflation in January 2024 stood above that of a year prior. In Egypt, inflation surpassed 31 percent by January 2024, up from about 26 percent in January 2023, although it has gradually declined since reaching a peak of 40 percent in September 2023. Food items and excess government credit contributed to inflation in Egypt. Consumer prices in West Bank and Gaza have shot up since October, with inflation reaching 18.6 percent in January 2024, more than triple the inflation in September 2023 which stood at 5.0 percent.

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6   The year-on-year inflation for January 2024 represents percent difference in the CPI between January 2023 and January 2024.

Figure II.4. Inflation in MENA

Panel A. Inflation January 2024 relative to January 2023

Panel B. Inflation in Egypt and the West Bank and Gaza
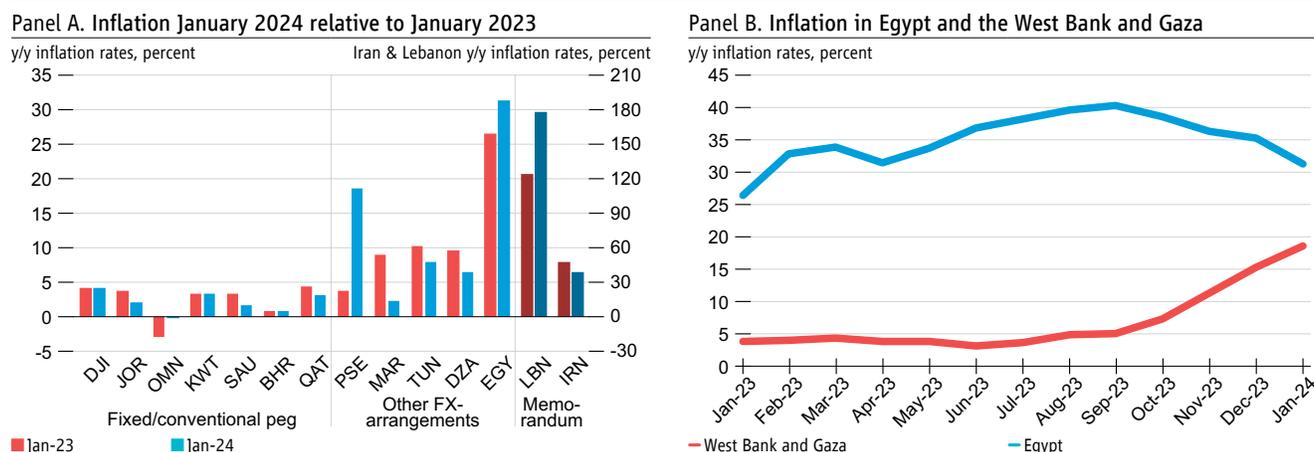
Sources: Haver Analytics and National Statistics Offices.
Notes: Panel A shows year-on-year headline inflation in January 2023 and January 2024 for countries with available data; countries are ordered in ascending 2022 GDP per Capita (2017 constant PPP$) within currency system categorization. Panel B shows year-on-year headline inflation for each month from January 2023 to January 2024, for each country.

Shifting expectations when shocks hit

Current forecasts reflect current expectations. But projections are by nature constantly in flux. As analysts incorporate additional information—whether from new data or from unforeseen events—forecasts are continually revised.

In MENA, forecasts for 2024 GDP growth have been revised substantially over the past year (Table II.2). Regional growth is expected to be 0.8 percentage point lower than forecast in the previous edition of the MENA Economic Update. Growth forecasts for oil importers were revised downward by 0.9 percentage point, whereas growth forecasts for oil exporters decreased by 0.7 percentage point.

Table II.2 2024 real GDP forecasts by editions of the MENA Economic Update			
	Apr 2023	Oct 2023	Apr 2024
MENA	3.1	3.5	2.7
Oil Exporters	2.9	3.5	2.8
GCC	3.1	3.6	2.8
Developing Oil Exporters	2.4	3.4	2.8
Developing Oil Importers	3.7	3.4	2.5

Sources: World Bank, *Macro Poverty Outlook*.
Note: GCC = Gulf Cooperation Council, and includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. Developing oil exporters includes Algeria, Iran, Iraq. Developing oil importers includes Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza.

The evolution of private sector forecasts, which are updated monthly, shows how things changed over time with more granularity.

In April 2023, oil production cuts announced by OPEC+ were followed by an immediate upward revision in the private sector forecasts for oil exporters in MENA. However, the forecasts were revised down a few months later—particularly for developing oil exporters (Figure II.5). The upswing after the announcement in April might have reflected the expectation that the production cuts would be short lived and growth in 2024 would ramp up as oil production returned to previous levels. However, further voluntary cuts announced by Saudi Arabia in June 2023–and extended in September 2023—

likely signaled that the bounce-back in 2024 might be more modest than previously thought.

Forecasts for 2024 GDP growth for developing oil importers were gradually revised downward between January and October 2023—when forecasts were 0.3 percentage point below those at the beginning of that year.

After the onset of the conflict in the Middle East in October 2023 private sector forecasts were revised downward for the entire region. Projections for GCC economies decreased by 0.5 percentage points between the start of the conflict and March 2024, while forecasts for developing oil importers were downgraded by 0.5 percentage point. For the region as a whole, growth expectations decreased by 0.4 percentage point between October 2023 and March 2024.

Figure II.5 2024 GDP growth forecast revisions since January 2023
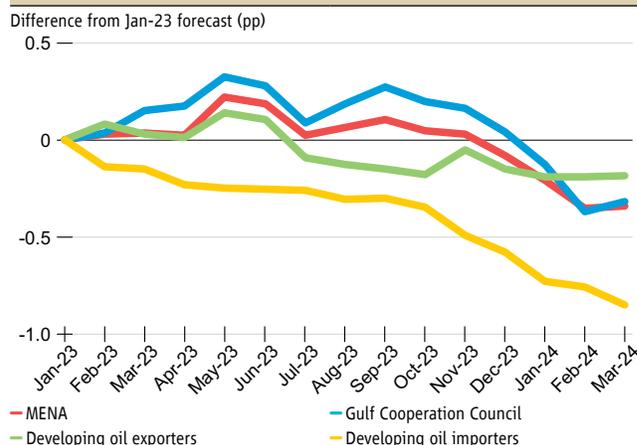
Source: Authors' calculations based on Focus Economics, forecasts from January 2023 to March 2024.
Notes: The graph shows the difference in 2024 GDP growth rates forecasted over time compared to forecasts made in January 2023. GCC = Gulf Cooperation Council, and includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. Developing Oil Exporters includes Algeria, Iran, Iraq, Libya, Yemen. Developing Oil Importers includes Djibouti, Egypt, Jordan, Lebanon, Morocco, Tunisia. MENA = Middle East and North Africa, which comprises countries in all three groups. Egypt data for 2024 are adjusted fiscal year estimates transformed into calendar year estimates: the average of the FY2024 and FY2025 forecasts. Egypt's FY2024 starts on July 1, 2023 and ends on June 30, 2024. MENA and other category averages are weighted growth rates using previous year GDP levels as the weights.

When forecasters disagree: To whom do you listen?

There is broad consensus that the crises that hit the world in recent years have increased uncertainty.[7] Frequent and often large forecast revisions, such as those since the start of the Gaza conflict, are indicative of a limited ability to look into the future. If past estimates are obsolete, will today's estimates hold up? Confidence in any given projection is closely related to the degree of consensus across analysts. This subsection looks at how differences in the expectations across forecasters can yield insights on uncertainty in MENA over time.

The way in which news are incorporated into forecasts is not always clear. When treading familiar territory, the benefit of additional information can make forecasts more reliable and the future less uncertain. However, unexpected large shocks can have the opposite effect. The impact of rare events can be difficult to assess, and analysts may differ in their interpretation of the effects. When forecasts from different sources point in dramatically different directions, it is often unclear which analyst merits attention. Uncertainty increases.

Private sector forecasts put forth by various institutions, banks, and analysts are often aggregated into a projection labeled a consensus forecast. However, the average expectation captured by the consensus forecast does not tell the full story.

The level of disagreement across forecasters at any given point in time—measured as the dispersion of individual forecasts—has been used in the academic literature as a proxy for the degree of ambiguity or uncertainty embedded in the average expectation. Confidence in any given projection is lower when multiple credible forecasts point in different directions.

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7   See Global Economic Prospects (World Bank, 2024); Chief Economists Outlook (World Economic Forum, 2024); Middle East and Central Asia Regional Economic Update (IMF, 2024).

By this measure, uncertainty in MENA has been consistently higher than in other EMDEs as well as in High Income Countries (HIC) (Figure II.6, Panel A). Uncertainty across the world spiked in 2020 with the advent of the global pandemic but showed signs of abating toward the end of 2021. Forecast dispersion in other EMDEs and HICs exceeded that of MENA following Russia's invasion of Ukraine but has since nearly returned to pre-pandemic levels. In contrast, uncertainty in the MENA region has remained high. The first months of 2024 suggest that the pre-pandemic trend of heightened uncertainty in MENA will persist.

Figure II.6 Forecast dispersion as a proxy for uncertainty

Panel A. Uncertainty in one-year-ahead real GDP growth forecasts
Uncertainty Index, smoothed (forecast dispersion of the median economy)

Panel B. Uncertainty in 2024 real GDP growth forecasts
Uncertainty Index, smoothed (forecast dispersion of the median economy)

— MENA   — EMDE (ex-MENA)   — HIC (ex-MENA)
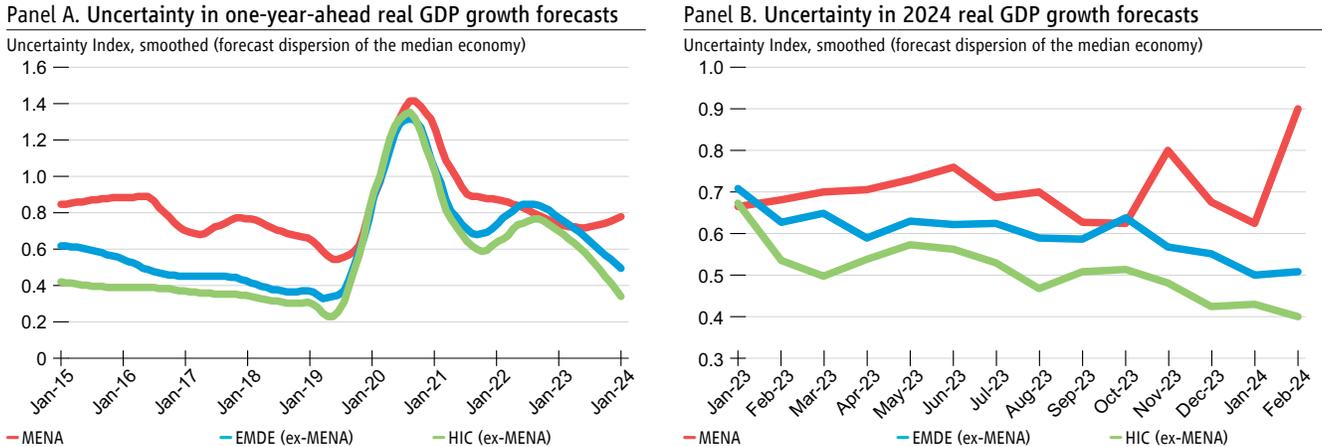
Sources: Authors' calculations based on Consensus Economics and Focus Economics.
Note: MENA = the Middle East and North Africa (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates, Yemen). Panel A: the time series depicts the dispersion of one-year-ahead forecasts for real GDP growth of the median country within each group. Dispersion is captured by the interquartile range across forecasters, namely the difference between the forecast in the 75th percentile and the forecast in the 25th percentile. The monthly time-series is smoothed using a local regression model. Panel B: the time series depicts the dispersion of 2024 real GDP forecasts of the median country within each group. Dispersion is captured by the interquartile range across forecasters, namely the difference between the forecast in the 75th percentile and the forecast in the 25th percentile at each point in time.

A closer look at the dispersion in 2024 real GDP growth forecasts since the beginning of 2023 shows that uncertainty in MENA was in line with, or slightly above, that of other EMDEs between January and October 2023 (Figure II.6, Panel B). After the conflict in the Middle East began, uncertainty in MENA spiked and has remained elevated.

Moreover, disagreement across forecasters on the growth prospects for 2024 is much higher two months into the year than it was a year earlier. That there is less consensus among analysts, despite an additional year's information, demonstrates how disruptive the conflict in the Middle East has been to the expectations of regional economic growth.

A lack of clarity about the future can affect economic decisions and may be a major source of business cycle fluctuations (Ilut and Schneider, 2014). Firms may delay investment and hiring (Baker et al., 2016; Bloom, 2009; Jurado et. al., 2015; Kumar et al., 2022) as they adopt a "wait and see" strategy.

The influence on uncertainty of black swan events—those that are impossible or nearly impossible to foresee—may be unavoidable, but clear policy stances that are

Figure II.7 Uncertainty and Statistical Performance Index

Median Uncertainty Index, 2019

Statistical Performance Index
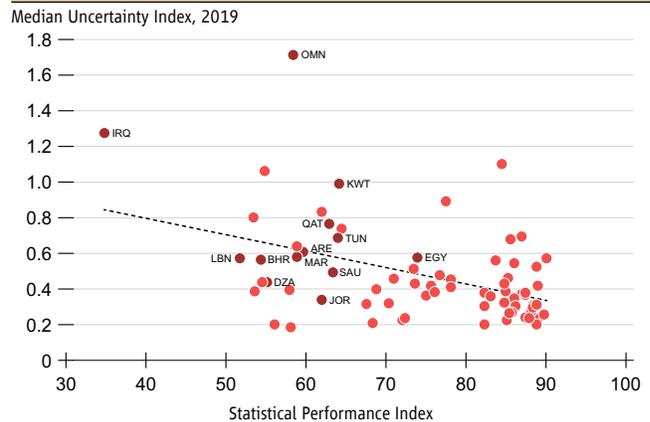
Sources: Consensus Economics, Focus Economics; World Bank, *World Development Indicators.*
Note: ARE = United Arab Emirates; BHR = Bahrain; DZA = Algeria; EGY = Egypt; IRQ = Iraq; JOR = Jordan; KWT= Kuwait; QAT = Qatar; SAU = Saudi Arabia; TUN = Tunisia. Median Uncertainty Index is the median inter-quartile range of 2020 real GDP forecasts made in 2019 across forecasters (the median difference between the forecast in the 75th percentile and 25th percentile).

predictable and access to high quality data, as captured by the Statistical Performance Indicator, can help mitigate uncertainty (Figure II.7).[8]

The conflict in the Middle East has further clouded prospects for the MENA region. While the immediate impact on Gaza is as evident as it is devastating, the potential spillover effects on the rest of the region—and possibly beyond it—are difficult to assess. The following sections describe the potential channels of impact from the conflict on the economy of the West Bank and Gaza as well as on the MENA region as a whole.

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8   The Statistical Performance Indicator measures the capacity and maturity of national statistical systems by assessing the use of data, the quality of services, the coverage of topics, the sources of information, and the infrastructure and availability of resources.

CHAPTER III ECONOMIC IMPACTS OF THE CONFLICT IN THE MIDDLE EAST

- Hostilities in the Gaza Strip that began in October 2023 have caused massive loss of life and one of the largest economic shocks in recent history. GDP in Gaza plummeted by 86 percent in the final quarter of 2023.

- Widespread destruction, the extensive displacement of people coupled with the massive downturn, means nearly every Gaza resident is poor.

- Knock-on effects in the West Bank have exacerbated a pre-existing fiscal crisis that led the Palestinian Authority to further reduce and delay public salary payments.

- The outlook for the Palestinian economy is highly uncertain depending upon the conflict's evolution. The conflict has also increased uncertainty in the Middle East and North Africa (MENA) region.

- The level of exposure of MENA countries depends upon their proximity to the conflict and level of regional integration.

- The disruption of maritime transportation, particularly through the Suez Canal, can increase shipping times and raise costs for several countries regionally and globally. A prolonged disruption can raise shipping insurance costs and prices globally, and potentially affect the oil market.

Impacts on the West Bank and Gaza: An economy on the brink

Hostilities in the Gaza Strip that began October 7, 2023 have caused a massive loss of life.[9] As this report was written, the conflict entered its fifth month, the situation was highly volatile and prospects for lasting peace and stability were unclear. The loss of life, the speed and extent of damages to fixed assets and the reduction in production flows across the Palestinian territories are unprecedented.[10]

Since the start of the conflict, the Palestinian economy experienced one of the largest economic shocks recorded in recent history.[11] In the final months of 2023, Gaza's GDP fell by more than 86 percent (Figure III.1)—from approximately US$670 million in the third quarter to roughly US$90 million in the fourth quarter. Economic activity in Gaza has virtually ground to a halt—with little promise of substantial improvement as of this writing. For 2023 as a whole, GDP in Gaza declined 24 percent, according to preliminary estimates from the Palestinian Central Bureau of Statistics (PCBS). The private sector across the entirety of the Palestinian territories—the West

Figure III.1 Quarterly real GDP growth (year-on-year)

Quarterly real GDP, yoy, percent change
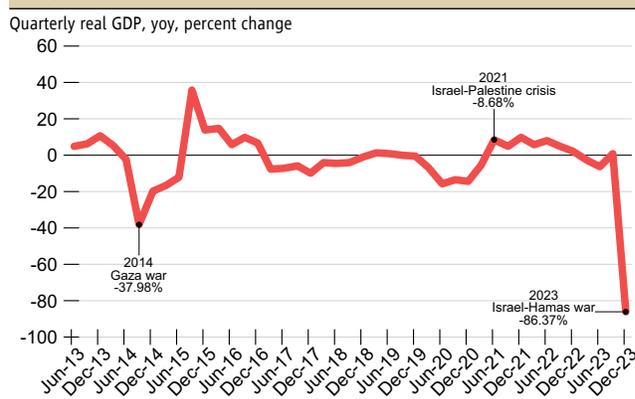
Sources: Palestinian Central Bureau of Statistics; World Bank estimates.

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9 This section is based on information available on February 10, 2024. More details can be found in the Gaza Strip Interim Damage Assessment, April 2024 (https://thedocs.worldbank.org/en/doc/14e309cd34e04e40b90eb19afa7b5d15-0280012024/original/Gaza-Interim-Damage-Assessment-032924-Final.pdf, accessed on April 2, 2024)

10 Cfr. UNCTAD Rapid Assessment, "Preliminary Assessment of the Economic Impact of the Destruction in Gaza and Prospects for Economic Recovery", January 2024 (https://unctad.org/publication/preliminary-assessment-economic-impact-destruction-gaza-and-prospects-economic-recovery, accessed March 5, 2024) and World Bank. 2024. Note on the Impacts of the Conflict in the Middle East on the Palestinian Economy February 2024. Washington, DC. https://thedocs.worldbank.org/en/doc/db985000fa4b7237616dbca501d674dc-0280012024/original/PalestinianEconomicNote-Feb2024-Final.pdf, accessed on March 5, 2024.

11 World Bank. 2024. Note on the Impacts of the Conflict in the Middle East on the Palestinian Economy February 2024. Washington, DC. https://thedocs.worldbank.org/en/doc/db985000fa4b7237616dbca501d674dc-0280012024/original/PalestinianEconomicNote-Feb2024-Final.pdf, accessed March 5, 2024.

Bank and the Gaza Strip—is estimated to have had losses totaling around US$1.5 billion in the first two months of the conflict, roughly US$25 million per day.[12] The economic decline in the Palestinian territories already exceeds that from conflicts in 2008, 2012, 2014, and 2021—and since the start of the century, it is second only to the uprising from 2000 to 2005 known as the second *intifada*.

Damage to fixed assets and overall destruction in Gaza are catastrophic. Over 1 million people are estimated to have had their homes destroyed or severely damaged.[13] The UN Shelter Cluster has reported 1.7 million internally displaced persons (IDPs) in Gaza, about 75 percent of the population.[14] Infrastructure is heavily impacted. Data from the analytical firm IPSOS indicate that more than half of all roads have been damaged or destroyed.[15]

Health is amongst the hardest hit sector of the Gazan economy—nearly 80 percent of health facilities have been partially damaged or destroyed (Figure III.2). The World Health Organization (WHO) and the International Committee of the Red Cross (ICRC) have raised concerns about the functionality of hospitals in the southern Gazan city Khan Younis, where fighting and evacuation orders have limited public access to several facilities.[16]

Figure III.2 Impact (damaged and destroyed) percentage by sector
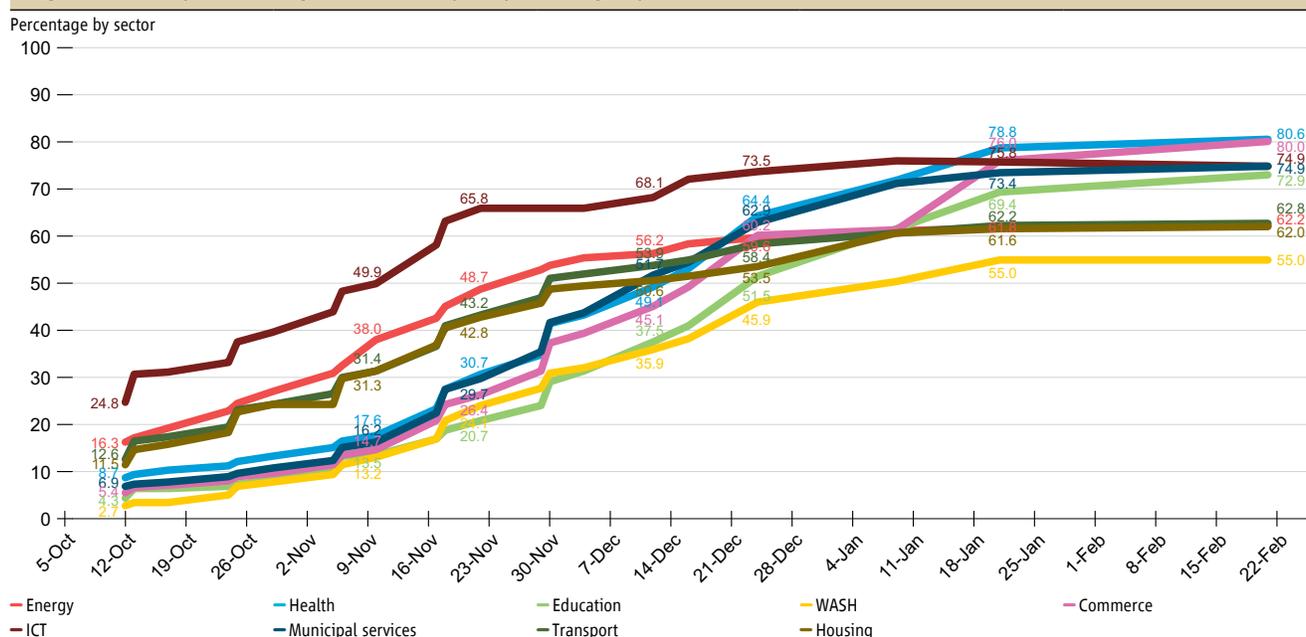
Source: IPSOS.
Notes: These are preliminary assessments and are subject to change. Damage to Health, Education, WASH, Commerce, and Municipal services refer to percent of facilities damaged. Damage to the Energy sector is represented as percent of the length of feeder lines damaged or destroyed. Housing damage is calculated as the percent of residential buildings that have sustained partial damage or have been completely destroyed. Damage to the transportation sector is presented as the percent of the road length that have been damaged or destroyed. ICT damage is calculated as percent of ICT assets that have been impacted. These ICT assets include Fiber access node, Fixed access node, Fixed access partial node, local switch, mini data center, mobile, mobile tower, national switch, VoIP access node, VoIP access partial node.

Education is also strongly affected as a sector (Figure III.2), with most schools non-functional—either serving as shelters for displaced individuals or damaged beyond repair. Before the conflict, there were more than 625,000 students in Gaza; the UN Office for the Coordination of Humanitarian Affairs estimates that more than 70 percent of those students attended schools that have been damaged or destroyed. This is posed to have lasting socio-economic repercussions, as

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12 Ibid.

13 Approximately 62 percent of residential buildings have been damaged or destroyed, World Bank estimate based on IPSOS data, based on Synthetic Aperture Radar (SAR) and high-resolution satellite imagery.

14 Data reported as of January 10, 2024. People without homes refers to people whose homes have been severely damaged or destroyed and are separate from internally displaced persons (IDP) assessments. IDPs indicate people who have left their homes, which may still be habitable, as a result of conflict. https://reliefweb.int/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-122-enarhe, accessed March 5, 2024.

15 Note that estimates from IPSOS should be taken with caution as they are preliminary and subject to change.

16 https://www.who.int/ar/news/item/12-07-1445-who-and-partners-bring-fuel-to-al-shifa--as-remaining-hospitals-in-gaza-face-growing-threats, accessed March 5, 2024 and https://www.icrc.org/en/document/gaza-risk-complete-medical-shut-down-without-urgent-action-preserve-services?utm_source=twitter&utm_medium=social, accessed March 5, 2024.

the absence of schooling can be detrimental for the long-term human capital development for children (Corral and Gatti, 2020).

The energy sector also was severely affected (Figure III.2). Approximately two thirds of the electricity feeder lines are damaged or destroyed. Because both health and water, sanitation, and hygiene (WASH) facilities heavily rely on commercial generators, access to clean water is difficult for Gazans, given widespread fuel shortages.[17] Functional WASH assets, such as municipal wells and desalination plants, are operating significantly below capacity; approximately half of WASH facilities have been damaged or destroyed, and the rest lack access to grid electricity or fuel for commercial generators.[18]

Because of preexisting high levels of poverty, widespread internal displacement, the destruction of homes, fixed assets, and productive capacity and the massive economic downturn, nearly every Gaza resident can be considered poor at present, and at least for the short term. The hostilities have caused a substantial increase in multidimensional poverty—in which households lack money, education, and access to basic services and infrastructure.[19]

Acute food insecurity is pervasive—at least one in four Gazan is experiencing catastrophic hunger,[20] and there is a growing risk of famine.[21] Most children are at risk of stunting.[22] Food insecurity has long-term costs. A child experiencing malnutrition early in life, even in utero, can face poor long-term health, education, and employment consequences. Research has shown that early exposure to famine in China (Chen and Zhou, 2007), Germany (Jürges, 2013), the Netherlands (Lindeboom et al., 2010), and Ethiopia (Dercon and Porter, 2014) resulted in adults with reduced height, fewer years of schooling, lower cognitive scores, and reduced earnings. Gatti et al. (2023a) estimate that the four months of high food inflation that followed Russia's invasion of Ukraine in 2022 may have increased the risk of stunting—a summary measure of insults to child's health—by 17 to 24 percent in the developing MENA region.

Moreover, Palestinians outside Gaza are also experiencing worsened economic conditions. The GDP for all the Palestinian territories declined by 6.4 percentage points in 2023, wiping out the progress in welfare achieved since the end of the pandemic. In addition, the effectiveness of social protection programs in the West Bank is hampered by the Palestinian Authority's severely limited fiscal capacity. Poverty levels in West Bank and Gaza at the close of 2023 are estimated to have been higher than the 26.5 percent in 2020, at the peak of COVID-related restrictions.

Effectively managing a spiraling fiscal crisis remains at the top of the Palestinian Authority (PA)'s priorities. A pre-existing structural fiscal crisis has been worsened by a reduction in clearance revenues, the import duties that Israel collects on behalf of the PA, and a fall in domestic revenues from lower economic activity.[23] The PA had to reduce salary payments in the last quarter of 2023.[24] The fiscal deficit grew approximately fivefold from the pre-conflict baseline to 3.0 percent of GDP. Because the PA has no traditional economic policy instruments, the only alternatives for covering the financial gap are additional arrears or foreign aid.

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17 Gaza's domestic electricity supply primarily came from two sources: the diesel-fired Gaza Power Plant, which has a capacity of 140 MW but normally operates at 60–80 MW because of constraints on the fuel supply, and the Israel Electric Corporation, which exported up to 120 MW. Prior to the conflict, electricity was available for only five to 15 hours per day. During the early stages of the conflict, Israel stopped supplying electricity to Gaza and the Gaza Power Plant ran out of fuel on October 11. As of this writing, fuel availability is intermittent.

18 https://www.ochaopt.org/content/hostilities-gaza-strip-and-israel-flash-update-103, accessed March 5, 2024.

19 United Nations Office for the Coordination of Humanitarian Affairs. (February 2, 2024). Hostilities in the Gaza Strip and Israel | Flash Update #109. https://www.ochaopt.org/content/hostilities-gaza-strip-and-israel-flash-update-109, accessed March 5, 2024.

20 Level 5 on the Integrated Food Security Phase Classification scale (IPC).

21 https://www.wfp.org/news/gaza-grapples-catastrophic-hunger-new-report-predicts-famine-if-conflict-continues, March 5, 2024.

22 Gaza Strip Interim Damage Assessment, April 2024 (https://thedocs.worldbank.org/en/doc/14e309cd34e04e40b90eb19afa7b5d15-0280012024/original/Gaza-Interim-Damage-Assessment-032924-Final.pdf, accessed on April 2, 2024)

23 "Clearance revenues" are revenues collected by the Government of Israel and transferred to the Palestinian Authority after certain deductions have been made. Most clearance revenues are VAT and import duties, and they should be remitted on a monthly basis according to the Paris Protocol.

24 October 2023 salaries were paid at a rate of 50 percent. November salaries were paid at a rate of 65 percent and December salaries were paid at a rate of 60 percent.

Gaza's long-term economic trajectory faces grave challenges—not just because its fixed assets have been destroyed, but on account of the toll the conflict has taken on people: not only because of displacement, malnutrition, and overall health, but because of the impact on their mental health. Before the conflict, a study[25] by the World Bank found that 58 percent of the adult Palestinian population exhibited symptoms consistent with depression, and that trauma is reinforced by the economic disempowerment and the loss of sense of agency caused by high unemployment and a lack of economic prospects.[26] Depression symptoms affected 50 percent of adults in the West Bank and 71 percent in Gaza, the study found. The extreme stress associated with displacement and destruction during the current conflict is anticipated to worsen mental health among Palestinians—hindering full potential educational attainments and skills development and worsening long-term productivity. When people are closer to conflict—as they are now in Gaza—depressive symptoms broaden and intensify. Almost all Gazans can be presumed to have been exposed to a traumatic conflict event. The World Bank estimates that economic losses from mental trauma for 2022 were equivalent to roughly 8.9 percent of Palestine's GDP for that year.[27] The psychological burden of the current conflict is expected to exacerbate the negative effect of conflict on the economy, contributing to a vicious spiral of poor mental health, lower economic activity and productivity, sustained high unemployment, and poverty.

Unemployment is also predicted to suffer because physical displacement, security concerns, and broken infrastructure will limit employment opportunities over the medium-term. Segments of the population that are already vulnerable, including women and marginalized groups, will bear a disproportionate burden, because of more difficulties in accessing education, healthcare, and economic opportunities than they already faced before the conflict.[28]

Regional impacts: Heterogeneous geographically and contingent on the evolution of the conflict

Five months into the conflict in the Middle East, the region continues to grapple with high uncertainty, which may worsen existing fragilities in several MENA economies. For example, in an economy of systemic regional importance such as Egypt, vulnerability to balance-of-payments crises could be aggravated by a longer-than-expected slowdown in maritime traffic through the Suez Canal, which has already hurt both the country's fiscal and external accounts. The assaults on ships that have caused disruptions in the Red Sea could further lengthen shipping times and raise costs for several countries in the region. If geopolitical instability in the region increases, oil markets and capital markets could be affected, and foreign investors could be less willing to lend to the region.

Beyond the large direct impacts on the Palestinian economy, the magnitude of the MENA regional impacts will largely hinge on two elements: the conflict's duration and whether it expands. In a scenario of expanded hostilities, the MENA economies could be affected through such channels as commodities, especially energy; trade in goods and service; investment diversion; inflation; and currency depreciations that would, among other things, raise the cost of debt and refinancing. The following sections, however, assume a "confined scenario," in which the conflict in the Middle East remains primarily confined to Gaza and Israel. In such a scenario, the magnitude of the impact would reflect MENA countries economic exposure to the conflict.

The following section first presents such a taxonomy of countries in the region and then delves into the actual channels of transmission for the potential conflict impact.

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25 Palestinians' Psychological Conditions Survey 2022, World Bank. Available online at https://microdata.worldbank.org/index.php/catalog/5807, accessed on March 5, 2024.
26 According to the WHO-5 wellbeing index.
27 Ronzani et al., forthcoming. Prevalence of Depression and Associated Socio-economic Outcomes during Violent Conflict: A Matched Analysis for Palestine Using Nationally Representative Survey and Conflict Event Data. https://www.medrxiv.org/content/10.1101/2024.02.23.24303259v2, accessed on March 5, 2024.
28 The World Bank Annual Report 2023, available online at https://www.worldbank.org/en/about/annual-report/addressing-multitude-global-challenges, accessed on March 5, 2024.

Countries with negligible or indirect economic linkages

Many MENA economies (such as Algeria, Libya, those in the Gulf Cooperation Council, and Morocco) are likely to be relatively unaffected by the conflict because they have few economic linkages with Palestine or Israel. They could experience commodity price shocks and potentially an intensification of domestic tensions, but neither is likely to materialize if the conflict is contained. For instance, Morocco's direct trade links with Israel are very limited,[29] as are Libya's and Algeria's.[30]

MENA countries in fragile and conflict-affected situations (FCS), such as Yemen, may experience some—though indirect—effects, from trade shocks related to the Suez Canal crisis or to the potential diversion of international aid, which is a critical source of financing against structural external and fiscal deficits. In Yemen, oil exports scheduled for 2023 are now potentially earmarked for later in 2024, is now unlikely, due to the slowdown in peace negotiations amid the conflict. The resumption of oil exports is a crucial topic in the ongoing peace negotiations for Yemen, which, as of writing, have been slowed down due to the Gaza conflict and Houthi shelling of cargo ships in the Red Sea.

Neighboring countries

Neighboring countries (such as Jordan and Egypt) are more likely to be directly affected through such channels as tourism, energy commodities, fiscal pressures, and foreign exchange receipts. In Egypt, trade disruptions from the Red Sea assaults on shipping have already aggravated supply chain bottlenecks and contributed to inflationary pressures and shortages of staples (import backlogs in ports reportedly spiked to US$7 billion at the end of January 2024, up from US$3.9 billion at end-March 2023, because there was not enough foreign currency to clear goods from ports). In Jordan and Egypt trade in services—especially tourism—represents a major source of receipts and job creation. Additionally, street demonstrations or civil unrest spawned by the conflict in Jordan could affect its attractiveness as a tourist destination.

Neighboring countries do trade energy commodities with one other, which means that uncertainty around the availability and the price of gas from Israel could affect external balances and production chains: Jordan typically sources around 80 percent of its natural gas from the Leviathan field in Israel, and Egypt also imports from Chevron Corporation's Tamar field in Israel.

In Egypt, indicators show a sluggish industrial sector performance. The Purchasing Managers' Index signals a contraction of non-oil private sector activity and employment.[31] Unemployment worsened due to falling sales and economic uncertainty prompted enterprises to leave positions vacant, and this could be partially due to the conflict. But things reversed by December 2023, when employment figures began showing improvement. The heavier economic costs for Egypt, however, are in the Suez Canal crisis, and, to a lesser extent tourism.

Countries with distinct regional linkages

A group of MENA countries including Syria, Iran, Iraq, and Lebanon are additionally exposed economically for geopolitical reasons. Since the start of the conflict there have been targeted airstrikes on Syria, including the country's main airports, which resulted in damaged runways, grounded flights, and disrupted air travel. A protracted conflict could result in long-

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29 UN COMTRADE data report Moroccan imports from Israel represent less than 0.1 percent of total imports. The same is true of Moroccan exports to Israel.
30 International Trade Center (ITC), Trade Map database – www.trademap.org, accessed on March 5, 2024.
31 For 38 consecutive months, up to January 2024, the PMI averaged 48.2.

lasting infrastructure damage, potentially disrupting supply chains and raising logistics costs, as well as exacerbating inflationary pressure and currency depreciation.

Iran's economy remains vulnerable to a tightening of current U.S. sanctions on its oil exports, which could materially affect Iran's real GDP growth, public finances and severely strain its balance of payments, which could trigger a depreciation of its currency that adds to inflationary pressures.[32] In such a scenario, unless the drop in Iran's oil exports were to be offset by production increases in other oil exporting economies, the magnitude of any oil supply cut could increase global oil prices.

In Lebanon, cross-border shelling and military operations have been intensifying along the southern border since October 2023. The escalation in military confrontation in southern Lebanon has resulted in hundreds of casualties, injuries and mass displacement, and caused substantive infrastructural damage, and primarily affected the tourism and agriculture sectors, further weighing down on Lebanon's crisis-ridden economy. Even under a "confined conflict" scenario, the spillover effects of the hostilities constitute another large shock to a country already in a political and institutional vacuum and mired in a years-old socioeconomic crisis. About 20 to 25 percent of the active Lebanese population contributes to the agricultural sector and 20 percent of Lebanon's cultivated areas are located in the south of the country. Agricultural lands in the south have suffered substantial damage, including burning and contamination. Some estimates say that nearly 100,000 square meters of olive groves have been affected. Olives account for an estimated 7 percent of agricultural output in Lebanon. In addition, for a tourism dependent economy, the shock to tourism that started in Q4 of 2023 has knock-off effects for economic growth. Prior to the conflict, economic growth was projected— for the first time since 2018—to slightly expand thanks to a favorable summer tourism season and remittances following four years of sharp contraction, equivalent to 33.7 percent of real GDP between 2018–2022 and marking one of the worst economic downturns in modern history. However, as a result of the hostilities, the economy is expected to have contracted by 0.2 percent in 2023 primarily driven by the sharp shock to tourism spending undermining consumption growth, compounded by reduced business activity, and a disruption to trade activity, all materializing in Q4 of 2023 and continuing on to 2024.

Channels of Impact

Energy and financial markets

So far, both energy and the financial markets have been generally stable, despite sudden fluctuations immediately after the shock episodes. The spot price of oil and oil futures have been mostly steady, even declining since early October 2023. At the onset of the conflict, short-term gas futures in the European Union temporarily edged up, but quickly reverted to their pre-conflict levels (Figure III.3 Panel A and B). Financial markets also proved resilient, despite evidence of initial heightened stress in response to escalating geopolitical risks in the region. GCC capital markets fell[33] in the weeks immediately after the conflict started, but have since bounced back, buoyed by a global market rally since December 2023, have exceeded pre-conflict levels. In the case of oil importers such as Jordan, Morocco and Tunisia, capital markets barely reacted after the conflict broke out. (Figure III.3 Panel C and D).

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32 At the onset of the conflict in the Middle East, Iran's oil production was at its highest since the end of JCPOA in 2018. In September 2023 it reached 3.058 mbpd, compared to about 1.9 mbpd in 2020, and about 2.5 mbpd through 2022. As of February 2024, it stood at 3.1 mbpd.
33 Hovering in a range between -2 percent and -13 percent on November 1, 2023, compared to October 1, 2023. See full trend and sources in Figure III.3 Panel C.

Figure III.3 Energy and financial markets

Panel A. Oil Futures since the start of the conflict

US$ a barrel

— 10/2/2023 — 10/9/2023 — 12/1/2023 --- 3/8/2024 (latest)
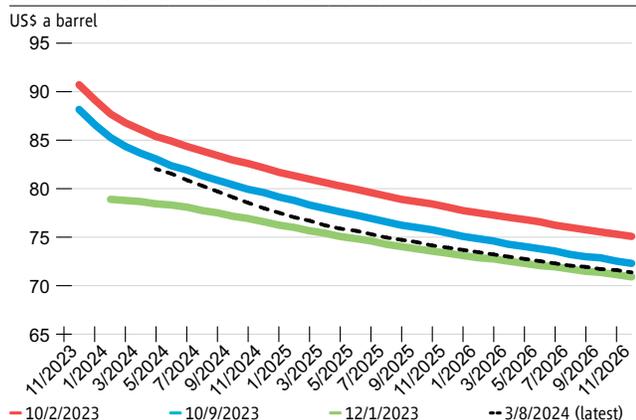
Panel B. EU Gas Futures since the start of the conflict

US$ 10,000 MMbtu

— 10/2/2023 — 10/9/2023 — 12/1/2023 --- 3/8/2024 (latest)
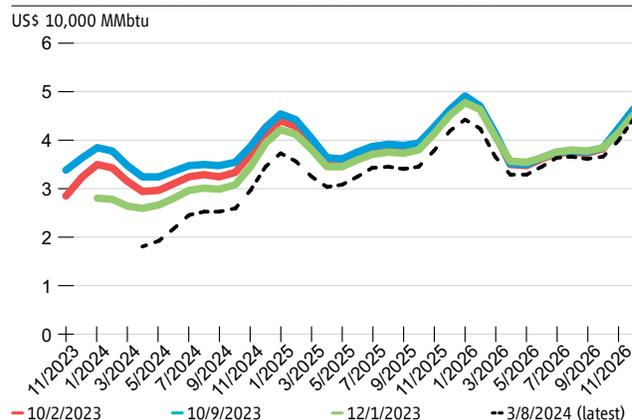
Panel C. GCC capital markets since October 1st 2023

MSCI indices, rebased (10/1/2023=100)

— Bahrain — Kuwait — Oman — Qatar
— Saudi Arabia — UAE
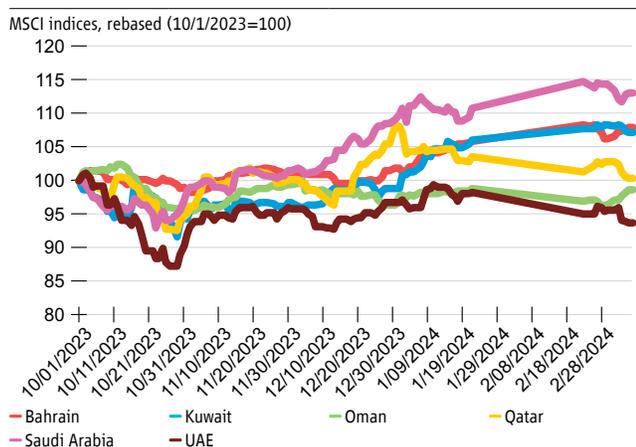
Panel D. Developing oil importers capital markets since October 1st 2023

MSCI indices, rebased (10/1/2023=100)

— Jordan — Morocco — Tunisia
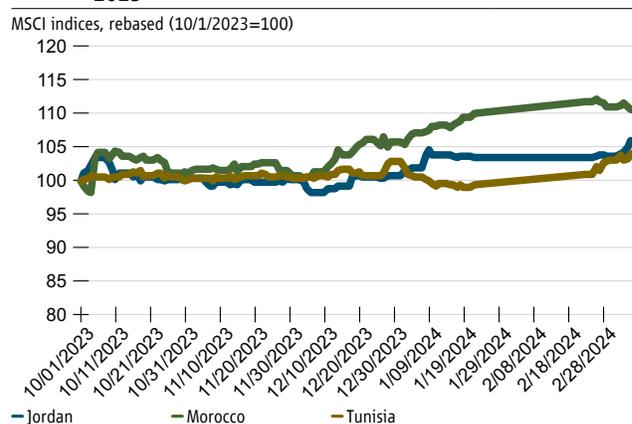
Sources: Authors' calculations based on Bloomberg L.P.
Notes: For Panels A and B, lines show futures contracts closing prices per date indicated, for Generic Oil Contracts and European Oil Contracts, while the dashed line shows the latest futures contract date (March 8, 2024). For Panels C and D, Capital Markets indices are rebased to October 10, 2023. The MSCI Country Equity indices are market capitalization-weighted indices aggregating the performance of companies representing 85 percent of each market, mainly consisting of large- and mid-cap companies. These indices are denominated U.S. dollars.

Food prices and inflation

International food prices have also been stable as of this writing, and any potential worsening would likely depend more on country-specific issues than effects from the conflict. The region remains highly vulnerable to food price fluctuations, as that can rapidly affect food access and poverty levels in a number of MENA countries. In Yemen, for instance, mounting concerns about higher import costs relate not just to the potential rise in shipping expenses (from rising war premiums and insurance costs from the Suez Canal crisis) but also from Yemen's own classification as a "high-risk" area.[34] In January 2024, the war risk premium for carriers active in Yemen increased sharply, from 0.5 to 0.7 percent of a ship's value to approximately 1 percent.[35] Coupled with supply shortages resulting from longer alternate sailing routes, higher premiums could spur inflation, in a country where the depreciation of the Yemini Rial (YER) already exerts upward pressure on consumer prices, particularly in areas controlled by the Internationally Recognized Government.[36]

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34 According to a 2021 UNDP assessment, war premiums, covering the potential loss or damage to vessels, resulted in insurance costs for shipping to the port of Aden port to be 15 times the regular rate. These additional insurance costs, totaling more than US$20 million per year, are ultimately borne by Yemeni consumers. "Houthi Red Sea Attacks Increase Shipping Costs - The Yemen Review", November and December 2023 - Sana'a Center for Strategic Studies. https://sanaacenter.org/the-yemen-review/nov-dec-2023/21551, accessed March 5, 2024.

35 "Yemen Import flows following the escalation in the Red Sea", ACAPS, January 2024. https://www.acaps.org/fileadmin/Data_Product/Main_media/20240119_ACAPS_Yemen_analysis_hub_Import_flows_following_the_escalation_in_the_Red_Sea.pdf, accessed March 5, 2024.

36 There are two exchange rates in Yemen. One related to the Internationally Recognized Government and another in effect in the Houthi controlled areas.

The military operations around the Bab El Mandab strait and the associated increase in freight costs could lead to a further uptick in inflation in the first half of 2024.

Social discontent

While the MENA region is not new to tensions, evidence shows that the risks that the Gaza conflict will worsen social instability are small, at least in the short term. Although civil protests markedly increased after October 7, they rapidly returned close to pre-conflict values (see Figure III.4). The available evidence emphasizes a period of increased regional tension, while suggesting that the risks of severely undermining social stability are still contained.

Figure III.4. Count of explosions/remote violence events vs count of protests events over time
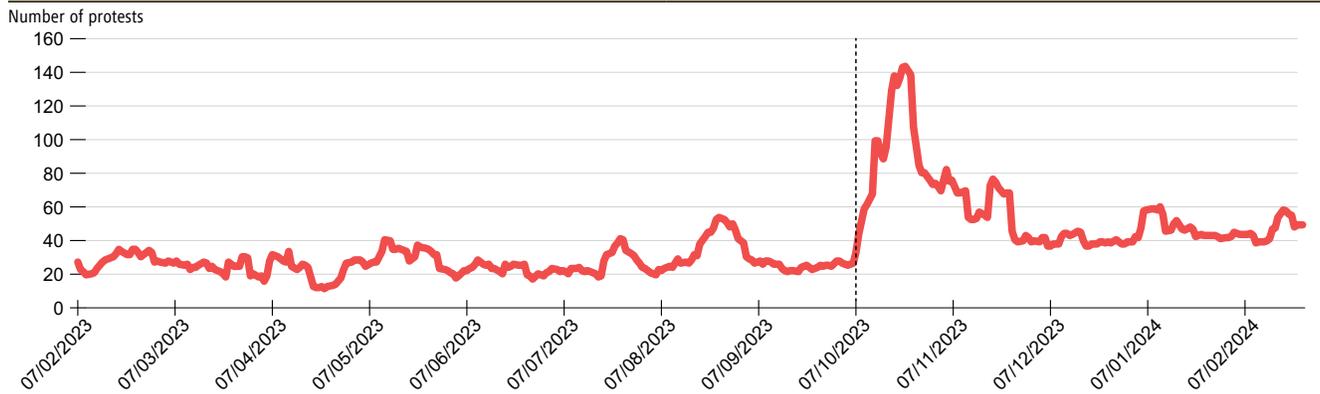
Source: Armed Conflict Location & Event Data Project (Raleigh et al, 2023).
Note: ACLED defines 'Protests' events as an in-person public demonstration of three or more participants in which the participants do not engage in violence, though violence may be used against them. Events include individuals and groups who peacefully demonstrate against a political entity, government institution, policy, group, tradition, business, or other private institution (ACLED, 2023). The line represents the seven-day moving average of the number of recorded protests in Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen.

Insurance sector

The conflict in the Middle East and the crisis in the Red Sea have also affected the insurance sector in the region; reinsurers have reduced their presence in MENA. In recent months, following the increased instability, global reinsurers reintroduced cancellation provisions into policies as a precaution against potential escalations in the Middle East conflict.[37] Such clauses would remove reinsurance coverage of assets if, for example, they were damaged or destroyed by military attacks. The insurance market has signaled a combination of higher premium prices coupled with reduced coverage to clients based in Israel and neighboring countries such as Lebanon and Jordan.[38] These developments also carry important fiscal implications for countries already grappling with fiscal rigidities in the region, because they could generate contingent liabilities, in which the private sector could expect to be bailed out by the public sector, because of inadequate or excessively costly insurance coverage.

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37 Financial Times, January 2024. Source: https://www.ft.com/content/2e7f89af-a3bb-46e6-b083-17f2199b632f, accessed on March 5, 2024.
38 Cfr. Aon, Reinsurance Market Dynamics report, January 2024 - https://www.aon.com/getmedia/1b3076ff-7c91-40f6-899b-3b6fda3f9be8/20240102-jan-rmd.pdf, accessed on March 5, 2024.

Diversion of aid

Rising Middle East tensions can worsen the economic challenges in MENA's fragile and conflict-affected countries, such as Yemen and the West Bank and Gaza, where fiscal and monetary difficulties are already high. Increased competition for limited foreign aid resulting from the confluence of several simultaneous crises across the world could reduce assistance to specific FCV countries and exacerbate the already acute fiscal crises that they are often confronted with. In the West Bank and Gaza, in a context of no access to traditional economic policy instruments—the only alternative sources of financing remain additional accrual of arrears and foreign aid. Given the level of destruction in Gaza, and the significant ripple effects on the entire Palestinian economy from the ongoing conflict, aid will reasonably continue to play an irreplaceable role in supporting the PA, especially in the short-to-medium term. In these fragile contexts, the aid influx not only helps respond to humanitarian crises but serves to mitigate or prevent adverse social and economic consequences resulting from much-needed reform efforts. For this reason, in these landscapes having adequate and reliable foreign assistance is an indispensable component for achieving development goals.

Importantly, any disruption to aid could exacerbate existing struggles in countries afflicted by fragility, conflict and violence with the risk of potentially worsening poverty, because the affected populations are often heavily reliant on aid, and have exhausted their coping mechanisms.[39] Destructive coping mechanisms—such as withdrawing children from school, engaging in child labor, child marriage, and hazardous work—already are widespread and could rise further. For example, when the World Food Program (WFP) had humanitarian funding shortages in Houthi-controlled areas in Yemen in 2020, there was an immediate 15 percent increase in food insecurity. A recent report from the WFP underscores the expectation of a further deterioration in food security over the coming months in Yemen from the Red Sea assaults on shipping.[40] In Yemen, 90 percent of the population relies on imports for its domestic food staples, and remains highly vulnerable.[41]

Tourism: Recent regional instability tempered—but did not halt—a strong post-pandemic rebound

Preliminary data show that in 2023 the conflict prompted a year-end contraction in tourism to the MENA region, slowing otherwise strong growth in of the post-COVID-19 rebound. According to UN Tourism, the Middle East was the first region to return to pre-COVID tourism volumes—by early 2023—and has remained at the forefront of the global tourism recovery despite the Gaza conflict. It closed 2023 with tourist arrivals 22 percent higher than pre-pandemic levels.[42] The region would likely have ended the year with even stronger growth had the conflict not prompted year-end cancellations.

At the country level, flight statistics corroborate travel industry accounts of what happened initially after the conflict began—including cancellations, postponement, and rerouting of travel. Palestinian territories, Israel—and its most geographically proximate neighbors such as Jordan and Lebanon—were most affected. In the three weeks after October 7, flight bookings to the Middle East were 26 percent below 2019. Flight data are not available for the Palestinian territories, but Lebanon had a more than 20 percent reduction in estimated aviation passenger arrivals (a proxy for tourist arrivals) during October and November 2023 compared to the same period in 2019 (Figure III.5). Tourism in countries such as Jordan was improving relative to pre-pandemic levels until November 2023 when the number of aviation passenger arrivals fell below 2019 levels (Figure III.6).[43]

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39 Yemen, as an example, is confronted with a dire humanitarian crisis, with approximately 21.6 million people, about two-thirds of the population, urgently requiring humanitarian assistance. Presently, more than 17 million individuals suffer from food insecurity, with 3.5 million facing severe malnutrition.
40 WFP Yemen Situation Report #12, December 2023 (February 2024).
41 Previously, WFP cutting humanitarian funding in Houthi areas in 2020, led to a 15 percent increase in food insecurity.
42 https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism, accessed on March 5, 2024.
43 OAG Traffic Analyzer.

Figure III.5 Change in estimated aviation passenger arrivals, by tourism contribution to GDP, Oct–Nov 2019 vs 2023

2022 tourism, percent of GDP

Percent growth in estimated aviation passenger arrivals, Oct–Nov 2019 vs 2023
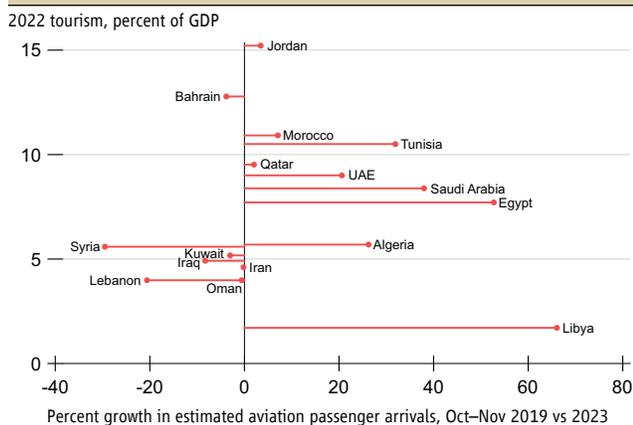
Source: OAG Traffic Analyzer.
Note: There are no reliable data available for Yemen and West Bank and Gaza.

Figure III.6 Change in estimated aviation passenger arrivals 2019 vs 2023, selected countries in MENA

2023 percentage recovery in 2019 estimated aviation passenger arrivals

— Egypt — Jordan — Lebanon — Morocco — Saudi Arabia — MENA
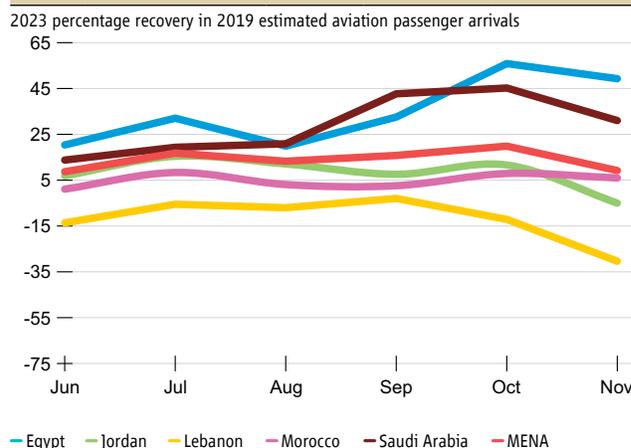
Source: OAG Traffic Analyzer.

This travel slowdown has been felt across the tourism value chain. Countries experienced traveler cancellations, cruise line ships redeployed away from affected areas during the peak cruise season, airlines curtailed services and international tour operators scaled back or postponed excursions. MSC Cruises canceled Israeli port calls until April 2024 and removed Aqaba, Jordan and Egypt from some itineraries.[44] The Jordan Hotel Association reported that about half of its hotel reservations were canceled in October 2023.[45]

Even if there is no regional escalation, lower tourism may have wider implications for economic activity through backward and forward linkages with other larger sectors—such as wholesale and retail trade, transport, and construction. As a result, especially in the MENA region, any reductions in tourism could spill over to other sectors.

Neighboring countries closest to the conflict (such as Lebanon, Jordan and Eqypt) are more vulnerable to tourism slowdowns, given the importance of the sector to their economies and the risk of spillovers from the conflict—as has occurred in Lebanon. Tourism is an important source of jobs and revenues in MENA, where 12 countries depended on tourism for more than 5 percent of GDP in 2022. Tourism revenues are a key source of hard currency for Egypt and had recovered to US$13.6 billion in FY23 (3.4 percent of GDP) after the COVID crisis. It is also worth noting that while a protraction of the conflict could jeopardize tourism revenues, a large number of visitors to the region are nationals living abroad, and their visits are less affected by regional geopolitical shocks than are those of traditional tourists.

Preliminary 2024 reports indicate a steady rebound in tourism confidence to destinations neighboring on the conflict. Global tour operators have recently reported double-digit year-on-year increase for family tours to Jordan in January of 2024.[46] Operators in Egypt, Jordan, and Oman reported a return to growth in bookings starting in January 2024, although Lebanon is experiencing a prolonged reduction due to intensifying military tensions. Historical observations in Lebanon indicate a significant initial decline in tourism during periods of conflict, followed by gradual recovery after the conflict subsides. For example, for the first two months after the 2006 Lebanon-Israel conflict, there was a 40 percent reduction in tourist arrivals in Lebanon but for the year as a whole tourist arrivals were down only 6 percent from 2005.[47] However, regional tourism may be susceptible to larger future disruptions if instability continues or spreads across

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44 New York Times, https://www.nytimes.com/2023/11/30/travel/tourism-israel-jordan-lebanon-egypt.html, accessed on March 5, 2024.
45 https://johotels.org/news-letter/, accessed on March 5, 2024.
46 "Intrepid Travel" reported, for instance, a 22 percent increase in that period.
47 S&P Global, January 2024, MENA Tourism Likely to Take a Hit from Israel-Hamas War.

the region. Risks include recent incidents in Syria, in Lebanon, in Iraq, and in the Red Sea Houthi attacks. The United States, Canada and other countries have also issued travel advisories for several countries—including Egypt, Jordan, and Lebanon—which may impact travel considerations and inform tour operator risk and insurance profiles.

At a global scale, the conflict's impacts resulted in a reduction of confidence. The travel analysis firm ForwardKeys reported a 5 percent year-on-year fall in flight bookings to all regions immediately after October 7, 2023.[48]

The effects of the Suez Canal crisis

Traffic in the Red Sea has decreased notably since the Houthi rebels in Yemen signaled a readiness to escalate hostilities in November 2023. The attacks triggered a chain reaction from commercial actors and foreign countries that included:

- increased shipping and insurance costs, and the rerouting of vessels and trade away from the Red Sea.
- added maritime security measures that were ramped up in mid-January to include airstrikes by the United States and Great Britain on sites in northern Yemen.
- designation of the Houthis as a Specially Designated Global Terrorist (SDGT) by the United States, effective February 16, 2024.

While most attacks by the Houthis have not severely damaged vessels, many shipping companies have decided to divert towards the Cape of Good Hope. In 2023, the Suez Canal handled approximately one-eighth of all global shipment trade, including roughly 30 percent of the world's container traffic.[49],[50] As major companies steered away from the Red Sea, trade volumes on this route declined by 42 percent between the end of December 2023 and early-February 2024.[51] Similarly, International Monetary Fund data[52] point to a significant decline in daily traffic through the Bab El-Mandeb Strait since the onset of the conflict (Figure III.7). The number of cargo and tanker ships passing through Bab El-Mandeb stagnated in November 2023 before declining by 14 percent in December 2023 and by 57.6 percent in January 2024 compared to the average for the first 10 months of 2023—which was prior to the Red Sea escalation.[53]

Figure III.7 Shipping disruption

Panel A. Number of Ships traversing select chokepoints

Panel B. Drewry World Container Index
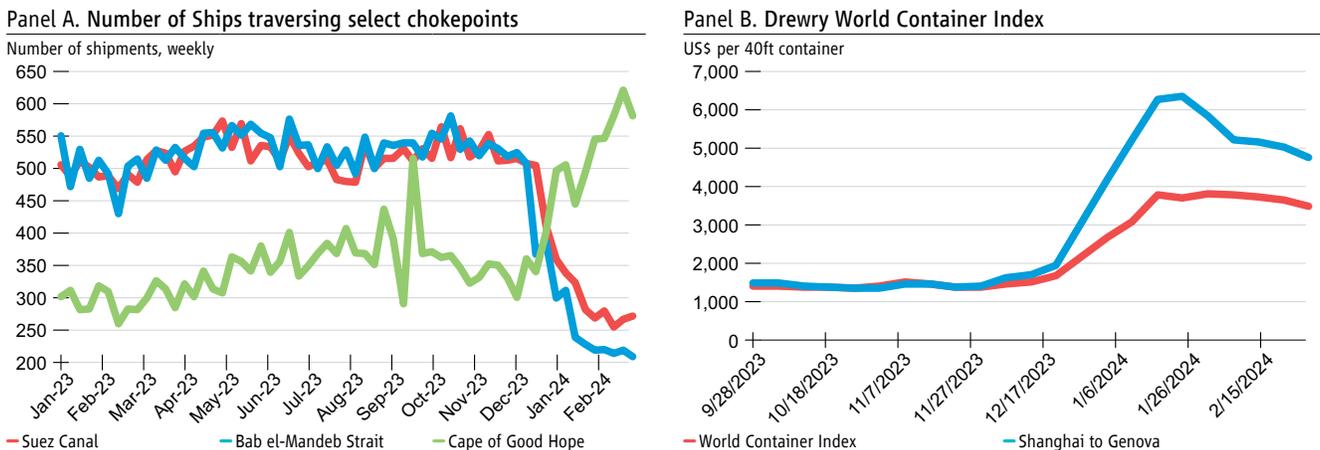
Source: International Monetary Fund, Portwatch, https://en.macromicro.me/charts/44756/drewry-world-container-index.

48 https://forwardkeys.com/israel-hamas-conflict-slows-the-recovery-of-air-travel-worldwide/, accessed on March 5, 2024.
49 https://unctad.org/news/red-sea-black-sea-and-panama-canal-unctad-raises-alarm-global-trade-disruptions, accessed on March 5, 2024.
50 IMF (2024), Middle East and North Africa: Conflict Compounding Economic Challenges, January 2024.
51 UNCTAD. See Figure III.7.
52 Port Watch, https://portwatch.imf.org/, accessed on March 5, 2024.
53 Data reported for January 2024 are available up to the 25th.

The attacks in the Red Sea had repercussions on shipping traffic through the Bab al-Mandeb strait and the Suez Canal, but the global container shipping industry has shown resilience in absorbing the resulting capacity shock. The outlook may change significantly, however, if the shock persists. Major freight carriers such as Maersk and Hapag Lloyd have halted operations through the Suez Canal. This diversion adds more than 3,000 nautical miles and 7 to 10 days to a typical shipping journey between Europe and Asia. As a consequence, regional supply chains have been strained, experiencing extended lead times and increased demand for shipping capacity. As a result, spot prices for shipping have risen across specific routes, particularly those linking East Asia and the Mediterranean Sea.[54] The World Container Index surged by 170 percent between November 30, 2023 and February 15, 2024—especially for routes traversing the Red Sea, such as Shanghai to Genoa, which increased by 270 percent in the same period (Figure III.7). While this reflects an increase in the spot rates and the marginal cost of container shipping for these routes, average shipping rates have not seen such a dramatic rise because a large portion of global shipping contracts were signed before the recent disruptions, January and February generally have softer seasonal demand, and the majority of shipping companies have expanded their fleets and are better able to cope with shocks than they were during the 2021 supply chain crisis.[55] Shipping rates connecting the Mediterranean and East Asia began to show signs of moderating in the opening months of 2024 although remain well above pre-conflict levels. Continued instability in the region could worsen the outlook—especially if violent episodes or attacks persist into spring 2024, when global trade typically experiences a seasonal rebound. Still, if the re-routing of traffic away from the Suez Canal is short-term, it is less likely that the spike in shipping rates will translate into significant price hikes for consumers, both in the MENA region and globally. Increased shipping expenses are more likely to be reflected in the prices of imported goods if the duration and severity of the crisis are extended.

Egypt could suffer the largest fiscal effects from the combined effects of the Suez Canal crisis and the conflict in the Middle East, as a result of lower fiscal revenues and tourism receipts. The Suez Canal is a key source of foreign currency for Egypt, with receipts amounting to US$8.8 billion (25.0 percent of its net international reserves) in FY23. Recently, the Canal has granted selective rebates to enhance its competitiveness and to encourage passage of ships. Assuming an extended continuation of the shock at the end of 2023, a 40 percent decline in Suez Canal transit through 2024 would imply losses of US$3.5 billion in foreign currency revenues (about 10 percent of net international reserves, an amount that could cover slightly more than a half month of imports).

Figure III.8 Yemen Imports

Panel A. Container Imports (TEUs) Aden and Al Hodeidah
in thousand TEUs
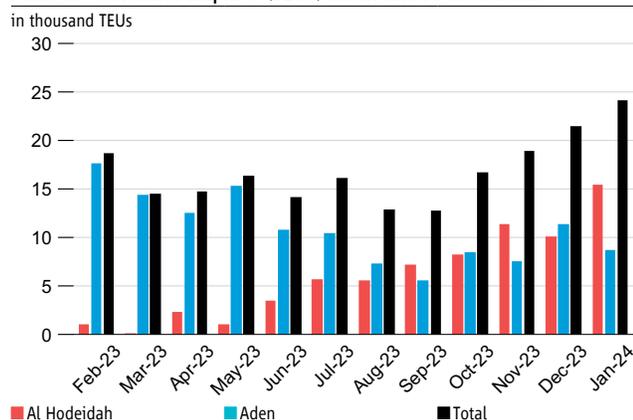
Panel B. Fuel Imports to Yemen
Fuel imports per port, in thousand metric tons
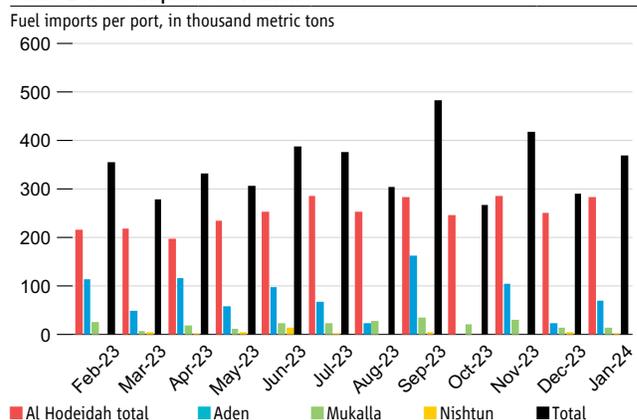
Sources: ACAPS and USAID.
Notes: For Panel A, container imports per port are measured in twenty-foot equivalent units (TEUs). For Panel B, Al Hodeidah Total is the combined total for fuel that was imported via Ras Issa oil terminal and Al Hodeidah port.

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54 The rate for a trip from Asia to Europe exceeded US$3,000 per 40-foot container in January 2024—a threefold increase compared to the lowest rate recorded in 2023 (approximately US$1,000).
55 Jean Francois Arvis, Cordula Rastogi, Daria Ulybina (2024, January 19). Will a prolonged rerouting of ships from Suez trigger a new supply chain crisis? Available at: https://blogs.worldbank.org/trade/will-prolonged-rerouting-ships-suez-trigger-new-supply-chain-crisis, accessed on March 5, 2024.

While Yemen's imports have shown so far relative stability, with continued conflict, there are increasing risks of supply shortage. Commodity stockpiling at Yemeni ports could be a sign of mounting market apprehension. However, commodity stockpiling at Yemeni ports could be a sign of mounting market apprehension. Commodity importers who operate in Yemen via the Ras Issa oil terminal or the Al Hodeidah and Saleef ports, are particularly exposed to regional shocks because they face the additional limit of being unable to adjust consumer prices in Houthi-controlled areas, which would otherwise help mitigate the effect of increasing operating costs. However, between October 2023 and February 2024, fuel and food imports to Yemen remained stable, and in January 2024 even surpassed the monthly averages of the previous 12 months. As of early February 2024, more than 460,000 metric tons of fuel was estimated to be in the pipeline at the Ras Issa oil terminal and Al Hodeidah port (either at anchorage or expected), and container traffic (Figure III.8) to Yemen increased in January 2024.[56] These developments suggest that traders dealing with Yemen are willing to tolerate increased risks and opt for smaller shipping lines and feeder vessels from nearby ports (such as Jebal Ali and Salalah). One potential reason for the high volume of fuel in the pipeline at major Yemeni ports is that there are heightened concerns over the impact of regional tensions on import flows into Yemen via the Red Sea in upcoming months.

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56 Data source: U.S. Agency for International Development.

CHAPTER IV THE EVOLUTION OF DEBT IN MENA

- Over the past decade, several MENA economies experienced increases in their debt-to-GDP ratios. In MENA, the level of indebtedness is much higher for oil importers than oil exporters. The debt-to-GDP ratio of the average MENA oil importing economy is much higher than that of the average EMDE.

- This chapter's novel accounting framework provides insights about the contributions of changes in nominal stocks of debt, growth, and inflation to the evolution of debt-to-GDP ratio across countries and over time.

- Growing out of debt seems to be more difficult for MENA oil importers, even when they are compared to other EMDE oil importers. For these economies, episodes of higher real GDP growth—which pushes the debt-to-GDP ratio down—coincide with faster debt accumulation which offsets the reduction in debt-to-GDP due to growth.

- For MENA oil exporters, episodes of high real GDP growth typically coincide with periods of smaller increases in nominal debt stocks, both of which contribute to a slower increase—or faster decrease—in the debt-to-GDP ratio.

- On average, MENA oil importers have been unable to inflate away their debt. For MENA oil importers, a reduction in the debt-to-GDP ratio attributable to inflation is typically accompanied by an almost equal increase in the debt-to-GDP ratio due to rising nominal debt stocks.

- For GCC oil exporting economies, large movements in the contribution of inflation to changes in the debt-to-GDP ratio relate to fluctuations in oil prices. This highlights the challenge faced by these countries regarding fiscal revenue and economic diversification.

This chapter unpacks the dynamics of debt in the MENA region. Debt has been rising in the region, even prior to the global pandemic, raising concerns about what is the appropriate mix of policies for countries to enact. Two strategies that are discussed in the public domain are growing out of debt and inflating it away. The evidence shows that either one is a mirage for oil importers in the region. This is largely due to exchange rate fluctuations, and unaccounted factors that are beyond the fiscal budget, often called stock-flow adjustments. These play a sizeable role and are to the detriment of debt transparency. As a result, the chapter highlights the need to address debt transparency by accounting for extrabudgetary items, especially for developing oil importing economies. Difficult tradeoffs must be made to address mounting debt. Primary balances are key, but only to the extent that they capture the true state of government finances. For GCC oil exporting economies, severe movements in nominal debt stocks are due to fluctuations in oil prices, which points to the need for fiscal revenue and economic diversification.

MENA's capacity to pay its public debt: The evolution of public debt relative to GDP

The ratio of gross public debt over GDP is an indicator commonly used to assess a government's capacity to repay its liabilities.[57] Because GDP reflects an economy's output within a national jurisdiction and can be taxed or otherwise

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[57] Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of IMF Special Drawing Rights, currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable (IMF, 2023a). However, it does not account for some important aspects of a country's liabilities. It does not consider the net debt position, which accounts for gross debt together with assets controlled by the government such as state-owned enterprises and sovereign wealth funds. For details on the distinction between gross and net debt, see Bloch and Fall (2015). Other dimensions not accounted for in the gross debt-to-GDP ratio include currency composition, jurisdiction of issuance, location of the creditors, maturity, yields, among others. For a more detailed description of the characteristics of public debt, see Arnone and Presbitero (2007); Panizza (2007) and Panizza (2008).

transformed into government revenues, the ratio indicates that larger economies have a higher capacity to repay a given amount of debt than do smaller economies. Whatever an economy's size, when public debt rises faster than output, the government's capacity to repay its gross debt should decline. But this does not always happen; it depends on how public debt is measured and reported as well as on an economy's expected future growth rate.[58]

High debt-to-GDP ratios can have important economic consequences. When governments borrow, they may crowd out private sector investment because rising interest rates may increase the cost of capital for the private sector (Gatti et al. 2021). In addition, high levels of debt may be accompanied by costly interest payments that gradually reduce the ability of governments to make other growth-enhancing public investments. Moreover, the effect of additional fiscal spending on GDP—the so-called fiscal multiplier—is smaller when public debt is high.

Over the past 10 years, debt-to-GDP ratios have increased from about 40 percent to 60 percent of GDP in emerging market and developing economies (EMDEs) around the world. The Middle East and North Africa (MENA) region is no exception (Figure IV.1, Panel A). There are large differences across countries in the MENA region, particularly between oil-importing economies and oil exporters (Figure IV.1, Panel B). On average, debt-to-GDP in oil-importing MENA countries was almost three times higher than that of MENA oil exporters and 50 percent higher than the average EMDE in 2023.

Figure IV.1 Gross debt-to-GDP ratio

Panel A. MENA and EMDEs

Panel B. Oil exporters and oil importers
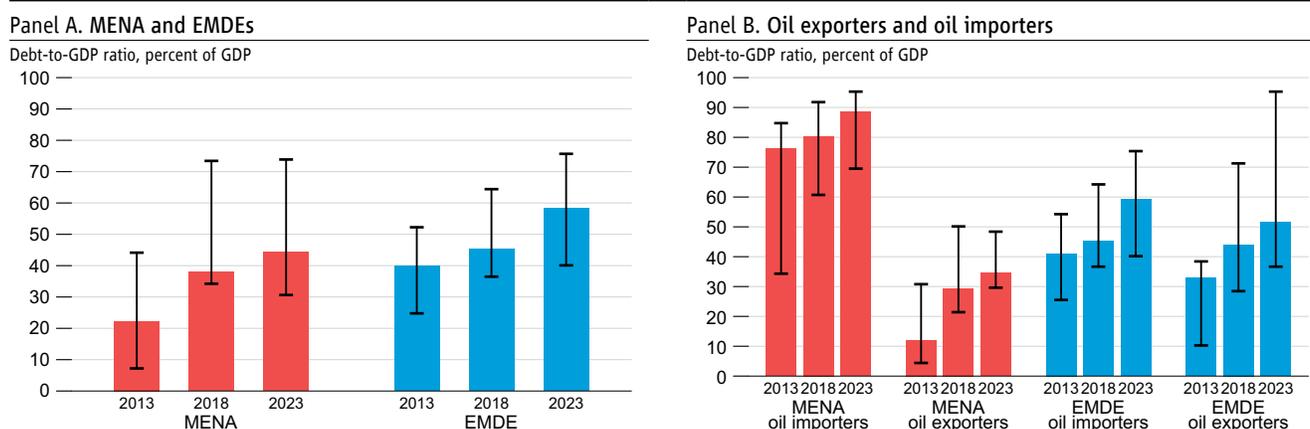
Source: Authors' calculations based on World Bank, *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, South Sudan, Sudan. EMDE oil importers include all other EMDEs where data are available. Group averages are GDP-weighted. Intervals denote the interquartile range.

Even before the global pandemic in 2020, the debt-to-GDP ratio was rising in MENA. By 2019, 16 out of 19 MENA economies had a higher debt-to-GDP ratio than they did in 2013. In MENA, the median economy's debt-to-GDP ratio increased by more than 23 percentage points over these six years—almost 4 percentage points per year on average. The pandemic exacerbated this trend, as declines in revenues together with pandemic support spending increased financing needs for many countries. In MENA economies, this ultimately resulted in a median increase in debt-to-GDP ratio of more than 11 percentage points in 2020. But between 2020 and 2023, as the pandemic slowly abated, the debt-to-GDP ratio fell in 13 of the 19 MENA countries. However, this reversion was partial for most of them; only eight of 19 countries had returned to pre-pandemic debt-to-GDP levels in 2023.

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58 Some countries report general government (local and central) debt while others use debt owed by the central government alone. Table A.I.1 in the appendix presents the definition of debt as reported by countries in the MENA region. For more details see OECD (2023), Government at a Glance 2023, OECD Publishing, Paris. Retrieved Jan 11, 2024 https://doi.org/10.1787/3d5c5d31-en, System of National Accounts 2008. USA: International Monetary Fund. Retrieved Jan 11, 2024, from https://doi.org/10.5089/9789211615227.071.

Among oil-importing economies in MENA, the median country experienced a net increase of almost 10 percentage points in the debt-to-GDP ratio between 2019 and 2023. In contrast, most MENA oil exporters experienced a net decrease in their debt-to-GDP ratio during the same period.[59] The 2022 oil price spike boosted revenues of oil exporters, greatly improving their fiscal balance, whereas rising commodity prices and tepid growth contributed to persistent fiscal deficits among MENA oil importers. This bifurcation within the region was labeled the "tale of two MENAs" in previous Economic Updates.[60]

The increases in debt-to-GDP ratios imply that stocks of debt have grown faster than real GDP growth and inflation. Even in countries that have recently grown relatively robustly with high inflation levels, such as Egypt, the debt-to-GDP ratio has remained stubbornly high if not increased further. This raises at least two questions:

- Can countries grow out of debt?
- Can an economy inflate its debt away?

This chapter unpacks these questions.

To shed light on the factors behind the recent rise in debt-to-GDP ratios among MENA countries, the following section describes an accounting framework that breaks down changes in debt-to-GDP ratios into three broad components: (i) nominal changes in gross debt, (ii) real GDP growth, and (iii) inflation, as captured by changes in the GDP price deflator. In turn, the first component, changes in debt, is further decomposed into subcomponents related to the government's fiscal balance and to changes in the value of pre-existing debt and other factors.

Accounting for changes in debt-to-GDP ratios

Changes in the debt-to-GDP ratio can be broken down into the contributions of changes in the stock of gross public debt expressed as a percent of the previous year's GDP, of real GDP growth and of inflation as measured by the GDP price deflator.[61] As nominal GDP grows—due to real (inflation-adjusted) growth in output, to changes in the price level (or both) the debt-to-GDP ratio falls because an unchanged amount of debt would be smaller relative to a now larger economy. In each period, these contributions are proportional to the debt-to-GDP ratio at that point in time. For example, if nominal GDP doubles from one period to the next, all else equal, the debt-to-GDP ratio would be cut in half. For a country with a debt-to-GDP ratio of 50 percent, this implies a decrease of 25 percentage points, while for a country with a debt-to-GDP ratio of 10 percent this implies a decrease of 5 percentage points.

In other words, the change in the debt-to-GDP ratio between two years can be broken down into the change in the nominal debt stock between the two years less the portion due to real growth and the portion due to inflation (See Appendix 3).

In the following two subsections, each of the components of the debt-to-GDP ratios in MENA are compared to those of other emerging market and developing economies (EMDEs).

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59 MENA oil importers includes Djibouti, Egypt, Jordan, Morocco, Tunisia and West Bank and Gaza. MENA oil exporters includes Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Lebanon, Libya, Syria, and Yemen are not included in the analysis.

60 Belhaj et al. 2022; Gatti et al. 2023a and Gatti et al. 2023b.

61 Inflation here refers to changes in the GDP price deflator—which roughly reflects changes in the price of all goods produced by an economy. It does not reflect changes in a fixed basket of goods—the consumer price index (CPI). The CPI, narrower than the GDP deflator, is more commonly used in news reports about inflation (so-called headline inflation). There can be a significant difference between the GDP price deflator and CPI in undiversified economies. This is the case for most oil exporters in MENA.

Changes in the stock of debt

Over the past decade, all MENA economies—oil importers and oil exporters—on average experienced increases in nominal debt that were similar to, or slightly below, increases in other EMDEs (Figure IV.2, panel A).[62] Within MENA, nominal debt increased slightly more among oil importers—excluding Egypt—than it did among oil exporters; the pattern was similar within EMDEs. However, MENA oil exporters had years in which nominal debt stocks barely increased (and even decreased) and years in which nominal debt stocks increased by almost 10 percentage points of the previous year's GDP.[63] This volatility could be attributed to the sensitivity of these countries' economies to changes in oil prices.

There are substantial differences within MENA oil importers and oil exporters (Figure IV.2, panel B). MENA oil importers—except Morocco and West Bank and Gaza—had higher increases in nominal debt on average than other oil-importing EMDEs. Egypt had the biggest increase in nominal debt—when expressed as a percent of the previous year GDP, an average of 18.5 per year for the period 2013–2023. The average for Egypt was driven up by two large spikes in FY2017 and FY2023, which coincided with currency devaluations. Even so, debt was still consistently above that of other MENA countries and EMDEs. Lebanon had a dramatic increase in nominal debt stocks between 2020 and 2023. This increase was due to the revaluation of debt denominated in foreign currency after the devaluation of the Lebanese Pound (see Box 3 for more details). The country defaulted on its government debt in March 2020.

Figure IV.2 Change in nominal stock of debt
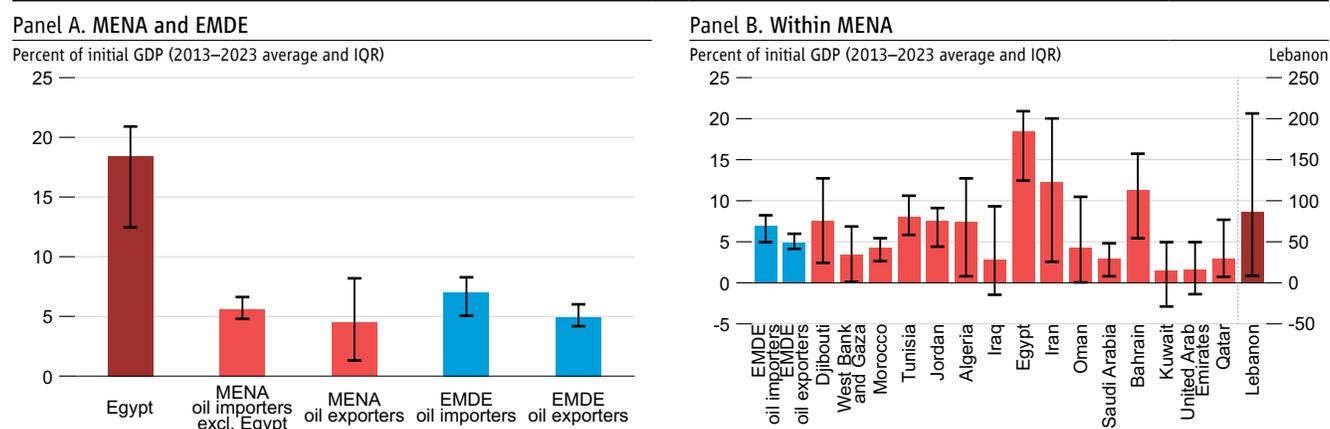
Panel A. MENA and EMDE — Percent of initial GDP (2013–2023 average and IQR)

Panel B. Within MENA — Percent of initial GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil importers include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria. EMDE oil importers include all other EMDEs where data are available. Panel A shows the GDP weighted average change in nominal debt stocks relative to the initial GDP of oil exporters and oil importers in the MENA region and EMDEs less MENA countries over the period 2013–2023. Intervals denote the interquartile range of the component over time. Panel B shows the average change in nominal debt stocks relative to initial GDP of MENA countries. Intervals denote the interquartile range.

In general, MENA oil exporters had smaller increases in nominal debt on average than EMDE oil exporters. The two exceptions among MENA oil exporters are Iran and Bahrain. They experienced increases in nominal gross debt of more than 10 percent of the previous year's GDP, on average, between 2013 and 2023.

Nominal debt can change as a result of primary deficits or surpluses; interest payments; and revaluations of debt denominated in foreign currency. Other factors—such as changes in asset positions, non-debt liabilities, statistical discrepancies—also can affect nominal debt and are often unaccounted for. They are jointly computed as a residual under the label of Stock Flow Adjustments (SFA).

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62 Figure IV.2 shows the changes in nominal debt expressed as percentage of *initial* GDP between 2013 and 2023. It represents what the change in debt-to-GDP would have been if the stock of debt had changed as it did, but nominal GDP had remained at its initial level, in other words without accounting for GDP growth.

63 The change in nominal debt stock from one year to the next relative to initial GDP in MENA oil exporters ranges from -0.8 percent (2014) to 8.5 percent (2020).

The contribution of these factors to debt accumulation in MENA compared with other EMDEs over the past 10 years is explored in the next several sections.

The role of primary fiscal balances

The primary balance is a major factor in changes in debt stocks. It is the difference between government revenues and expenditures. Fiscal surpluses can be used to pay off debt while deficits can be financed by debt issuance.[64]

Average primary deficits as a percent of the previous year's GDP in MENA oil importers were in line with other EMDEs between 2013 and 2023 (Figure IV.3, Panel A).[65] However, for MENA oil exporters, the primary deficit was almost two times higher on average and about six times more volatile than for EMDE oil exporters. Volatile fiscal balances in oil exporter countries are driven by their dependence on oil revenues and, in turn, reflect in volatile nominal debt stocks in these countries.[66]

Egypt has had a notably lower average primary deficit than other MENA oil importers and even oil exporters. Egypt's primary balance improved between 2013 and 2023 and has been in surplus since 2018.

Figure IV.3 Primary deficit
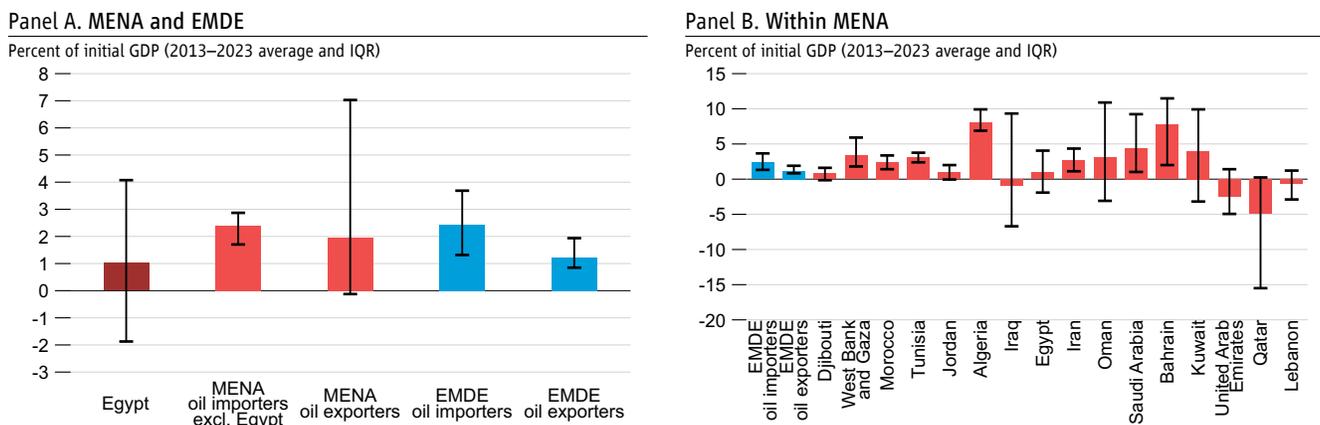
Panel A. MENA and EMDE
Percent of initial GDP (2013–2023 average and IQR)

Panel B. Within MENA
Percent of initial GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, Sudan. EMDE oil importers include all other EMDEs where data are available. Panel A shows the GDP weighted average primary deficit relative to initial GDP of the oil exporters and importers in MENA region and EMDEs less MENA. Intervals denote the interquartile range. Panel B shows the average primary deficit relative to initial GDP of MENA countries. Intervals denote the interquartile range.

Across the region, fiscal deficits widened considerably in 2020, due to higher pandemic-related government spending on healthcare and economic support and lower revenues as a result of widespread closures in response to COVID. Although primary deficits improved between 2021 and 2023, in many cases they remained above pre-pandemic levels. For example, primary deficits in MENA oil importers excluding Egypt, went from 1.7 percent of the previous year's GDP in 2019 to 4.4 percent in 2020. By 2023, the primary deficit improved to 2.3 percent of the previous year's GDP, although that was still higher than the pre-pandemic average. On the other hand, Egypt's primary balance was in surplus following the pandemic, increasing from 1.9 percent in 2020 to 2.1 percent in 2023. MENA oil exporters had a sharper widening of the fiscal deficit from 2.7 percent in 2019 to 8.0 percent in 2020. However, by 2022, their primary balances shifted to a surplus of 6.6 percent due to the rebound in oil prices after Russia invaded Ukraine in February.

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64 For a more detailed definition of primary balance, see OECD (2023), Government at a Glance 2023, OECD Publishing, Paris and IMF (2021), *Fiscal Monitor April 2021*, International Monetary Fund, Washington, DC.

65 As was the case for the changes in nominal debt stocks, the primary balance is expressed as a percent of the previous period's GDP to abstract from changes in nominal GDP. Typically, the fiscal balance is expressed as a percent of the current period's GDP.

66 MENA oil exporters are exceptionally reliant on oil—more so than even other oil exporters. In 2019, nine countries had oil revenues that exceeded 20 percent of GDP. Six were MENA economies.

The role of interest payments

A second factor affecting the evolution of public debt is interest payments.[67] MENA oil importers have had consistently higher interest payments as a percent of initial GDP than do MENA oil exporters (Figure IV.4, Panel A), because oil importers have higher debt levels and there is an almost mechanical relationship between debt stocks and interest payments.

Within MENA oil importers, interest payments have risen since the COVID pandemic. Excluding Egypt, the interest bill for MENA oil importers went from 2.6 percent of the previous year's GDP in 2020 to 3.0 percent in 2023. Egypt stands out for its substantially higher interest expenditure, averaging 10 percent between 2013 and 2023—which is associated with both high debt levels and high average effective interest rates–almost four times higher than other MENA oil importers.[68]

Figure IV.4 Interest payments
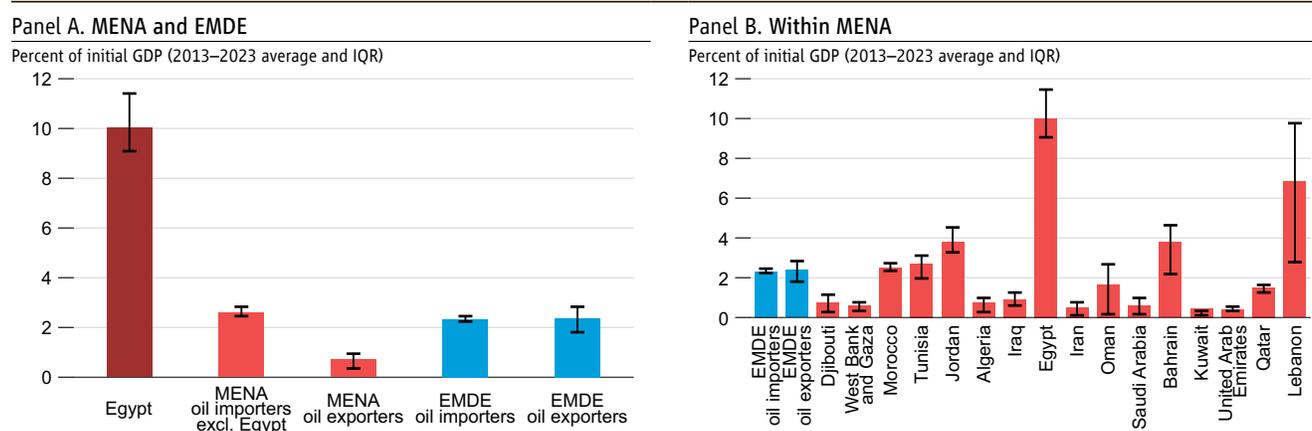
Panel A. MENA and EMDE

Percent of initial GDP (2013–2023 average and IQR)

Panel B. Within MENA

Percent of initial GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, Sudan. EMDE oil importers include all other EMDEs where data are available. Panel A shows the GDP-weighted average interest payments relative to initial GDP of the oil exporters and importers in MENA region and EMDEs less MENA. Intervals denote the interquartile range. Panel B shows the average interest payments relative to initial GDP of MENA countries. Intervals denote the interquartile range.

Interest payments as percent of initial GDP in Egypt peaked in 2018 at 11.97 percent and had been on a downward trend until it increased slightly from 8.8 percent in 2022 to 9.9 percent in 2023.

MENA oil exporters had a slight increase in their interest payments from 0.9 percent of the previous year's GDP in 2020 to 1.1 percent in 2022 before returning to 0.9 percent in 2023.

The increases in interest payments reflect the recent rise of interest rates in international markets during a global monetary tightening as well as changes in risk appetites, which impacted country-specific risk premia.[69]

Calculating the ratio of interest payments to the previous year's stock of debt—an indicator called the average effective interest rate (AEIR)—helps assess the burden of interest payments. MENA countries, with the exception of Egypt, had lower AEIRs than other EMDEs. This is true for both oil importers and oil exporters (Figure IV.5, Panel A). Egypt has had the highest AEIRs among MENA countries (Figure IV.5, Panel B).

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67 Interest payments on public debt include outlays on long-term bonds, long-term loans, and other debt to domestic and foreign residents.
68 The average effective interest rate captures how much interest is paid relative to the amount of debt. It is calculated as the ratio between interest payments in a given year and the stock of debt in the previous year.
69 IMF (2023b). *World Economic Outlook Update: Near-Term Resilience, Persistent Challenges*.

Figure IV.5 Average effective interest rates

Panel A. MENA and EMDE

Average Effective Interest Rate (%) (2013–2023 average and IQR)
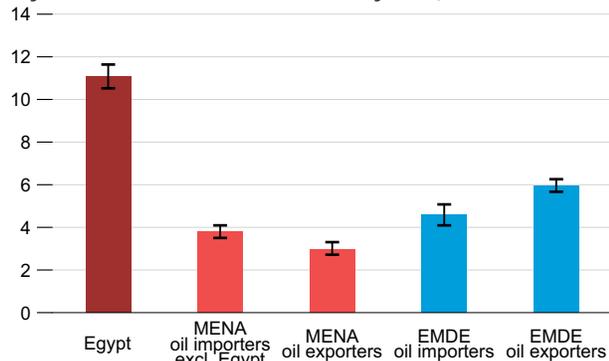
Panel B. Within MENA

Average Effective Interest Rate (%) (2013–2023 average and IQR)
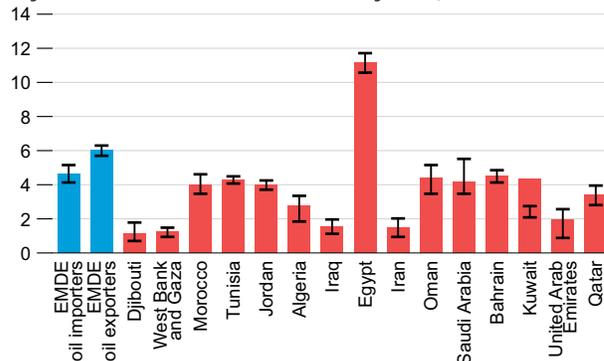
Source: Authors' calculations based on data from *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, Sudan. EMDE oil importers include all other EMDEs where data are available. Panel A: Shows the GDP-weighted average effective interest rate of the oil exporters and importers in the MENA region and EMDEs less MENA. Intervals denote the interquartile range. Panel B: Shows the average effective interest rate of MENA countries. Intervals denote the interquartile range.

The role of foreign exchange rate revaluation

The revaluation of debt denominated in foreign currency due to exchange rate fluctuations in MENA countries is generally lower than in other EMDEs.[70] Over the past decade, seven MENA countries—including Djibouti, Jordan, and Saudi Arabia—had fixed exchange rates, which meant they had little to no foreign exchange changes over the past 10 years and foreign exchange revaluations had no effect on debt-to-GDP ratios.

For countries that experienced foreign exchange fluctuations, the share of debt denominated in foreign currency matters. Egypt and Tunisia had the highest revaluation effects, but for different reasons. In Egypt, the revaluation effect was mainly due to large depreciations of the Egyptian pound in FY2022 and FY2023. According to official data, the Egyptian pound lost 50 percent of its

Figure IV.6 FX Debt revaluation

Percent of initial GDP (2013–2023 average and IQR)
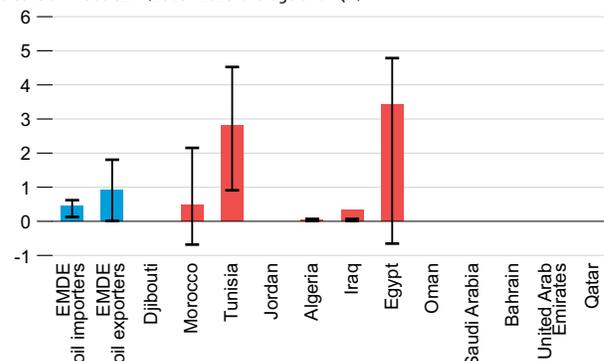
Source: Authors' calculations based on data from *Macro Poverty Outlook* accessed on March 1, 2024.
Note: FX = foreign exchange. EMDE oil exporters include Angola, Republic of Congo, Equatorial Guinea, Gabon, Malaysia, Mexico. EMDE oil importers include all other EMDEs where data are available. The figure shows the GDP-weighted average FX revaluations relative to initial GDP of the oil exporters and importers EMDEs less MENA and for individual MENA countries. Intervals denote the interquartile range.

value between January 2022 and December 2023.[71] Tunisia experienced a more modest 7.8 percent depreciation of its currency over the same period,[72] but so much of its debt is denominated in foreign currency—nearly 60 percent in June 2023—that a relatively small depreciation led to a sizeable revaluation effect (Figure IV.7, Panels A and B). On the other hand, because nearly all its debt is in local currency, Algeria's exchange rate fluctuations contributed almost nothing to changes in the debt-to-GDP ratio.

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70 For the MENA region, the data on percentage of public debt denominated in foreign currency were provided by World Bank country economists. When data were unavailable, the percentage of external debt to total public debt was used as a proxy.

71 Data on the exchange rates for the Egyptian pound versus the U.S. dollar were obtained from the Central Bank of Egypt's website at https://www.cbe.org.eg/en/economic-research/statistics/exchange-rates/historical-data. Accessed on January 17, 2024.

72 Data on the exchange rates for the Tunisian dinar versus the U.S. dollar were obtained from the Central Bank of Tunisia's website at https://www.bct.gov.tn/bct/siteprod/cours.jsp?la=AN#. Accessed on February 16, 2024.

Figure IV.7 Revaluation effects
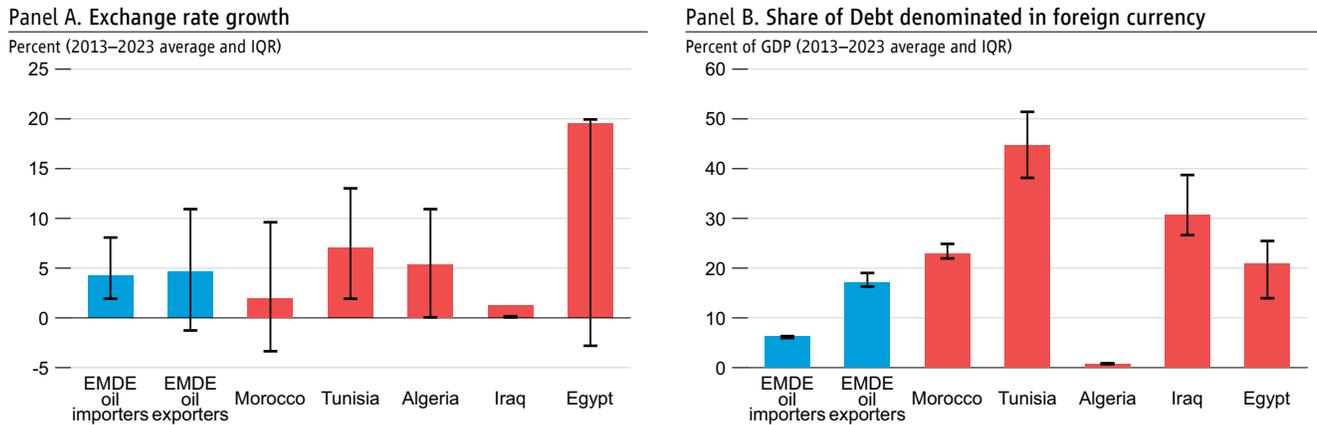
Panel A. Exchange rate growth

Percent (2013–2023 average and IQR)

Panel B. Share of Debt denominated in foreign currency

Percent of GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Notes: EMDE oil exporters include Angola, Republic of Congo, Equatorial Guinea, Gabon, Malaysia, Mexico. EMDE oil importers include all other EMDEs where data are available. Panel A shows the GDP-weighted average exchange rate growth for the oil exporters and oil importers EMDEs less MENA countries, and for five MENA countries. Intervals denote the interquartile range. Panel B shows the GDP-weighted average share of debt denominated in foreign currency as percentage of current GDP for the oil exporters and importers EMDEs less MENA, and for five MENA countries. Intervals denote the interquartile range. For the MENA region, the data on percentage of public debt denominated in foreign currency were provided by World Bank country economists. When data were unavailable, *Macro Poverty Outlook* data on the percentage of external debt to total public debt were used to compute the series.

The role of stock-flow adjustments

The last factor that can influence the nominal stock of gross debt is stock-flow adjustments (SFA), which are derived as a residual to take account of other, sometimes hidden factors. These other factors include statistical discrepancies, extra-budgetary expenditures and revenues, net acquisitions or sales of assets not reported in the budget, currency deposits, equity and investment funds, derivatives, and other adjustments—including liabilities excluded from the definition of government debt and changes in the valuation of debt (such as, issuances above or below nominal value, difference between interest accrued or paid, redemptions of debt above or below nominal value).[73]

A positive SFA component indicates that these additional factors contribute to an increase in gross debt. The SFA component reflects all changes in gross debt beyond what is accounted for by the government's fiscal balance and foreign exchange revaluation effects.

For example, a positive SFA component will be observed if debt is issued to finance expenditures that are not in the budget. In this case, the increase in gross debt will be bigger than what would be implied by the budget. In other words, extrabudgetary expenditures, captured by the SFA, drive changes in gross debt. The SFA component can also be positive when large fiscal surpluses are invested in a sovereign wealth fund rather than used to pay off gross debt. In this case, fiscal surpluses do not translate to lower debt; instead, the SFA component absorbs the surpluses and gross debt is higher than it would be had the surpluses been used to pay off debt.

An SFA Source Indicator can be calculated to help to distinguish whether SFAs are driving changes in debt or absorbing the fiscal balance and foreign exchange revaluation components.[74]

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73 Eurostat, "Stock-flow adjustment for the Member States, the euro area and the EU, for the period 2019–2022", last modified April 2023. Accessed January 17 2024, https://ec.europa.eu/eurostat/documents/1015035/16536421/SFA-PR-2023-Apr.pdf/ad4e15c0-a532-63d6-3f83-532d6429521b?t=1682009729585.

74 The indicator for stock-flow adjustments can be calculated:

$$SFA\ Source\ Indicator_t = log\,|\,D_t - D_{t-1}\,| - log\,|\,PB_t - I_t - \epsilon_t\,D^f_{t-1}\,|$$

If the SFA Source Indicator is positive, then the SFA component—whether positive or negative—is driving the changes in the stock of debt, while if the indicator is negative then it corresponds to the case where surpluses/deficits are absorbed by the SFA.

In practice, SFAs tend to cancel out over time with the average in several MENA countries close to zero (Bahrain, Tunisia, Morocco, and Oman). For a few countries, SFAs tend to be positive on average (Jordan, Iraq, UAE, Qatar, Djibouti, and Egypt). SFAs can also be very volatile (Figure IV.8, Panel A).

Figure IV.8 SFAs in the MENA region

Panel A. Average SFAs
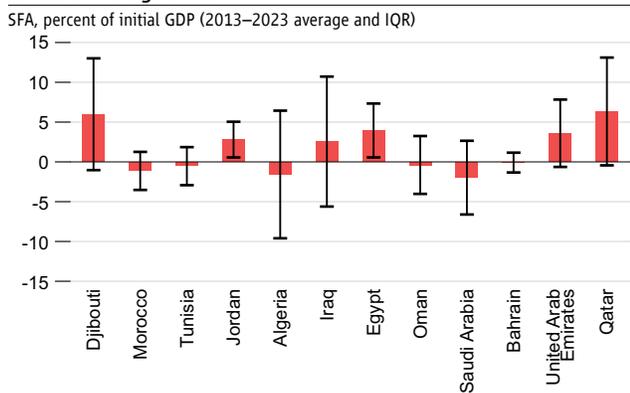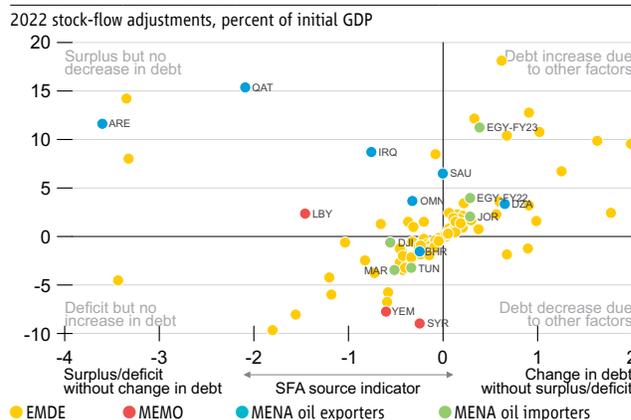
SFA, percent of initial GDP (2013–2023 average and IQR)

Panel B. Source of SFAs

2022 stock-flow adjustments, percent of initial GDP

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Kuwait, Iran, Iraq, Oman, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE include all other countries where data are available. Panel A shows the average stock flow adjustment relative to initial GDP of the oil exporters and importers in MENA region. Intervals denote the interquartile range.

In 2022, for example, many MENA oil exporters had positive SFA components and a negative SFA Source Indicator, which implies that they had surpluses that were not used to reduce their debt. On the other hand, oil importers such as Egypt and, to a lesser extent, Jordan had positive SFAs and a positive SFA indicator—which implies that the increases in debt were the result of unaccounted factors and were not related to the fiscal budget or reevaluation of debt from exchange-rate adjustments (Figure IV.8, Panel B).

Changes in nominal GDP

Previous sections examined the debt portion of the debt-to-GDP ratio. This section focuses on the role of changes in GDP. As discussed above, changes in *nominal* GDP are driven by two factors: real GDP growth and inflation. This analysis finds that, in MENA the contribution of real GDP growth to changes in the debt-to-GDP ratio was in line with that of other EMDEs. In contrast, the contribution of the inflation component differs between MENA and EMDEs. We turn to each of these.

The role of economic growth

Three factors determine the change in the debt-to-GDP ratio: (1) the change in the nominal debt stock, expressed as a percentage of initial GDP; (2) the contribution of real GDP growth; and (3) the contribution of the inflation rate to changes in debt-to-GDP ratio.

The contribution of real GDP, which will be referred to as the growth component, is the product of real GDP growth and the debt-to-GDP ratio. As an economy grows the debt-to-GDP ratio decreases, proportionally. For example, if real GDP doubles, all else equal, debt-to-GDP will be cut in half. So, a country with a 100 percent debt-to-GDP would have a decrease of 50 percentage points, while a country with 10 percent debt-to-GDP would have a decrease of 5 percentage points.

The average growth component's contribution over the period 2013–2023 was to reductions in the debt-to-GDP ratio for both MENA oil-importers, by 1.9 percentage points, and EMDE oil importers, by 2.2 percentage points (Figure IV.9). Even though MENA oil importers had a higher average debt-to-GDP ratio than did their EMDE counterparts (Figure IV.1, Panel B), their growth components are comparable. Because the contribution of real growth is proportional to the current level of indebtedness, this reflects that growth in MENA oil importers has been on average lower than in EMDE oil importers over the past decade (Belhaj et al. 2022).

Egypt exhibits the largest growth component, which reduced the ratio by 3.8 percentage points—the result of Egypt's high average debt-to-GDP ratio (around 90 percent) and its fast average real GDP growth of 4.2 percent per year during 2013–2023. Egypt consistently exhibits larger growth components than do other MENA oil importers and EMDE oil importers.

Oil-importing countries within MENA have had larger average growth components than MENA oil exporters during the considered timeframe. In MENA, real growth in oil importers has reduced changes in the debt-to-GDP ratio by an average of 1.9 percentage points per year, while for MENA oil exporters, the real GDP growth contributed -0.6 percentage points to the changes in debt-to-GDP ratio. This difference would be expected, because MENA oil importers had higher debt-to-GDP ratios than oil-exporting countries in MENA.

Figure IV.9 Contribution of Real GDP Growth to Changes in the debt-to-GDP Ratio
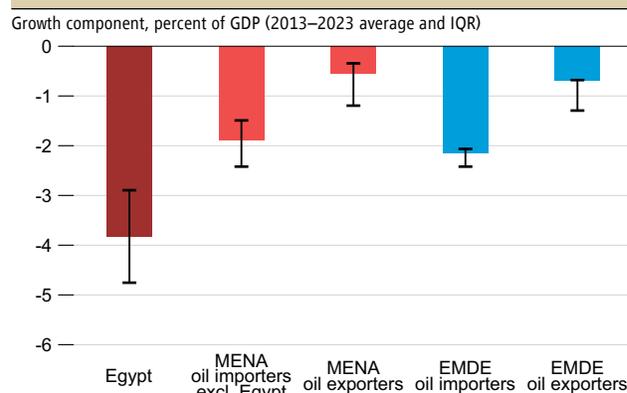
Growth component, percent of GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, South Sudan, Sudan. EMDE oil importers include all other EMDEs where data are available. The figure shows the GDP weighted average growth component of the oil exporters and importers in the MENA region and EMDEs less MENA. Intervals denote the interquartile range.

The role of price changes

The inflation component of changes in the debt-to-GDP ratio is the product of the inflation rate and the debt-to-GDP ratio. The inflation component captures the contribution of inflation to the changes in the debt-to-GDP ratio which—as with real GDP growth—is proportional to the current level of debt-to-GDP ratio.

Intuitively, high inflation erodes the value of the stock of debt, a phenomenon sometimes called "inflating debt away." By itself, an increase in the GDP price level (see Box 1) will reduce the debt-to-GDP ratio. As prices rise, the nominal value of GDP will increase, even in the absence of real growth. For the most part, debt represents a promise to repay a nominal amount of money regardless of its

Figure IV.10 The contribution of inflation to changes in the debt-to-GDP ratio
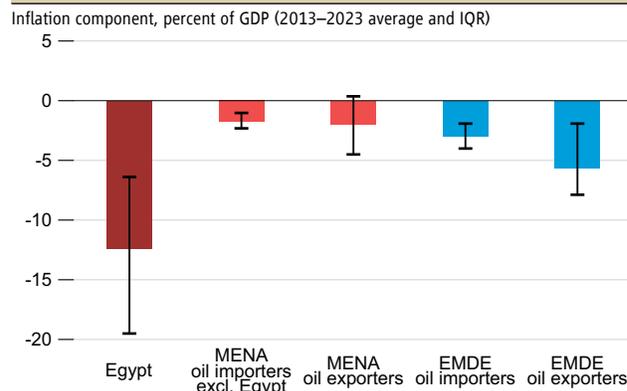
Inflation component, percent of GDP (2013–2023 average and IQR)

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, South Sudan, Sudan. EMDE oil importers include all other EMDEs where data are available. The figure shows the GDP weighted average inflation component of the oil exporters and importers in MENA region and EMDEs less MENA. Intervals denote the interquartile range.

purchasing power.[75] In short, for a given level of debt and real GDP growth, inflation makes the nominal size of the economy larger in comparison to its debt obligations.

Oil-importing countries within both MENA and EMDEs had a smaller average inflation component in the debt-to-GDP ratio than did oil-exporting countries (Figure IV.10). For MENA oil importers, the contribution of the inflation component to the changes in debt-to-GDP ratio was -1.8 percentage points, compared to -2.0 percentage points for MENA oil exporters. For EMDE oil importers the inflation contribution to the ratio was -2.9 percentage points and EMDE oil exporters had an average contribution of -5.7 percentage points.

Although MENA oil importers and MENA oil exporters had similar average inflation components there was greater volatility among MENA oil exporters (Figure IV.10).[76] The inflation rate in MENA oil exporters, as measured by changes in the GDP price deflator, closely correlates with changes in the price of oil.

Box 1   GDP deflator: The inflation rate that matters for debt sustainability

The inflation rate used to analyze debt sustainability is the change in overall GDP prices, reflected in the GDP price deflator, rather than changes in consumer prices—reflected in the consumer price index (CPI). The GDP deflator estimates the price level of an economy's total output, unlike the CPI, which estimates the price level of a basket of goods and services consumed by an average household. Figure II.10, shows the difference in inflation rates measured by the CPI and by the GDP deflator over past 10 years.

For diversified economies, such as several MENA oil importers, GDP inflation and CPI inflation are similar in magnitude and trends (Figure B1.1, Panel A).

However, in less-diversified economies, GDP price-level inflation can be different than CPI inflation. For MENA oil exporters, GDP inflation was much more volatile than CPI inflation (Figure B1.1, Panel B).

A 1 percent increase in the oil price is associated with a 0.32 percent increase in the GDP price deflator among MENA oil exporters, and a 0.4 percent increase among EMDE oil exporters. For oil-importing countries, there is no significant correlation between the GDP price deflator and oil prices. (See Appendix A.2)

Figure B1.1 GDP deflator
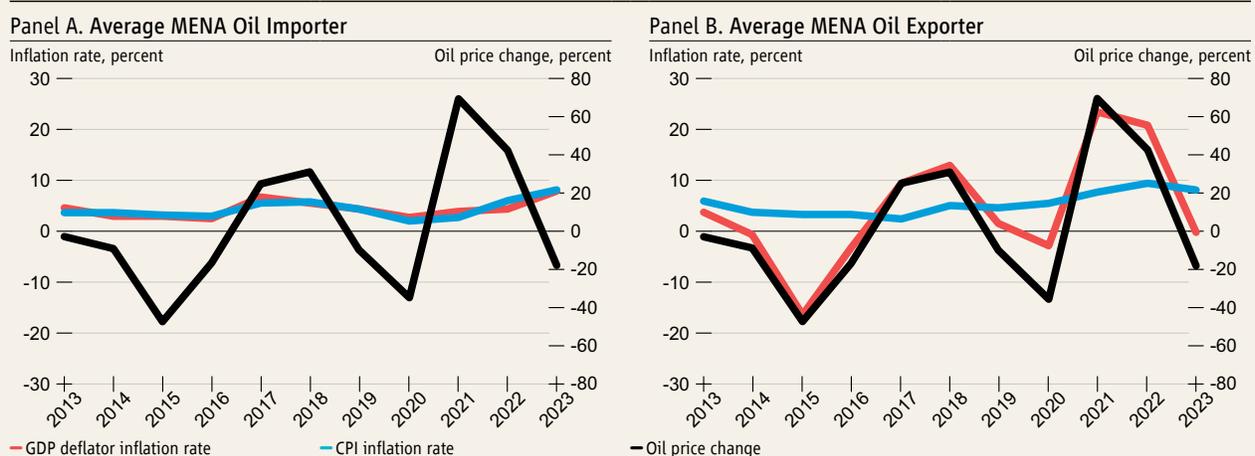
Panel A. Average MENA Oil Importer

Panel B. Average MENA Oil Exporter

Legend: GDP deflator inflation rate — CPI inflation rate — Oil price change

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Notes: MENA oil exporters include Algeria, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia, West Bank & Gaza. Time series for the average MENA oil-importing country and MENA oil-exporting country are computed using the simple average of CPI inflation and the simple average of the GDP deflator inflation for each group.

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75 Sovereign debt can be indexed to inflation. These instruments are more common in some advanced economies such as the Treasury Inflation-Protected Securities in the United States, the Index-linked Gilts in the United Kingdom and OATi/OAT€i market in France. In EMDEs, however, there is virtually no inflation-indexed sovereign debt.
76 The same higher volatility for oil exporters than for oil importers was observed for EMDEs.

Egypt had the largest inflation component contribution to changes in the debt-to-GDP ratio of around -12 percentage points. This was driven primarily by surging inflation after currency devaluations in 2017 and 2023. Inflation is an undesirable outcome for economic well-being and can come with increases in the value of the stock of debt that is denominated in foreign currency when it is caused by exchange rate fluctuations. Inflation can also be associated with increases in nominal debt due to its effects on interest payments, fiscal deficits, and even low growth.

The push and pull of changes in debt: The role of inflation and growth

This section brings together the three broad components of the change in debt-to-GDP ratio—one that relates to changes in the nominal stock of gross public debt, another to real GDP growth, and a third term that reflects changes in the GDP price deflator that was labeled the inflation component—and shows how they add up to account for the evolution of the ratio over time.

Over the past 10 years, nominal debt stocks have generally risen, pushing up the debt-to-GDP ratio. On the other hand, as economies grow and prices rise, real GDP growth and inflation tend to pull down the debt-to-GDP ratio. The push and pull of these factors mean that whether the debt-to-GDP ratio increases or decreases depends on whether or not increases in debt stocks outpace real growth and inflation.

In the year 2020 there was a global recession—real GDP contracted. That meant that real growth did not tamp down the ratio. Instead, negative GDP growth pushed up the debt-to-GDP ratio. Coupled with a large nominal increase in debt stocks—from increased sovereign borrowing to counter the effects of COVID—countries in MENA—and around the world—experienced sharp increases in their debt-to-GDP ratios.

In addition to a real GDP contraction in 2020, the GDP price deflator in MENA oil exporters fell. In undiversified oil-exporting economies, this price level is closely linked to the price of oil, which plunged in 2020. Altogether, sharp increases in nominal stocks of debt, a sizeable real GDP contraction, and deflation all contributed to about a 13-percentage-points increase in the debt-to-GDP ratio in MENA oil exporters.

In the years that followed, the main contributors to changes in the debt-to-GDP ratio in MENA were different for oil exporters and oil importers. In 2021, nominal debt stocks in oil-importing MENA economies continued to increase faster than they had before 2020, but the increase was offset by the contribution of high real GDP growth—as their economies bounced back from the effects of the pandemic. Together with a modest contribution from inflation, the net debt-to-GDP ratio was roughly unchanged that year. In contrast, increases in the nominal debt stock in MENA oil exporters slowed sharply in 2021 and were more than offset by high inflation, as oil prices increased to pre-pandemic levels. Real GDP growth was modest, but all told, debt-to-GDP for oil exporters fell by about 5 percentage points in 2021.

In 2022, the different dynamics between MENA oil exporters and MENA oil importers continued. On one hand, nominal debt stocks in MENA oil importers continued their fast growth—which was only partially offset by inflation and modest real GDP growth. That led to a small increase in the debt-to-GDP ratio in oil importers. MENA oil exporters, on the other hand, experienced a small increase in their nominal stock of debt, which was more than offset by record real GDP growth and high inflation that was driven by the increase in oil prices that followed Russia's invasion of Ukraine. Altogether, MENA oil exporters experienced a decrease in their debt-to-GDP ratio of about 7 percentage points—the second consecutive year the ratio fell.

Figure IV.11 Change in nominal debt, growth, and inflation
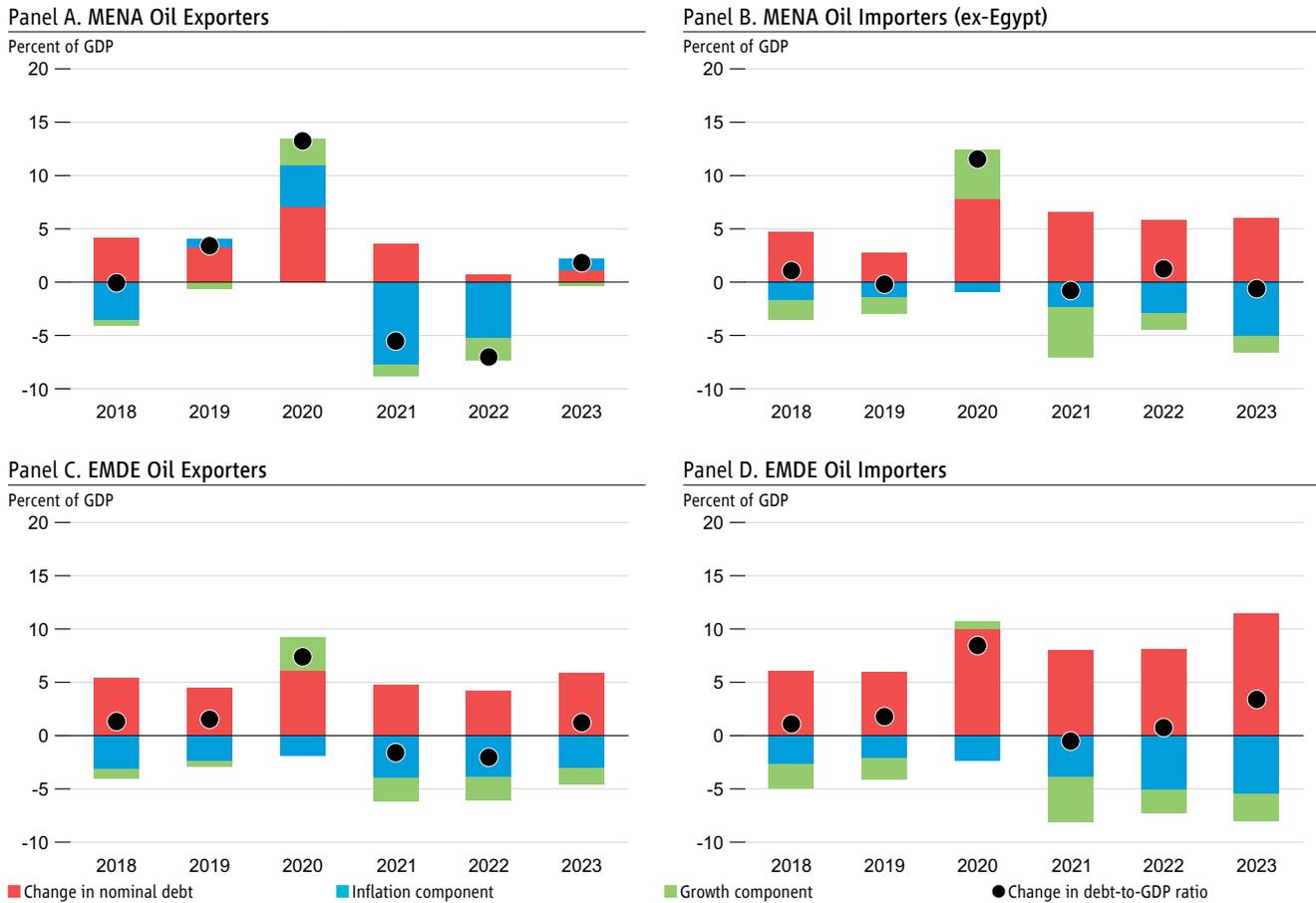
Panel A. MENA Oil Exporters

Percent of GDP

Panel B. MENA Oil Importers (ex-Egypt)

Percent of GDP

Panel C. EMDE Oil Exporters

Percent of GDP

Panel D. EMDE Oil Importers

Percent of GDP

■ Change in nominal debt   ■ Inflation component   ■ Growth component   ● Change in debt-to-GDP ratio

*Source:* Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Jordan, Morocco, Tunisia, West Bank & Gaza. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria. EMDE oil importers include all other EMDEs where data are available. The black dots represent the year-to-year change in debt-to-GDP ratio. The bars represent each of the individual components, which jointly add up to the change in the debt-to-GDP ratio. A positive value of a component signifies its contribution to an increase in the debt-to-GDP ratio, while a negative value indicates a contribution to a decrease in the debt-to-GDP ratio.

Higher inflation and an uptick in real growth among MENA oil importers in 2023 account for the observed decrease in the debt-to-GDP ratio, despite persistently large increases in nominal debt stocks. In contrast, as oil prices moderated in 2023 from a very high level the previous year, inflation and real growth among MENA oil exporters played hardly any role in the debt-to-GDP ratio. As a result, because nominal debt stocks were roughly unchanged, the ratio remained constant in 2023.

By the end of 2023, the overall debt-to-GDP ratio of MENA oil exporters was less than 1 percentage points above the 2019 level. The fall of the oil prices in 2020 partly accounts for the increase in debt-to-GDP that year, but the recovery of oil prices in 2021 and the spike in 2022 explain the subsequent fall in the debt-to-GDP ratio.

The debt-to GDP ratio of MENA oil importers in 2023 was more than 10 percentage points above pre-pandemic levels. The sharp increase in nominal debt stocks in 2020 persisted into the following years which meant that despite high real GDP growth in 2021 and high inflation in 2022, the debt-to-GDP ratio not only did not fall, it rose further in those years.

On one hand, MENA countries, especially oil importers, exhibit a smaller real GDP growth component than do EMDEs. Because MENA oil importers are more indebted than their EMDE counterparts, a smaller growth component can be attributed to lower rates of economic growth. Economic growth in the MENA region has been lackluster over the past two decades (Gatti et al., 2022). Several factors have contributed to low growth rates. Productivity growth has lagged, even

in Morocco and Egypt—the two economies with the fastest growth rates in the region—suggesting that not only has growth been low, but it has also been inefficient. Other factors include a deficit of governance, a lack of transparency, and insufficient accountability.

On the other hand, the inflation component in MENA oil-importing countries is about the same size as in other EMDEs. Again, because of the differences in the levels of indebtedness, this can be attributed to lower inflation rates in the MENA region. MENA countries had lower inflation rates during the period March–July 2022 than did EMDEs (Gatti et al., 2022), because to varying effect, MENA countries employed policies that reduced the pass-through of rising global prices of food and fuel to consumer prices. Policymakers in MENA intervened in product-markets—using tools such as price controls and consumption subsidies—to make the domestic price of specific tradable goods, such as food and energy, lower than the global price.

Box 2   Egypt: Decomposition of changes in the debt-to-GDP ratio

Egypt's debt-to-GDP ratio merits separate treatment, mainly because its trajectory before and after the pandemic differs from that of other MENA oil importers.[77] Before the pandemic, Egypt's debt-to-GDP ratio was steadily falling because high real GDP growth and inflation outweighed the nominal increases in debt.

In fiscal year 2021, nominal debt stocks increased twice as much as in the previous year, but inflation and real growth were modest. That led to an increase in the debt-to-GDP ratio of about 5 percentage points. The increase in the nominal debt stocks can be largely attributed to a sizeable interest bill, effects of a foreign exchange revaluation and stock-flow adjustments (SFAs). Primary deficits do not play an important role. Egypt has posted a positive primary balance since 2018.

In FY2022 and FY2023, large increases in nominal debt offset all other factors, including higher inflation and growth. In FY 2023, a devaluation of the Egyptian pound led to a substantial rise in the inflation component. However, this was surpassed by an even larger increase in nominal debt stocks, resulting in an increase in the debt-to-GDP ratio of about 7 percentage points. Other factors, captured by stock-flow adjustments, also played an important role in the increase in nominal debt stocks, particularly in FY 2023.

Figure B2.1 Decomposing the evolution of debt-to-GDP in Egypt

Panel A. **Nominal changes in Egypt's debt stocks, real GDP growth and inflation**
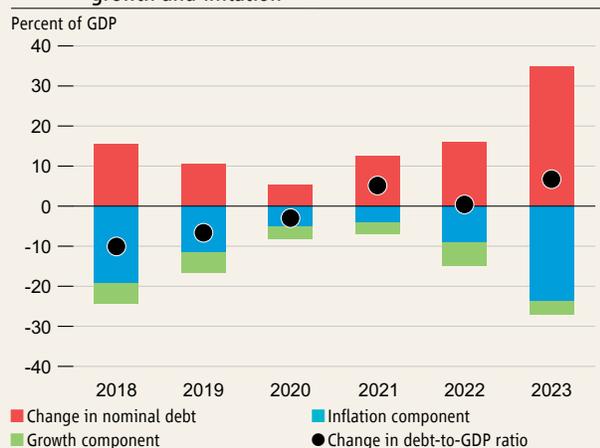
Panel B. **Subcomponents of the changes in Egypt's debt stocks**
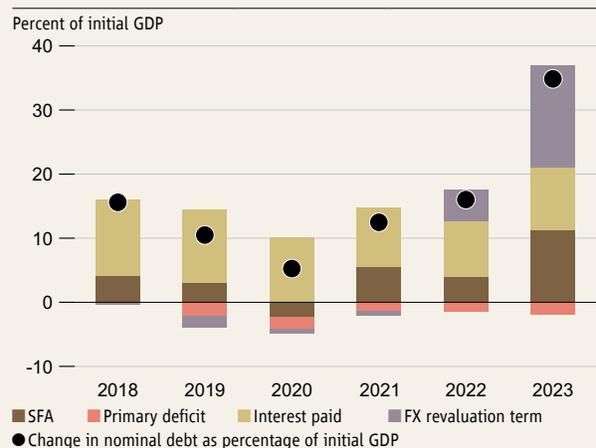
■ Change in nominal debt   ■ Inflation component   ■ SFA   ■ Primary deficit   ■ Interest paid   ■ FX revaluation term
■ Growth component   ● Change in debt-to-GDP ratio   ● Change in nominal debt as percentage of initial GDP

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: FX = foreign exchange; SFA = stock-flow adjustment. Panel A, the black dots represent the year-to-year change in debt-to-GDP ratio. The bars represent each of the individual components, which add up to the change in the debt-to-GDP ratio. Panel B, the black dots represent the nominal change in debt as a percentage of initial GDP. The bars represent each of the individual components, which add up to the nominal change in debt as the percentage of initial GDP.

77   Egypt also reports its data on a fiscal year basis, which complicates comparisons with other MENA countries, which report on a calendar-year basis. Egypt's fiscal year runs from July through June. For example, Egypt's fiscal year 2021 started on July 1, 2020 and ended June 30, 2021.

Box 3 Lebanon: Decomposition of changes in the debt-to-GDP ratio

Over the past four years Lebanon has been in a multifaceted crisis. Inflation soared to triple digits, while the Lebanese pound depreciated sharply. In March 2020 the Lebanese government defaulted on Eurobond debt service (Article 4 IMF, 2023c).

Before 2020, Lebanon already was dealing with high and steadily increasing levels of indebtedness (Figure B3.1, Panel A). The debt-to-GDP ratio went from 135 percent in 2013 to 155 percent in 2018. The contributions of inflation and real growth were overwhelmed by rising debt stocks, driven mainly by the interest burden (Figure B3.1, Panel B).[78]

In 2019, debt-to-GDP ratios rose about 17 percentage points, to 172.3 percent as the real economy contracted by almost 7 percent in the lead up to the default. After 2020, a big exchange rate depreciation led to a sharp rise in the value of foreign currency-denominated debt, but its effect on the debt-to-GDP ratio was offset by inflation.[79] Between 2020 and 2023, the debt-to-GDP ratio had a net increase of about 22 percentage points, from 179 percent to 201 percent.

Figure B3.1 Decomposing the evolution of debt-to-GDP in Lebanon
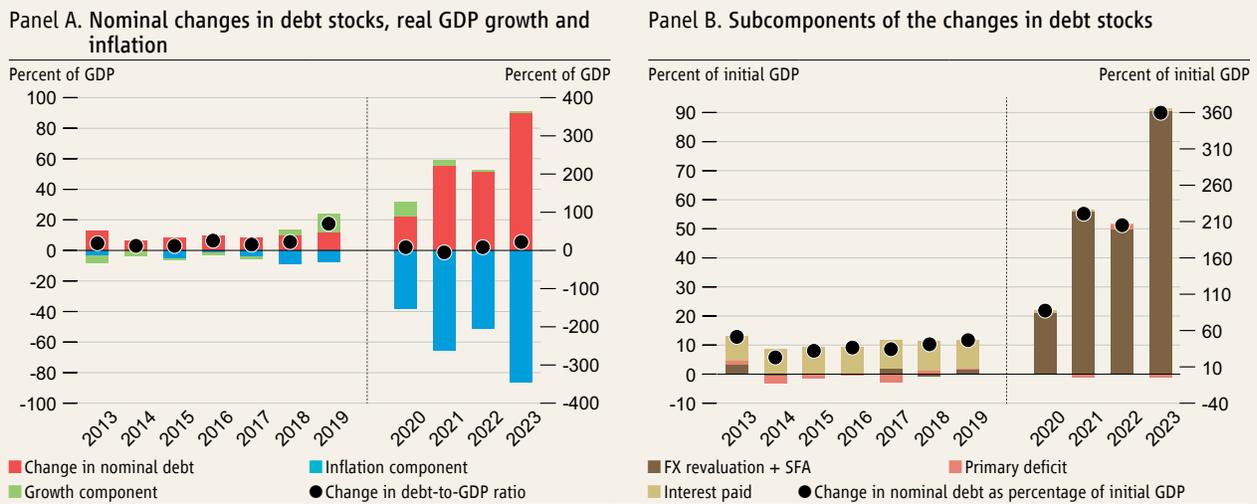
Panel A. Nominal changes in debt stocks, real GDP growth and inflation

Panel B. Subcomponents of the changes in debt stocks

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: FX = foreign exchange; SFA = stock-flow adjustment. Panel A, the black dots represent the year-to-year change in debt-to-GDP ratio. The bars represent each of the individual components, which add up to the change in the debt-to-GDP ratio. Panel B, the black dots represent the nominal change in debt as a percentage of initial GDP. The bars represent each of the individual components, which add up to the nominal change in debt as the percentage of initial GDP.

Digging deeper: Drivers behind changes in debt stocks

Changes in debt stocks accounted for a large portion of the increase in debt-to-GDP in 2020 as well as the differences in how the debt-to-GDP ratio evolved in oil-exporting and oil-importing countries in MENA. As discussed above, nominal debt stocks accelerated in 2020 both in oil-exporting and oil-importing economies in MENA. However, in the years that followed, the accumulation of debt quickly slowed to pre-pandemic levels in MENA oil-exporting countries. But among MENA oil importers, debt stocks increased faster after 2020 than before the pandemic.

As discussed above, changes in debt stocks can be broken down into different factors—the primary deficit, interest payments on the debt, foreign exchange revaluations, and a residual component (stock-flow adjustment) that captures other non-budgetary factors.

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78 Note that accrued interest payments on Eurobonds which have accumulated since the default in March 2020 are excluded.
79 Note that the decomposition looks at changes in debt expressed in local currency units, thus the depreciation of the Lebanese pound was associated with a sharp increase in nominal GDP and in the value of debt denominated in foreign currency.

Figure IV.12 Subcomponents of the nominal change in debt
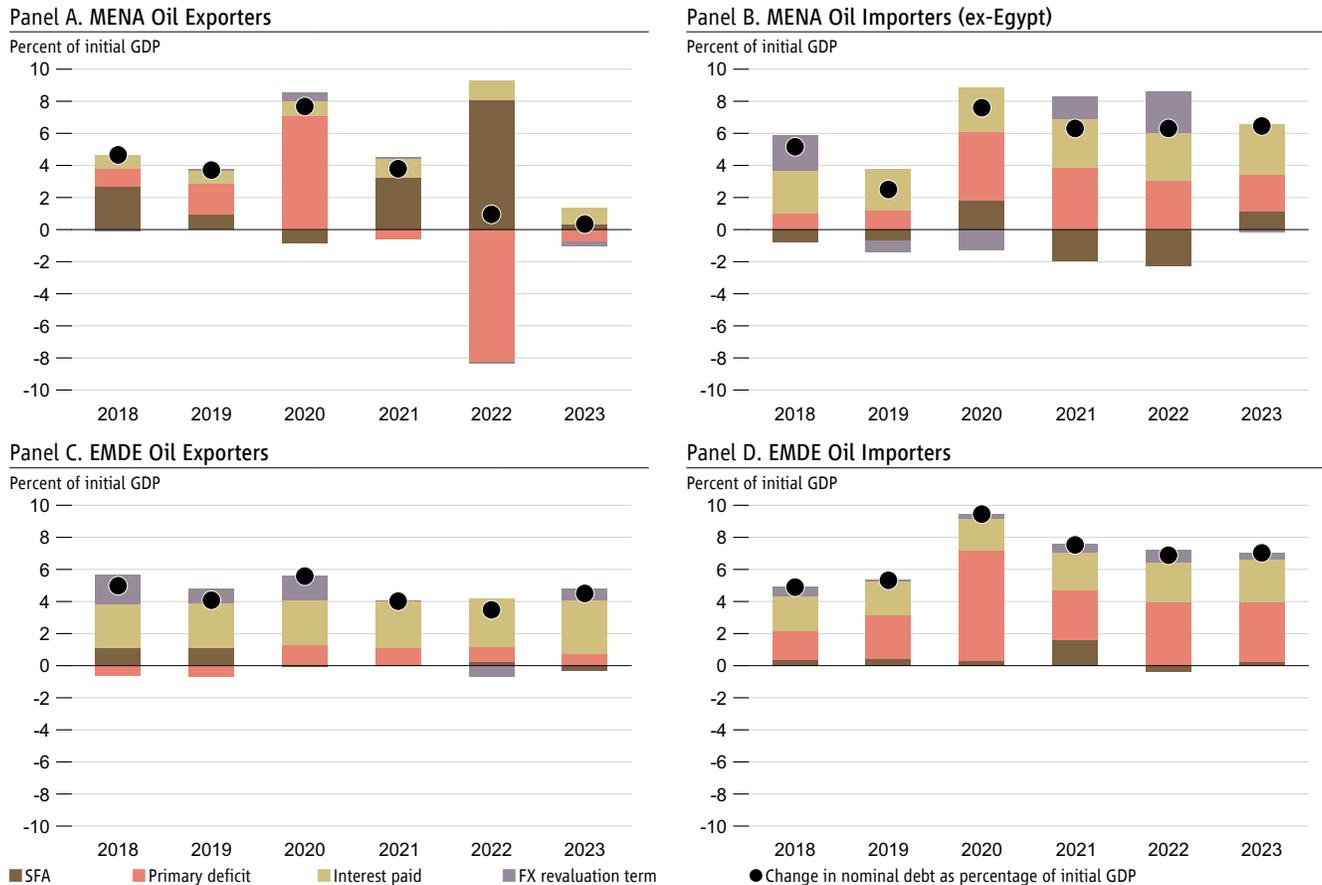
Panel A. MENA Oil Exporters

Percent of initial GDP

Panel B. MENA Oil Importers (ex-Egypt)

Percent of initial GDP

Panel C. EMDE Oil Exporters

Percent of initial GDP

Panel D. EMDE Oil Importers

Percent of initial GDP

■ SFA   ■ Primary deficit   ■ Interest paid   ■ FX revaluation term   ● Change in nominal debt as percentage of initial GDP

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: FX = foreign exchange. SFA = stock-flow adjustment. MENA oil exporters include Algeria, Bahrain, Iraq, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Jordan, Morocco, Tunisia. EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Equatorial Guinea, Gabon, Malaysia, Mexico. EMDE oil importers include all other EMDEs where data are available. Black dots represent the nominal change in debt as the percentage of initial GDP. The bars represent each of the individual components, which add up to the nominal change in debt as a percentage of initial GDP.

The sharp rise in the nominal stock of debt that occurred in MENA oil importers and exporters in 2020 stemmed from a sizeable increase in primary deficits. Expressed as a percent of the previous year's GDP, primary deficits were more than three times larger in 2020 than in 2019 or 2018. The increase in nominal debt stocks that year likely reflects both pandemic support spending and lower fiscal revenues.

MENA oil exporters quickly reined back primary deficits in 2021 and although nominal debt stocks continued to increase, they did so at a much lower rate than in the previous year. In contrast, the large primary deficit of MENA oil importers in 2020 persisted into 2021. Moreover, despite decreasing in 2022 and 2023, the primary deficit of MENA oil-importing countries remained, on the whole, twice as large as in 2018 and 2019.

In 2022, as oil prices spiked following Russia's invasion of Ukraine, MENA oil exporters posted sizeable primary surpluses. However, these surpluses were offset by extrabudgetary factors captured in the stock-flow adjustments subcomponent, which overall resulted in a marginal increase in nominal stocks of debt. While it is hard to ascertain precisely what those extrabudgetary factors were, it is probable that instead of using fiscal surpluses to pay down existing debt, the oil windfall was used to purchase assets. This is likely the case for many Gulf Cooperation Council countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates), which have sovereign wealth funds (SWFs) that serve this purpose.[80] However, it is possible that in some cases, a portion of this surplus went to off-budget spending.

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80 The implied rationale of using fiscal surpluses to invest in sovereign wealth funds (SWFs), rather than paying off debt, is that the risk-adjusted return on these funds exceeds the interest cost of the outstanding debt. Whether this is the case depends on how well the SWF is managed.

There are two important points. First, *the gross debt-to-GDP ratio is an imperfect indicator of the level of indebtedness*, especially for countries that have asset positions that can change abruptly from one year to the next. Despite the nominal increases in gross debt, it is likely that net debt (the difference between what a country owes and its asset holdings) in many oil-exporting MENA economies decreased substantially in 2022, which is missed by the analysis presented here. Second, *debt transparency is obscure when stock-flow-adjustments play such a sizeable role because the factors captured by this residual term cannot be accounted for*.[81]

From accounting to economics: Assessing changes in debt-to-GDP ratios due to interactions among inflation, growth, and debt

MENA oil importers have a limited ability to grow out of debt or inflate it away. Reductions in debt-to-GDP attributable to real GDP growth and inflation can be systematically offset, partially or entirely, by increases in the nominal stock of debt.

In previous sections, each factor affecting debt-to-GDP was analyzed in isolation. However, changes in the nominal quantity of debt, real GDP growth, and inflation are intertwined economically. Issuing cautions that the results hold if all other things remain the same is open to misinterpretation. For example, although it is correct to say that inflation would contribute to a reduction in the debt-to-GDP ratio were nothing else to change, it would be incorrect to conclude that countries can always inflate away their debt. To the extent that inflation is expected and anticipated, investors will account for it when purchasing sovereign paper and will demand higher nominal yields, which increases the sovereign's financing costs. In this case, although inflation reduces the debt-to-GDP ratio, the reduction can be offset by increases in nominal debt stocks due to higher interest payments (Garcia Macia, 2023).

In the analysis so far, changes in the debt-to-GDP ratio have been broken down into three main factors: changes in nominal debt, real GDP growth, and inflation. This breakdown helps explain how each of these factors contributes to changes in the debt-to-GDP ratio. But this is an accounting approach. Instead, it is important to note that these factors are not independent of one another; they are closely linked within the economy. Understanding how these factors relate to each other is key to obtaining a deeper insight into what drives changes in the debt-to-GDP ratio, moving from an accounting to an economic perspective.[82]

The final part of this analysis focuses on a quantitative review of how these factors have interacted over the past 10 years. This review aims to show how these different areas are correlated with each other, affecting the overall debt-to-GDP ratio.[83]

The following subsections will provide the details of the extent to which economies are able or unable to "grow out of debt" and "inflate debt away."

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81 Gatti et al. (2021) highlighted the importance of institutional reforms in MENA that might improve debt transparency. Higher accountability might lower borrowing costs when countries try to refinance their debt.

82 The relationships identified in the analysis cannot speak to cause and effect. Nevertheless, the analysis describes how the components move in tandem, which provides insight into the potential economic relationships between the factors.

83 An assessment of the systematic relation among the factors driving changes in the debt-to-GDP ratio is conducted by regressing the change in the nominal debt stocks on the contribution of real growth and inflation to changes in debt-to-GDP ratio. The regression allows for heterogeneity across country groups denoted by the subscript k.

$$\frac{D_{c,t} - D_{c,t-1}}{Y_{c,t-1}} = \sum_{\kappa} \beta_{1,\kappa} \left(- \frac{D_{c,t}}{Y_{c,t}} g_{c,t} \right)_{c \in \kappa} + \sum_{\kappa} \beta_{2,\kappa} \left(- \frac{D_{c,t}}{Y_{c,t}} \pi_{c,t} \right)_{c \in \kappa} + c + t + \varepsilon_{c,t}$$

The regression includes controls for both country and time fixed effects to account for time-invariant differences across countries and year-specific global factors that affect all countries equally in a given year. By controlling for these fixed effects, the regression zooms in on the specific relation of real GDP growth and inflation on nominal debt changes, and potentially how these may differ across country groups.

The coefficients of the regression speak to whether the relation between nominal changes in debt and the real GDP growth component or the inflation component offset or complement each other. A positive coefficient indicates that the two factors operate in the same direction while a negative coefficient indicates components that offset each other.

Debt and real GDP growth

The relationship between the contribution of real GDP growth and that of nominal changes in debt stocks to changes in the debt-to-GDP ratio is different for oil exporters and oil importers in MENA (Figure IV.13).

For MENA oil-importing economies, the data show that periods of higher growth—which tend to push down the debt-to-GDP ratio—coincide with episodes of more pronounced increases in nominal debt stocks, which push up the debt-to-GDP ratio. Table IV.1, shows that among MENA oil importers, for every additional percentage point decline in the debt-to-GDP ratio attributable to real GDP growth, almost half is offset by rising nominal debt stocks. This suggests that MENA oil importers have been severely limited in harnessing growth's potential to reduce indebtedness—a striking finding because economic growth is often considered the most sustainable way of reducing debt. This is in contrast to the case of other oil importers, where this offsetting pattern is absent.

For MENA oil exporters, episodes of high real GDP growth over the past decade typically coincided with periods of smaller increases in nominal debt stocks, both of which contribute to a slower increase—or a faster decline—in the debt-to-GDP ratio. In this sense, changes in the nominal stock of debt and economic growth complement each other, resulting in a positive co-movement between the contributions of the both factors to the debt-to-GDP ratio (Table IV.1 shows that a decline in debt stocks enhanced the contribution of a 1 percentage point increase in growth by another 0.1 percentage points).

Figure IV.13 Relationship between nominal change in debt and growth component
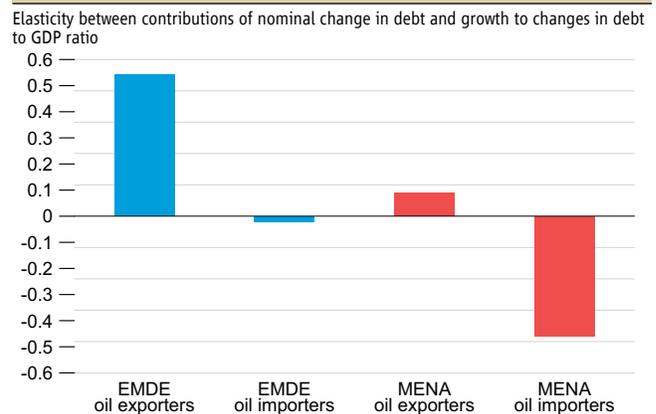
Elasticity between contributions of nominal change in debt and growth to changes in debt to GDP ratio

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iraq, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia. EMDE oil exporters include Angola, Republic of Congo, Equatorial Guinea, Gabon, Malaysia, Mexico. EMDE oil importers include all other EMDEs where data are available.

Table IV.1 Relationship between subcomponents of nominal change in debt and growth

Dependent Variable:	Nominal Change in Debt (1)=(2)+(5)+(6)+(7)	Primary Balance (2)=(3)+(4)	Revenues (3)	Primary Expenditures (4)	Interest Payments (5)	FX-Revaluation (6)	SFA (7)
growth x EMDE Oil Exp.	0.544	0.279	0.953	-0.673	0.067	0.672	-0.475
growth x MENA Oil Exp.	0.089	0.292	0.488	-0.196	-0.002	0.202	-0.403
growth x EMDE Oil Imp.	-0.024	0.076	0.164	-0.089	-0.014	0.023	-0.108
growth x MENA Oil Imp.	-0.461	0.066	0.129	-0.064	-0.074	-0.281	-0.171

Note: The table shows how much a 1 percentage point increase in the contribution of growth on the debt-to-GDP ratio is enhanced (a positive value) or offset (a negative value) by the contributions of another factor. For example, for MENA oil exporters, the change in debt stocks enhances the contribution of growth on the debt-to-GDP ratio by 0.089 percentage points, whereas among oil importers it reduces the effect by nearly half (-0.461).

Table IV.1 also shows that for MENA oil importers exchange rate revaluations and stock-flow adjustments are the main drivers of the negative relation between the divergent contributions of nominal changes in debt stocks and real GDP growth to changes in the debt-to-GDP ratio. In periods of higher real GDP growth, foreign exchange fluctuations and other extrabudgetary factors offset almost half of the decrease in the debt-to-GDP ratio attributable to real GDP growth. In contrast, the contribution of the fiscal balance to changes in the debt-to-GDP ratio seems to have little relation with that of the real GDP growth component. Table IV.1 shows the relation between the subcomponents of the nominal changes in debt stocks—the primary balance, interest payments, FX-revaluation, and stock-flow adjustments—and the growth component.

The story is different for MENA oil exporters. The primary balance and the FX-revaluation effect are the two subcomponents behind the positive relation between the contribution of nominal changes in debt stocks and real GDP to changes in the debt-to-GDP ratio. In other words, for every percentage point decrease in debt-to-GDP ratio attributable to real GDP growth, improvements in the primary balance and strengthening of the local currency combine to further reduce the ratio by almost a half percentage point. However, other factors—captured by the stock-flow adjustment—partly offset the contributions of these two subcomponents, leaving the overall relationship between the contributions of nominal changes in debt and real GDP growth a little less than a tenth (0.09) of a percentage point. This scenario is consistent with oil exporters directing a portion of the additional revenues towards asset accumulation rather than using it to reduce nominal stocks of debt.

Debt and inflation

The evidence points to an inverse relationship between the contributions of nominal changes in debt and inflation to changes in the debt-to-GDP ratio. That is, the regression analysis returns negative coefficients. The only exception to this pattern is among MENA oil exporters, where there seems to be no relation between the two components.

The broad pattern indicates that, generally, inflation and nominal changes in debt have opposite influences on the debt-to-GDP ratio. This means that periods of high inflation, which push down the debt-to-GDP ratio, often coincide with increases in the nominal amount of debt that offset some or all of the contribution of inflation to changes in the debt-to-GDP ratio.

This relationship is particularly important in MENA oil importers, for whom a 1 percentage-point decrease in the debt-to-GDP ratio attributable to inflation is typically accompanied by an almost equal 0.84 percentage-point increase in the ratio due to rising nominal debt stocks. In other words, rising debt stocks nearly neutralize the effect of inflation. For EMDE oil importers, the offsetting effect is less pronounced but still sizeable.

Figure IV.14 Relationship between nominal change in debt and inflation component

Elasticity between contributions of nominal change in debt and inflation to changes in debt to GDP ratio

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook* accessed on March 1, 2024.
Note: MENA oil exporters include Algeria, Bahrain, Iraq, Oman, Qatar, Saudi Arabia, United Arab Emirates. MENA oil importers include Djibouti, Egypt, Jordan, Morocco, Tunisia. EMDE oil exporters include Angola, Republic of Congo, Equatorial Guinea, Gabon, Malaysia, Mexico. EMDE oil importers include all other EMDEs where data are available.

For MENA oil importers, the exchange rate revaluation subcomponent accounts for almost two thirds of the total estimated offsets (Table IV.2). To make sense of this keep in mind the following observations. First, previous editions of the MENA economic update have shown that exchange rate depreciation can account for a significant share of CPI inflation.[84] Second, for oil-importing economies in MENA, inflation measured by the GDP price deflator is more closely linked to inflation in the CPI, which suggests that periods of higher inflation, which reduce debt-to-GDP, often coincide with episodes of currency depreciation, which increase the nominal value—in local currency—of debt denominated in foreign currency. The stock-flow adjustment subcomponent accounts for the rest of the offsetting relation between the inflation component and nominal changes in the stock of debt.

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84 Belhaj et al. 2022, Gatti et al. 2023a and Gatti et al. 2023b.

The picture is different for MENA oil exporters. The inflation component has a positive relation with the primary balance subcomponent, through higher revenues. For MENA oil exporters, the inflation component relates closely to the price of oil. As a result, an increase in the oil price will translate to higher inflation in the GDP price deflator, while also boosting revenues. That results in co-movement between the inflation component and the primary balance subcomponent. In other words, if driven by increasing oil prices, periods of high inflation will coincide with periods of lower deficits. Both will contribute to declines in the debt-to-GDP ratio. The opposite scenario prevails when oil prices fall. Then inflation will likely drop and revenues will deteriorate. In this case, both factors will contribute to increases in the debt-to-GDP ratio. This was the case in 2020 for oil exporters in MENA.

Table IV.2 The relationship between subcomponents of nominal change in debt and inflation							
Dependent Variable:	Nominal Change in Debt (1)=(2)+(5)+(6)+(7)	Primary Balance (2)=(3)+(4)	Revenues (3)	Primary Expenditures (4)	Interest Payments (5)	FX-Revaluation (6)	SFA (7)
inflation x EMDE Oil Exp.	-0.191	0.318	0.080	0.239	-0.090	-0.215	-0.204
inflation x MENA Oil Exp.	0.010	0.534	0.642	-0.108	-0.035	-0.040	-0.449
inflation x EMDE Oil Imp.	-0.712	0.036	0.236	-0.200	-0.060	-0.294	-0.393
inflation x MENA Oil Imp.	-0.840	-0.023	0.183	-0.207	-0.072	-0.527	-0.217

Note: The table shows how much a 1 percentage point increase in the effect of inflation on the debt-to-GDP ratio is enhanced (a positive value) or offset (a negative value) by changes in another subcomponent. For example, for MENA oil exporters, the change in debt stocks enhances the effect of inflation on the debt-to-GDP ratio by 0.01 percentage points, whereas among oil importers it almost totally reduced the effect (by -0.840 percentage points).

The positive relation between the contributions of inflation and primary balances to changes in the debt-to-GDP ratio in MENA oil exporters is almost entirely offset by the stock-flow adjustment subcomponent—which incorporates all other factors affecting nominal changes in the stock of debt. One possible explanation for this is asset accumulation. Several MENA oil exporters have sovereign wealth funds to which they channel proceeds from the sale of non-renewable resources (such as oil). If that happened, then a spike in revenues and subsequent improvement in the fiscal balance due to a higher oil price would coincide with asset accumulation. Instead of observing a reduction in gross debt, additional revenues would instead be absorbed by the stock-flow-adjustment term.

CHAPTER V POLICY RECOMMENDATIONS AND CONCLUSIONS

The current conflict in the Gaza Strip has caused economic activity in the Palestinian territory to virtually halt. Real GDP in the last quarter of 2023 was 86 percent lower in Gaza than it was in the last quarter of 2022. This is consistent with the findings of an analysis based on nighttime lights, which shows a drop of roughly 90 percent in the luminosity from the territory. The conflict has resulted in a massive loss of lives as well as economic devastation and it is unclear how the conflict will evolve.

The effects of the conflict on the MENA region are uncertain, and to an extent depend on whether the conflict expands. Tourism in the region has been hurt, which can be significant because it is an important sector for many MENA economies. The onset of the conflict in the Middle East in October 2023 initially had little effect on shipping routes—until mid-November, when Houthis in Yemen began attacking commercial vessels in the Red Sea. The number of ships moving through the Suez Canal plummeted as a result, while the number of ships traversing a longer route around the Cape of Good Hope rose. The spot price of container shipping has gone up globally, especially for routes from the East to Europe. Diversion of trade is costly because more ships are required for longer routes. Broadly, the overall effects regionally at this point are unclear. Oil and food prices have been declining, which helps oil-importing economies in the region. At this point there are several potential scenarios of escalation and de-escalation that are hard to assess.

What is well documented, however, is that the trajectory of debt after a conflict is different than after other calamities (Fan et al. 2023). Debt does increase due to almost any type of natural disaster (including the COVID-19 pandemic), and GDP growth collapses in the year of the disaster. However, growth accelerates in the years after. After armed conflict, debt increases substantially as in any calamity. However economic growth does not pickup following the conflict, implying that interventions by governments after fighting ends do not necessarily improve economic growth. That means debt is a pre-existing vulnerability that would be exacerbated were conflict to expand in the MENA region.

This report looks at the nature of the evolution of debt in MENA. On average, debt- to-GDP in oil-importing MENA countries was almost three times that of MENA oil exporters and 50 percent higher than the average EMDE in 2023. A closer look at the drivers of debt shows that MENA oil importers have been unable to grow or inflate debt away. This is largely due to exchange rate changes, and stock-flow adjustments that are extrabudgetary. SFAs play a sizeable role, and to the extent that the factors captured by this residual term are unaccounted for, it hurts debt transparency.

Inflation is a double-edged sword. On one hand, rising prices, especially rising food prices, tend to hurt the poor and the most vulnerable (Gatti et al. 2023a). On the other hand, inflation should improve the debt situation. But this has not been the case for oil importers in MENA. Every percentage point decrease in the debt-to-GDP ratio due to inflation for oil importers is almost entirely undone by increases in nominal debt stocks. This is largely due to exchange rate changes. Inflation can come hand in hand with currency depreciations that increase the burden of debt denominated in foreign currencies. For oil exporters, inflation—as measured by the GDP deflator—is largely accompanied by rising oil revenues and lower deficits. Thus, periods of lower inflation—such as during the pandemic—can lead to higher debt-to-GDP ratios. Egypt, Jordan and Lebanon are exceptional cases. All three economies have had large exchange revaluations and Egypt has faced crippling interest rate payments.

The policy implications for the region are straightforward. Debt transparency is lacking (Gatti et al., 2021). Considerable attention must be paid to stock-flow adjustments that are a catchall for many factors, including extrabudgetary expenditures. The fiscal balance does not include extrabudgetary expenditures. Thus, any fiscal adjustments through the primary balance to address high interest payments may be unable to address the burgeoning debt burdens that are not

caused by budgeted expenditures, especially for MENA oil importers. For oil exporters, the stock-flow adjustments likely represent transfers to sovereign wealth funds. These economies are making good use of oil upswings and face low debt and interest payments. The challenge for them is one of economic and fiscal-revenue diversification given the structural change in global oil markets and the rising demand for renewable sources of energy.

References

ACLED. (2023). "ACLED Codebook, 2023." Armed Conflict Location & Event Data Project (ACLED). www.acleddata.com.

Aon, Reinsurance Market Dynamics report, January 2024 - https://www.aon.com/getmedia/1b3076ff-7c91-40f6-899b-3b6fda3f9be8/20240102-jan-rmd.pdf, accessed March 5, 2024.

Arnone, M., & Presbitero, A. F. (2007). External debt sustainability and domestic debt in heavily indebted poor countries. External Debt Sustainability and Domestic Debt in Heavily Indebted Poor Countries, 187-213.

Baker, Scott R., Nicholas Bloom, Steven J. Davis (2016) "Measuring Economic Policy Uncertainty." The Quarterly Journal of Economics, 131 (4):1593–1636

Belhaj, F., Gatti, R., Lederman, D., Assen, H., Sergenti, E. J., Lotfi, R., & Mousa, M. (2022). Towards a Learning State: How Transparency and Accountability are the Key to a Sustainable Recovery. World Bank Publications.

Belhaj, F., Gatti, R., Lederman, D., Sergenti, E. J., Assem, H., Lotfi, R., Mousa, M. E. (2022). A New State of Mind: Greater Transparency and Accountability in the Middle East and North Africa. Middle East and North Africa Economic Update (October). Washington, DC: World Bank

Bloom, Nicholas (2009). The impact of uncertainty shocks. Econometrica, 77, 623–685

Chen, Y., and Zhou, L. A. (2007). "The Long-term Health and Economic Consequences of the 1959-1961 Famine in China." Journal of Health Economics, 26(4), pp. 659-81.

Corral, P., and Gatti, R. (2020). "Accumulation interrupted: COVID-19 and human capital among the young." Vox eBook Chapters, in: Simeon Djankov and Ugo Panizza (ed.), COVID-19 in Developing Economies, edition 1, volume 1, chapter 1, pp. 286-302, Centre for Economic Policy Research.

Dercon, S., and Porter, C. (2014). "Live Aid Revisited: Long-Term Impacts of the 1984 Ethiopian Famine on Children." Journal of the European Economic Association, 12(4), pp. 927-948."

Fall, F., Bloch, D., Fournier, J. M., & Hoeller, P. (2015). Prudent debt targets and fiscal frameworks.

Fan, R. Y., Lederman, D., Nguyen, H., & Rojas, C. J. (2023). Calamities, debt, and growth in developing countries. IMF Economic Review, 1-21.

Garcia-Macia, D. (2023). The Effects of Inflation on Public Finances (No. 2023/093). International Monetary Fund.

Gatti, R., D. Lederman, A.M. Islam, F.R. Bennett, B.P. J. Andree, H. Assem, R. Lotfi, and M.E. Mousa. (2023a). Altered Destinies: The Long-Term Effects of Rising Prices and Food Insecurity in the Middle East and North Africa. Washington, DC: World Bank.

Gatti, R., Lederman, D., Islam, A., Fan, R. Y., Wood, C., Lotfi, R., ... & Mousa, M. (2022). Reality Check: Forecasting Growth in the Middle East and North Africa in Times of Uncertainty. World Bank Publications.

Gatti, R., Lederman, D., Nguyen, H. M., Alturki, S. A., Fan, R. Y., Islam, A. M., & Rojas, C. J. (2021). Living with Debt. Washington, DC: World Bank.

Gatti, Roberta; Lederman, Daniel; Elmallakh, Nelly; Torres, Jesica; Silva, Joana; Lotfi, Rana; Suvanov, Ilias. (2023b). Balancing Act: Jobs and Wages in the Middle East and North Africa When Crises Hit. Washington, DC: World Bank.

Ilut, Cosmin L., and Martin Schneider. 2014. "Ambiguous Business Cycles." American Economic Review, 104 (8): 2368-99.

IMF. (2016). Article IV Consultation for Lebanon. No.23/237

IMF. (2021). Fiscal Monitor: A Fair Shot. Washington, April.

IMF. (2023a). World Economic Outlook: Navigating Global Divergences. Washington, DC. October.

International Monetary Fund (2023b). World Economic Outlook Update: Near-Term Resilience, Persistent Challenges.

IMF. (2023). Article IV Consultation for Lebanon. No.23/237

IMF. (2009). System of National Accounts 2008. USA: International Monetary Fund. Retrieved Feb 20, 2024, from https://doi.org/10.5089/9789211615227.071

IMF. (2024), "Regional Economic Outlook: Middle East and Central Asia - Conflict Compounding Economic Challenges", January 2024 (Washington: International Monetary Fund).

Jurado, Kyle, Sydney C. Ludvigson, and Serena Ng. (2015). "Measuring Uncertainty." American Economic Review, 105 (3): 1177-1216

Jürges, H. (2013). "Collateral Damage: The German Food Crisis, Educational Attainment and Labor Market Outcomes of German Post-War Cohorts." Journal of Health Economics, 32, pp. 286-303.

Kumar, S., Gorodnichenko, Y., & Coibion, O. (2023). The effect of macroeconomic uncertainty on firm decisions. Eonometrica,92(4), 1297–1332.

Lindeboom, M., Portrait, F., and Van den Berg, G. J. (2010). "Long-run Effects on Longevity of a Nutritional Shock Early in Life: the Dutch Potato famine of 1846–1847." Journal of health economics, 29, pp. 617-629.

OECD (2023), Government at a Glance 2023, OECD Publishing, Paris, https://doi.org/10.1787/3d5c5d31-en.

Panizza, U. (2008, March). Domestic and external public debt in developing countries. In United Nations Conference on Trade and Development Discussion Paper (No. 188).

Panizza, U., & Krugman, P. (2007). Domestic public debt in developing countries. UNCTAD, mimeo.

Raleigh, C., Kishi, R. & Linke, A. Political instability patterns are obscured by conflict dataset scope conditions, sources, and coding choices. Humanit Soc Sci Commun 10, 74 (2023).

Ronzani, P., Stojetz, W., Stammel, N., Boettche, M., Zardetto, D., Fenzl, S., Salhab, M., Anderson, J.M., Finn, A., Aghajanian, A. and Brück, T., 2024. "Prevalence of Depression and Associated Socio-economic Outcomes during Violent Conflict: A Matched Analysis for Palestine Using Nationally Representative Survey and Conflict Event Data". medRxiv, pp.2024-02. https://www.medrxiv.org/content/10.1101/2024.02.23.24303259v2, accessed March 5, 2024.

UNCTAD (2024). Preliminary Assessment of the Economic Impact of the Destruction in Gaza and Prospects for Economic Recovery. https://unctad.org/system/files/official-document/osginf2024d1_en.pdf

UNDP. (2023). "Gaza War: The Preliminary Findings on the Socio-Economic and Environmental Impact on Lebanon". https://www.undp.org/sites/g/files/zskgke326/files/2023-12/gaza_war_preliminary_findings_on_the_socio-economic_and_environmental_impact_on_lebanon.pdf, accessed March 5, 2024.

World Bank (2022). West Bank and Gaza - Palestinians' Psychological Conditions Survey 2022

World Bank (2023a) The West Bank and Gaza Country Climate Diagnostic Report, 2023, The World Bank

World Bank. (2023b). World Bank Annual Report 2023. Washington, DC: World Bank. doi:10.1596/AR2023EN

World Bank. (2024a). Global Economic Prospects, January 2024

World Bank. (2024b). Note on the Impacts of the Conflict in the Middle East on the Palestinian Economy. February 2024. Washington, DC.

Appendix I   Debt Statistics

	Country	Public Debt Definition	Notes
Table AI.1 Definition of Public Debt for MENA Countries			
GCC	Qatar	Central Government Debt	
	United Arab Emirates	General Government Debt	
	Kuwait	General Government Debt	Gross debt comprises the stock of all government gross liabilities (residents & nonresidents).
	Bahrain	General Government Debt	
	Saudi Arabia	Central Government Debt	
	Oman	General Government Debt	
Other Oil Exporters	Iran	Central Government Debt	Including debt from SOEs and pension fund holdings
	Algeria	Central Government Debt	
	Iraq	General Government Debt	
Oil Importers	Egypt	Total Budget Sector/Central Government Debt	The Central Government comprises central administration, local governments, and public service authorities.
	Tunisia	Central Government Debt	Social security funds and local authorities are not included.
	Jordan	Government (Budgetary) and Guaranteed Debt	Includes Social Security Investment Fund holdings.
	Morocco	Central Government Debt and Guaranteed Debt	
	West Bank and Gaza	Domestic and External Debt	
	Djibouti	Central Government Debt and External Guaranteed Debt	Includes domestic debt contracted by the central government. SOEs' domestic debt is not captured. SOEs' non-guaranteed external debt data is not available. Domestic Debt is negligeable. In June 2023, the stock of external debt arrears amounted to 6 percent of GDP.
Memorandum	Libya	Central Government Debt	
	Lebanon	General Government Debt	
	Yemen	General Government Debt	Yemen's debt figures are reported as gross general government debt and include an overdraft facility at the Central Bank of Yemen in Aden (accounted in domestic debt).

Source: National Statistics Agencies.
Note: SOEs state-owned enterprises. Lebanon, Libya and Yemen are excluded from MENA sub-regional groups due to uncertain values and are classified as memorandum countries. General government gross debt is the nominal (face value of total gross debt outstanding at the end of the year and consolidated between and within the government subsectors (Source: Eurostat https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Government_debt, accessed on 8 April 2024). Central government debt refers to Public and publicly guaranteed debt comprises long-term external obligations of public debtors, including the national government, Public Corporations, State Owned Enterprises, Development Banks and Other Mixed Enterprises, political subdivisions (or an agency of either), autonomous public bodies, and external obligations of private debtors that are guaranteed for repayment by a public entity. Data are in current U.S. dollars (Source: World Bank, International Debt Statistics). Note that an alternative definition of public debt is often used for Jordan, which comprises the general government and excludes Social Security Investment Fund Holdings.

Table AI.2 Debt Statistics for MENA Countries								
		Debt-to-GDP		Primary Balance		Interest Paid		Domestic Currency Denominated Debt	Foreign Currency Denominated Debt
		percent of GDP							
		2022	2023	2022	2023	2022	2023	2022	2022
GCC	Qatar	42.4	41.4	11.6	7.2	1.2	1.2	NA	NA
	United Arab Emirates	31.4	29.2	11.1	5.8	0.3	0.2	NA	NA
	Kuwait	3.5	3.8	2.4	-6.7	0.2	0.1	NA	NA
	Bahrain	117.4	120.9	-1.8	-0.6	4.4	4.4	49.5	67.9
	Saudi Arabia	23.8	26.2	3.3	-1.1	0.8	1	14.8	9
	Oman	39.9	37.6	12.5	8.2	2.4	2.5	9.8	30.1
Other Oil Exporters	Iran	30.1	30.7	-1.5	-1.6	0.5	0.4	NA	NA
	Algeria	48.1	46.8	-1.3	-5.2	1.2	1.3	47.6	0.4
	Iraq	40.9	45.5	13.5	1.3	0.8	0.5	18.5	22.5
Oil Importers	Egypt	88.3	95.2	1.3	1.6	7.5	7.6	63.8	24.5
	Tunisia	79.9	80	-3.4	-3.1	3.2	3.3	31.9	48
	Jordan	111.4	114.1	-1.5	-0.9	4.3	4.7	62.4	48.9
	Morocco	71.6	70.6	-3.2	-2.2	2.1	2.2	45.2	26.4
	West Bank and Gaza	53.2	58.2	-0.7	-2.2	0.7	0.7	42.8	10.4
	Djibouti	66.5	69.4	-0.7	-1.1	0.7	0.8	0.1	66.5
Memorandum	Libya	57.6	54.4	2.1	-0.1	0	0	57.6	0
	Lebanon	179.7	201.2	-2.5	1.6	0.4	1	17.2	162.4
	Yemen	77.9	100.5	-1.7	-2.9	1	1	39.3	38.6

Source: World Bank staff calculations based on data from the World Bank's *Macro Poverty Outlook*.
Note: SOEs state-owned enterprises. Lebanon, Libya and Yemen are excluded from MENA sub-regional groups due to uncertain values and are classified as memorandum countries.
For Tunisia, data for 2023 correspond to June 2023. The debt numbers reported for Jordan are for the Central Government and include holdings of the Social Security Corporation investment arm. General government debt (% of GDP) for Jordan in 2022 is 88.8 and in 2023 (estimate) is 89.4.

Appendix II The Relationship between GDP Deflator and Oil Price Change

Table AII.1 column 1 shows the coefficients from a simple Ordinary Least Squares (OLS) regression of the annual change in Brent crude oil prices on the yearly inflation rate, as measured by the GDP deflator, as the independent variable along with a constant term. Column 2 shows the standard deviation of inflation rate. The analysis utilized monthly data on Brent crude oil prices from 2013–2023, aggregated into annual figures.

Regression formula: *Oil Price Percent Change$_t$ = constant + Inflation rate$_t$ + ε_t*

MENA oil exporters (GCC + other MENA Oil Exporters) experience a high correlation between inflation, and changes in oil prices (percent), while MENA Oil importers experience little to no correlation. MENA oil exporters also have a higher volatility in the inflation rate, while MENA oil importers have lower levels of volatility in the inflation rate. The same patterns are observed in both EMDE oil importers and oil exporters.

Table AII.1 Regression Coefficients		Inflation elasticity to Oil Price Change	Standard Deviation of Inflation Rate
GCC	Qatar	0.33	14
	United Arab Emirates	0.27	11
	Kuwait	0.43	16
	Bahrain	0.16	6
	Saudi Arabia	0.31	12
	Oman	0.33	13
Other MENA Oil Exporters	Iran	0.3	18
	Algeria	0.22	8
	Iraq	0.52	18
MENA Oil Importers	Egypt	0.08	8
	Tunisia	0	2
	Jordan	0	2
	Morocco	0	3
	West Bank and Gaza	0.05	3
	Djibouti	0	1
EMDE Oil Exporters		0.4	23
EMDE Oil Importers		0	7

Source: Authors' calculations based on data from the World Bank's *Macro Poverty Outlook and US Energy Information Administration*.
Note: For Egypt, data on yearly oil prices and the inflation rates, as measured by the GDP deflator aggregated based on Egypt's fiscal year (for e.g. FY2024 starts from July 1 2023–June 30 2024). EMDE oil exporters include Angola, Republic of Congo, Azerbaijan, Brunei, Equatorial Guinea, Gabon, Kazakhstan, Malaysia, Mexico, Nigeria, South Sudan, Sudan. EMDE oil importers include all other EMDEs where data are available.

Appendix III Changes in Debt-to-GDP Ratio: An Accounting Framework

This appendix derives a framework to relate changes in debt-to-GDP ratios to factors such as real growth, inflation, and government budget flows such as the primary balance, and interest payments, among others.[85] The note proceeds in three steps. The first consists of deriving an identity that additively separates the change in debt-to-GDP into two terms that relate to (i) changes in nominal debt while keeping GDP constant and (ii) nominal GDP growth (which in turn is expressed in terms of inflation in the GDP price deflator and real GDP growth). The second step uses a stylized government budget constraint to break down the change in nominal debt into terms related to the primary balance, interest payments, exchange-rate valuation effects and other adjustments. The third step brings everything together and states the full framework. The note concludes with a short comparison with alternative decompositions of changes in debt-to-GDP.

The Numerator and Denominator of the Debt-to-GDP Ratio

Let D_t and Y_t denote the nominal amount of gross public debt outstanding and nominal GDP at time t respectively. The following identity of the change in debt-to-GDP ratio is stated:

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = \frac{D_t - D_{t-1}}{Y_{t-1}} + D_t\left(\frac{1}{Y_t} - \frac{1}{Y_{t-1}}\right) = \frac{D_t - D_{t-1}}{Y_{t-1}} - \frac{D_t}{Y_t}\underbrace{\frac{Y_t - Y_{t-1}}{Y_{t-1}}}_{\equiv \rho_t} \qquad (AIII.1)$$

where ρ_t is nominal GDP growth at time t.[86]

Because nominal GDP growth relates to real GDP growth and inflation, the second term in the right-hand side of equation (AIII.1) can be broken down into three terms as shown in equation (AIII.2)[87]. The first term relates to real growth, the second to inflation (from the GDP deflator), and the third relates to the product of the two. In practice, this last term tends to be an order of magnitude smaller than the other two and often negligible.

$$\frac{D_t}{Y_t}\rho_t = \frac{D_t}{Y_t}[(1 + g_t)(1 + \pi_t) - 1] = \frac{D_t}{Y_t}g_t + \frac{D_t}{Y_t}\pi_t + \frac{D_t}{Y_t}g_t\pi_t \qquad (AIII.2)$$

Bringing (AIII.1) and (AIII.2) together we obtain the following accounting identity:

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = \frac{D_t - D_{t-1}}{Y_{t-1}} - \frac{D_t}{Y_t}g_t - \frac{D_t}{Y_t}\pi_t - \frac{D_t}{Y_t}g_t\pi_t \qquad (AIII.3)$$

Government Budget Constraint

One of the most straightforward ways to think about how sovereign debt evolves over time is the basic government budget constraint. Denote D the nominal quantity of gross public debt, PB the primary balance, I interest payments and SFA the stock-flow-adjustment term all expressed in local currency units (LCU).

$$D_t = D_{t-1} - PB_t + I_t + SFA_t \qquad (AIII.4)$$

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85 Throughout, "debt" will mean "gross debt," which is what the government owes in total. It does not take account of what the government is owed (net debt).

86 Note that while the first term in the right-hand side of equation (AIII.1) captures the change in nominal debt while keeping GDP at initial levels, the second term captures the change in nominal GDP weighted by the final debt-to-GDP ratio. In a more traditional decomposition of multiplying terms, this term equates to the change in $1/Y$ keeping D at initial levels plus the change in $1/Y$ times the change in D, i.e. the covariance terms. To be precise,

$$-\frac{D_t}{Y_t}\rho_t = D_{t-1}\left(\frac{1}{Y_t} - \frac{1}{Y_{t-1}}\right) + (D_t - D_{t-1})\left(\frac{1}{Y_t} - \frac{1}{Y_{t-1}}\right)$$

Do note, however, that the covariance term is often an order of magnitude smaller and negligible relative to the other partial terms.

87 Specifically, we are using the identity $1 + \rho_t = (1 + g_t)(1 + \pi_t)$ where g_t denotes real growth and π_t is the inflation implied by the GDP price deflator at time t.

In its most elemental form, the government budget constraint states that the amount of gross public debt inherited from the past can be paid off using surpluses (after interest payments) or must be refinanced (rolled over). Other factors can also come into play such as asset sales, which are captured by the residual term SFA_t.[88]

The government budget constraint (AIII.4) can be augmented to explicitly account for the stock of debt denominated in local currency and that which is denominated in foreign currency. Let D^f_{t-1} and D^d_{t-1} denote the stock of debt denominated in foreign currency and local currency respectively at time $t-1$, both expressed in local currency. Note that the nominal amount of debt remains constant when it is denominated in local currency but is subject to changes in exchange rates when it is denominated in foreign currency units (FCU). For example, if at $t-1$ the Egyptian government issues debt worth 1 EGP denominated local currency, at time t the government will owe the lend 1 EGP. However, if the same amount of debt is issued denominated in Euros, at time t, this amount, expressed in EGP may be more or less if the Egyptian pound has depreciated or appreciated relative to the Euro. To account for this, we introduce the notation e_t which represents the exchange rate of local currency units (LCU) per foreign currency unit (FCU) and restate the government budget constraint as follows:

$$D_t = \frac{e_t}{e_{t-1}} D^f_{t-1} + D^d_{t-1} - PB_t + I_t + SFA_t \qquad (AIII.5)$$

Note in (AIII.5), the revaluation of the stock of debt denominated in FCU (D^f_{t-1}):

- At time $t-1$, the sovereign had debt denominated in foreign currency equivalent to a quantity D_{t-1} of local currency.
- This amounts to D_{t-1}/e_{t-1} units of foreign currency at $t-1$.
- At time t, D_{t-1}/e_{t-1} units of foreign currency are owed but, currently, this amounts to $(e_t/e_{t-1})D_{t-1}$ units of local currency.

Introducing the notation $(1 + \varepsilon t) = e_t/e_{t-1}$, and noting that $D_{t-1} \equiv D^f_{t-1} + D^d_{t-1}$, we can rearrange (AIII.5) to obtain:

$$D_t - D_{t-1} = \varepsilon_t D^f_{t-1} + i_t D_{t-1} - PB_t + SFA_t \qquad (AIII.6)$$

Accounting Framework

Changes in the debt-to-GDP ratio are affected by many factors. Among them, as discussed above, are real GDP growth, inflation, exchange rates, primary balances, interest rates, and other stock-flow-adjustments. An accounting framework that reflects these factors is obtained by combining (AIII.3) and (AIII.6).

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = -\frac{PB_t}{Y_{t-1}} + i_t \frac{D_{t-1}}{Y_{t-1}} + \varepsilon_t \frac{D^f_{t-1}}{Y_{t-1}} + \frac{SFA_t}{Y_{t-1}} - \frac{D_t}{Y_t} g_t - \frac{D_t}{Y_t} \pi_t - \frac{D_t}{Y_t} g_t \pi_t \qquad (AIII.7)$$

This accounting identity (AIII.7) states that the change in debt-to-GDP ratio can be divided into seven components:

- The first two terms on the right-hand side of (AIII.7) capture the pure contribution (pure in the sense that it ignores changes in GDP by keeping the denominator as the initial level of GDP) of primary deficits and interest payments.

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88 Stock-flow adjustments can be broadly categorized into three groups. The first relates to the net acquisition of financial assets, which may not contribute to the deficit but do lead to increases or decreases in the stock of debt. The second is called adjustments and includes three sub-categories (i) transactions in liabilities that are excluded from the government debt definition; (ii) valuation effects related to issuances above or below nominal value, differences in interest accrued and paid, and redemptions of debt that stand above or below nominal value, given that government debt is often measured at face value; and (iii) appreciation or depreciation of foreign-currency debt and other changes in volume. The third category relates to statistical discrepancies, which reflects differences arising from diversity of data sources and, when significant, might indicate problems with the quality of data. This categorization is taken from the Stock-flow adjustment for the Member States, the euro area (EA-19) and the EU-27, for the period 2019–2022 as reported in the April 2023 EDP notification.

- The third term accounts for the revaluation of past debt denominated in foreign currency due to changes in the exchange rate and the fourth term captures other stock-flow adjustments. In both cases, again, keeping the initial level of GDP fixed.[89]
- The last three terms account for the contribution of nominal growth which is expressed in terms of real growth and the rate of inflation.

Finally, while the accounting framework proposed in (AIII.7) provides a convenient way to think about changes in debt-to-GDP, caution must be taken when interpreting each component. Mathematically, these factors are presented as additively separable but, from a conceptual perspective, they are not. Economically we fully expect deficits to relate to growth and inflation, exchange rate fluctuations are likely to have close links with debt yields and thus the effective exchange rate, and so forth. It is precisely in looking at the relation between these terms that the framework is most useful as a tool to understand the factors that affect how debt-to-GDP ratios evolve.

Side-by-side comparison with alternative decompositions

The decomposition derived in this appendix is far from the only one possible. Below, equation (AIII.7) is compared with two alternative decompositions.

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = -\frac{PB_t}{Y_{t-1}} + i_t \frac{D_{t-1}}{Y_{t-1}} + \varepsilon_t \frac{D^f_{t-1}}{Y_{t-1}} + \frac{SFA_t}{Y_{t-1}} - \frac{D_t}{Y_t} g_t - \frac{D_t}{Y_t} \pi_t - \frac{D_t}{Y_t} g_t\pi \qquad (AIII.7)$$

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = -\frac{PB_t}{Y_{t-1}} + \frac{z_t}{(1+g_t)(1+\pi^f_t)} \frac{D^f_{t-1}}{Y_{t-1}} + \frac{r_t - g_t}{1+g_t} \frac{D_{t-1}}{Y_{t-1}} + \frac{\pi^d_t - \pi^f_t}{(1+\pi^f_t)(1+\rho_t)} \frac{D^f_{t-1}}{Y_{t-1}} + \frac{SFA_t}{Y_{t-1}} \qquad (AIII.8)$$

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = -\frac{PB_t}{Y_{t-1}} + \frac{i_t}{1+\rho_t} \frac{D_{t-1}}{Y_{t-1}} - \frac{\pi_t}{1+\rho_t} \frac{D_{t-1}}{Y_{t-1}} - \frac{g_t}{1+\rho_t} \frac{D_{t-1}}{Y_{t-1}} + o_t \qquad (AIII.9)$$

Equation (AIII.8) is taken from *Box 3. Debt Dynamics and Drivers in the SRDSF*, in the August 2022 "Staff Guidance Note on the Sovereign Risk and Debt Sustainability Framework for Market Access Countries." From the International Monetary Fund IMF). In (AIII.8), z_t is the real exchange rate, defined by *1 + z_t = (1+ε_t) (1+π^f_t) / (1+π^d_t)* and π^f_t and π^d_t denote the foreign and domestic inflation levels respectively. Also, in (AIII.8), r_t denotes the real interest rate, defined by *1 + rt = (1 + i_t)/(1 + π^d_t)*.

Equation (AIII.9) is taken from the Online Annex 3.2 Debt-to-GDP Ratio Decomposition in the April 2023 edition of the IMF's *World Economic Outlook*. In (AIII.9), o_t is a true residual.

Unlike in (AIII.8) and (AIII.9), the proposed decomposition isolates nominal growth (real growth and inflation) in terms that are additively separated from components found in the government's budget constraint. This leads to a more parsimonious breakdown that, while similar to that of (AIII.9), allows the incorporation of the debt currency denomination and exchange rate as relevant factors as in (AIII.8). Perhaps one quirk of our decomposition is that time –t flows are expressed as a fraction of GDP in $t–1$ (this is the case for the primary balance and stock flow adjustments). However, this is a feature, not a bug. This quirk stems precisely from the fact that the component of the change of gross debt that does not relate to nominal growth is change in gross debt as a percent of initial GDP. This is by design. Note that, for example, one could note the mathematical equivalence $PB_t/Y_{t-1} \equiv (PB_t/Y_t)/(1 + \rho_t)$ that explicitly shows how the term expresses, in this case, the primary balance as a share of GDP adjusting for nominal GDP growth.

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89 Note that the valuation effect of exchange rate fluctuations is typically grouped with other stock-flow-adjustments. For cases where the currency composition is unavailable, an alternative accounting framework would be used:
$(D_t/Y_t) − (D_{t-1}/Y_{t-1}) = (PB_t/Y_{t-1}) + [i_t (D_{t-1}/Y_{t-1})] + (SFA_t/Y_{t-1}) − [(D_t/Y_t) g_t] − [(D_t/Y_t) \pi_t] − [(D_t/Y_t) g_t\pi_t]$
where the term SFA_t/Y_{t-1} has absorbed the effect of exchange rate fluctuations on the valuation of the stock of debt denominated in foreign currency.

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