

4. Financial Stability Considerations amid the Pandemic

Banks in the Middle East and Central Asia (MCD) region began the year in a generally strong position, but the unprecedented crisis caused by the coronavirus disease (COVID-19) pandemic could trigger significant increases in defaults and nonperforming loans (NPLs). The results from a streamlined stress-testing exercise show that the potential costs from asset impairment for countries in the region could reach \$190 billion. In this exercise, the Middle East, North Africa, Afghanistan, and Pakistan (MENAP) region is hit particularly hard—oil exporters face the largest losses while bank capital in several oil importers falls below regulatory minimum requirements. Banking systems in the Caucasus and Central Asia (CCA) are more resilient due to higher starting capital and low private sector credit. So far, supportive financial sector policies have helped prevent some short-term financial risks from materializing, including some of the worst-case outcomes highlighted by the stress test, and helped ease the provision of credit. Going forward, authorities should carefully balance the sustained provision of credit and the preservation of financial stability. As the pandemic subsides, efforts should focus on removing regulatory easing, strengthening supervision, and continuing to improve financial inclusion—including for small and medium-sized enterprises (SMEs)—to boost inclusive growth.

Financial Stability before the Pandemic

Banking systems in most MCD countries have strengthened over the past decade and have mostly recovered from the 2014–15 oil crisis. Despite some localized vulnerabilities related to significant credit to government or weak asset quality, the banking systems in most countries entered the pandemic with sizable capital buffers. The

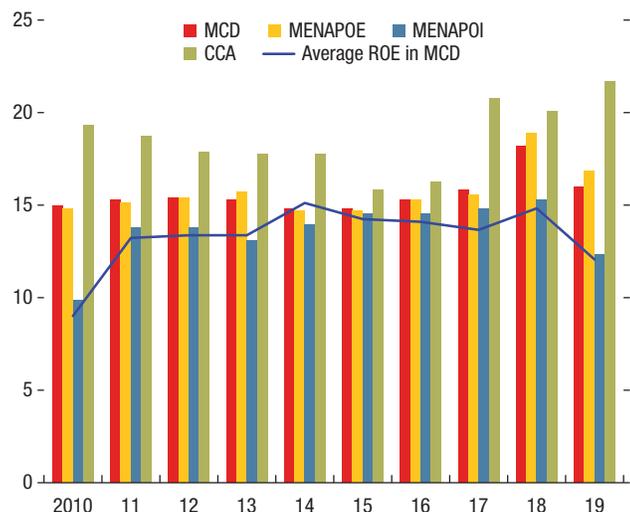
following are some key characteristics of banking systems in the region before the pandemic:

- **Heterogeneous banking systems.** The banking systems of oil exporters in the MENAP are the largest in the MCD region, with total assets of about 110 percent of GDP.¹ Those of the MENAP oil importers are very heterogeneous in size—few are comparable to the oil exporters, and most are small. With assets at approximately 50 percent of GDP, the banking system in the CCA region remains small. The small size reflects a variety of factors, including lower access to finance, especially for SMEs (see Box 4.2).
- **Adequate capital buffers** (Figure 4.1). Healthy profitability has supported capital buffers, and capital adequacy ratios (CARs) at the end of 2019 were well above regulatory requirements in the region, except in Iran and Lebanon, which experienced some financial distress even before the current crisis. CARs were highest in the CCA, at above 20 percent, reflecting large buffers and low credit and risk-weighted assets, but also less stringent definitions for capital instruments. MENAP oil exporters had CARs above 16 percent, with sizable buffers but also lower risk-weighted assets, reflecting large exposures to domestic governments. MENAP oil importers entered the crisis with relatively weaker loss-absorbing buffers and CARs of about 12 percent.
- **Significant improvement in NPL resolution and coverage** (Figure 4.2). The NPL ratio in all MCD subregions improved significantly over the past 10 years and reached 5.2 percent at the end of 2019—almost half the value at the end of 2010. The CCA countries saw the largest improvement over this period, and for some, through the transfer of bad loans to

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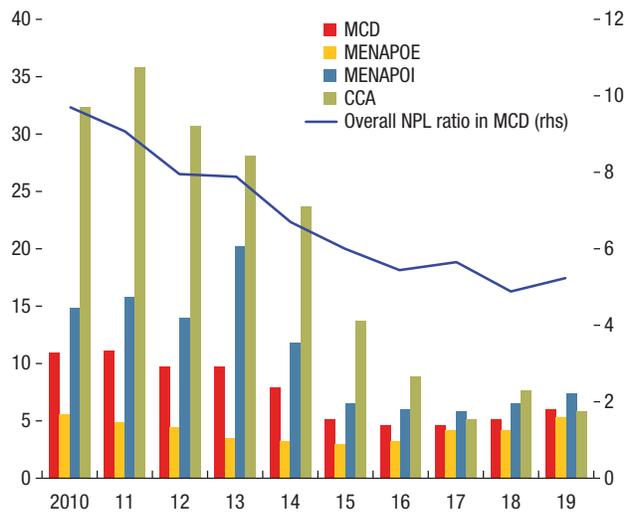
¹Total assets excluding offshore or international banks.

Figure 4.1. Capital Adequacy Ratio and Profitability (Percent)



Sources: National authorities; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers; ROE = return on equity.

Figure 4.2. NPLs Net of Provisions to Capital (Percent)



Sources: National authorities; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers; NPL = nonperforming loans; rhs = right-hand scale.

special asset management companies. Across the MCD region, the implementation of more stringent provisioning frameworks brought NPLs net of provisions to very low levels in most countries, though in some countries, evergreening of existing NPLs could have also contributed to underreported NPLs. That said, there are some exceptions, and a few countries entered the pandemic with weak asset quality (Algeria, Iran, Lebanon).

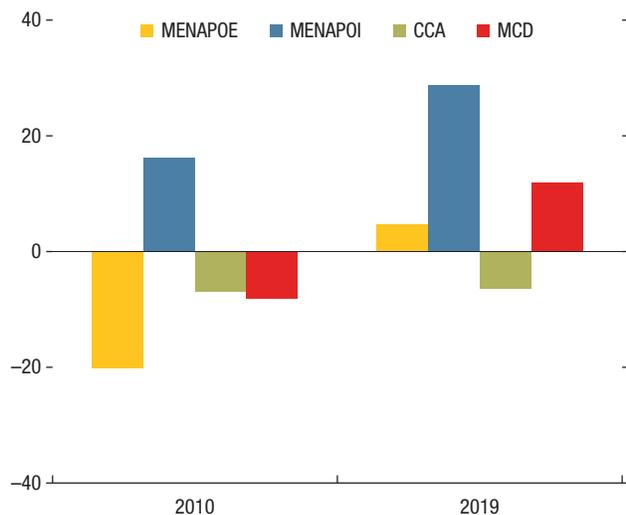
- Rising credit to government** (Figure 4.3). Net domestic credit to government expanded rapidly over the past decade, mainly in the MENAP countries (and most significantly among oil exporters), to finance large fiscal deficits. This expansion has created strong balance sheet linkages between the public sector and banks. In some countries, bank credit to government has begun crowding out lending to the private sector and has developed into a systemic exposure or an emerging fiscal dominance problem.

- Slowing private sector credit before the pandemic** (Figure 4.4). Private sector credit rebounded briefly in the years after the 2014–15 oil price shock, but the credit cycle began slowing toward the end of 2017, with credit growth lagging non-oil GDP in some countries.² Because of credit cooling down, the credit gap (a measure of the credit cycle) in the three MCD subregions turned negative in 2019.³ The state of the MCD region’s credit cycle is driven by developments in MENAP oil exporters because those countries have the lion’s share of total bank loans in the region (more than 80 percent). The cooling of the credit cycle among MENAP oil exporters might signal some underlying real sector weakness before the pandemic.

²A detailed discussion of sectoral credit, which could further enhance the analysis of precrisis vulnerabilities, was not feasible because data were not available.

³The credit gap is defined as the difference between the observed credit-to-GDP ratio and its long-term trend derived from the Hodrick-Prescott filter.

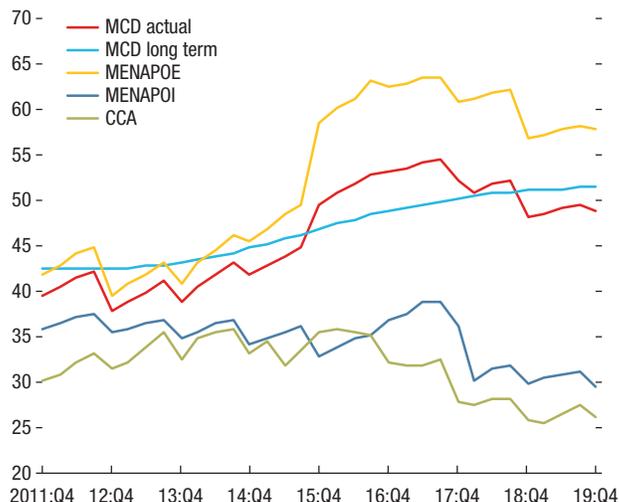
Figure 4.3. Net Domestic Credit to Government
(Percent of GDP)



Sources: National authorities; and IMF staff calculations.

Note: CCA = Caucasus and Central Asia; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

Figure 4.4. Financial Cycle in MCD Countries¹
(Credit to private sector in percent of GDP)



Source: IMF staff calculations.

Note: CCA = Caucasus and Central Asia; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

¹Calculated using the ratio of credit to the private sector and GDP. The long term is estimated using the Hodrick-Prescott filter on a time series starting in 2001:Q4 and a lambda parameter of 1600 for quarterly data.

A Shock Like No Other

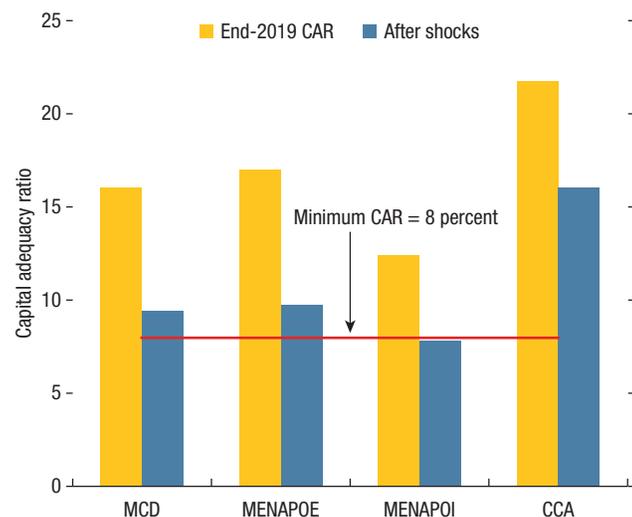
Banks started 2020 with generally sound balance sheets, but the pandemic and the resulting severe disruption in domestic and regional economic activity are massive shocks that directly affect otherwise sound borrowers, with SMEs likely to be disproportionately affected (Box 4.2). Preliminary data for the first quarter of 2020, available for seven MCD countries only, do not show a deterioration of financial soundness indicators except in *Lebanon* (where the NPL ratio increased to 20 percent) and *Bahrain, Georgia, Oman,* and the *United Arab Emirates* (where profitability deteriorated). However, vulnerabilities such as deterioration of asset quality or a sharp decline in profitability might show in the data with a lag of a few quarters after the shock. Furthermore, policy support at the onset of the crisis (see Chapter 1) may have initially delayed the impact of the macroeconomic shock on the financial sector.

In this context, this section engages in a forward-looking exercise, identifying channels through which banks' balance sheets may be

impaired and designing a stress test to assess the impact of such shocks. The propagation of the macroeconomic shock to the banking system may occur through different channels and, in a most severe scenario, could both raise recapitalization needs and result in a prolonged credit crunch, further weighing on economic growth and the recovery. Using a streamlined macro-level stress test, the chapter performs a sensitivity analysis of CARs based on a scenario with credit and foreign exchange risks as the two propagation channels for the shock (see Box 4.1).

There are, of course, additional risks to balance sheets that are not included in the following exercise. Those include risks to **liquidity**, especially stemming from capital outflows or sudden foreign exchange deposit withdrawals, and headwinds to **profitability**, caused by low interest rate margins, low demand for credit, and losses on holdings of government securities from rising domestic rates (in addition to provisioning requirements from higher NPLs). The motivation for choosing a stress

Figure 4.5. Aggregate Stress Test Results
(Percent)



Sources: National authorities; and IMF staff calculations.

Note: CAR = capital adequacy ratio; CCA = Caucasus and Central Asia; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

test focused on credit risk is to provide a concise, clear picture of balance sheet repercussions from the ongoing recession, without the need to make the many assumptions required for a full scenario.⁴

The stress test shows that the potential costs from asset impairment in MCD banking systems could be very large. We estimate that total losses for MCD countries could amount to \$190 billion (5 percent of GDP). The CCA region seems to be the most resilient to the credit risk shock, mainly because of higher starting capital and overall small exposures. Losses in the CCA could amount to \$10 billion, or up to 2 percent of GDP. Although total losses for MENAP oil importers could amount to \$30 billion, or a comparable 3 percent of GDP, several countries could see their capital ratios drop below the Basel regulatory minimum⁵ of 8 percent because of a weaker initial

⁴Widespread data limitations at the regional level would also need to be addressed for a more comprehensive scenario analysis.

⁵The stress test focuses on overall CARs as opposed to common equity tier 1 ratios due to widespread data limitations at the regional level. Also, as background, the Basel Accords are international standards for banking supervision established by the Basel Committee on Banking Supervision. In Basel I and II versions of the accords, one

position combined with the large increases in NPLs (Figure 4.5). Among MENAP oil exporters, losses are very large at \$150 billion, or 6 percent of GDP. These losses result from the larger size of the banking system and loan portfolios; that said, in the scenario considered, capital would remain above 8 percent in all MENAP oil exporters except *Iran*.

Recapitalization costs in the stress test could amount to \$40 billion at the MCD level, which could arise at a time when several MCD countries already have limited policy space. They are concentrated in *MENAP oil importers* (\$8 billion, or 1 percent of GDP) and *Iran* (\$33 billion, or 6 percent of GDP). To illustrate, capital injections are calculated to bring average capital to the standard Basel minimum of 8 percent. However, actual costs may yet be higher because of the following factors: (1) the actual distribution of CARs within countries (which may require capital injections to specific banks even in a country that passed this macro stress test at the aggregate level), and (2) several jurisdictions having implemented minimum CAR requirements higher than the 8 percent threshold this stress test used. Even jurisdictions that will not require a capital injection after the crisis will likely need several years to absorb the shock and bring NPLs back to the precrisis level. In turn, this could imply that credit provision remains impaired in several countries after the crisis abates.

The effect of the foreign exchange depreciation in the stress test is limited at the aggregate level, though its impact could still be disruptive on individual banks and through other channels. The assumed 30 percent foreign exchange depreciation leads to a 1 percent drop in CARs at the MCD level. This is due to most countries having a relatively small net open position, a small pool of foreign exchange loans to the private sector (with some exceptions in highly dollarized countries, mainly in the CCA), and important data gaps

of the established principles on capital requirements stipulates that banks should hold a capital-to-risk-weighted-assets ratio of 8 percent or above. This requirement was increased recently in Basel III with specific additional capital charges.

Figure 4.6. Macro-Financial Responses to COVID-19 in MCD Countries



Sources: Announcements of national authorities; IMF Policy Tracker; and IMF staff calculations.

Note: CCA = Caucasus and Central Asia; COVID-19 = coronavirus; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers. Country abbreviations are International Organization of Standardization (ISO) country codes. The size of the bars reflects the number of countries that implemented the policy.

¹Such announcements vary by country and may refer to restructuring of loan terms, or suspension of any commission.

²Other macroprudential measures vary by country and may include changes in cash reserves and loan-to-value and loan-to-deposit ratios.

that prevent the estimation of this shock in several jurisdictions.

Risks to the outlook and this stress test remain tilted to the downside (see Chapter 1). Despite the sobering picture the stress tests paints, the sheer size and persistence of the shock may yet lead to nonlinear shock propagation in the banking system. Some triggers that may escalate the impact on banks could include the following: (1) the sudden removal of emergency support measures, (2) a new pandemic wave and higher persistence of the shock, and (3) large capital outflows accompanied by disruptive foreign exchange depreciations.

A Swift Policy Response

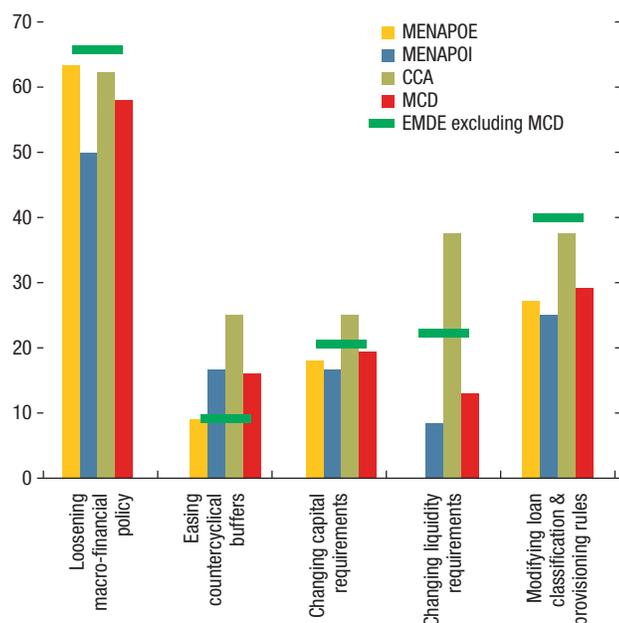
Some of the worst possible outcomes of the stress-testing scenario may have been avoided, at least so far, because of the comprehensive policy responses to the pandemic by the authorities across the region (though lack of recent data makes this hard to assert). Many countries deployed supportive financial sector policies to ease the provision of credit and help banks

absorb the stresses.⁶ Policy responses included reducing policy rates in line with lower global rates, lowering reserve requirements, mandating that banks defer loan repayments (often without interest or penalty), supplying liquidity to the banking system, and loosening various regulatory requirements (Figure 4.6).

Slightly fewer than 60 percent of MCD countries have loosened macro-financial policy; the proportion of countries that have done so in the CCA and among MENAP oil exporters is higher, close to that of emerging market and developing economies (Figure 4.7). The share of MCD countries that eased countercyclical buffers exceeded that of emerging market and developing economies (16 percent versus 9 percent). The fraction of countries that loosened liquidity requirements is particularly high in the CCA, about 40 percent versus 22 percent among emerging market and developing economies. Although modification of loan classification and provisioning rules in the CCA was almost as common as within emerging market and

⁶The IMF Macroeprudential Policy Framework (IMF 2013, 2014) discusses the role of macroprudential policy.

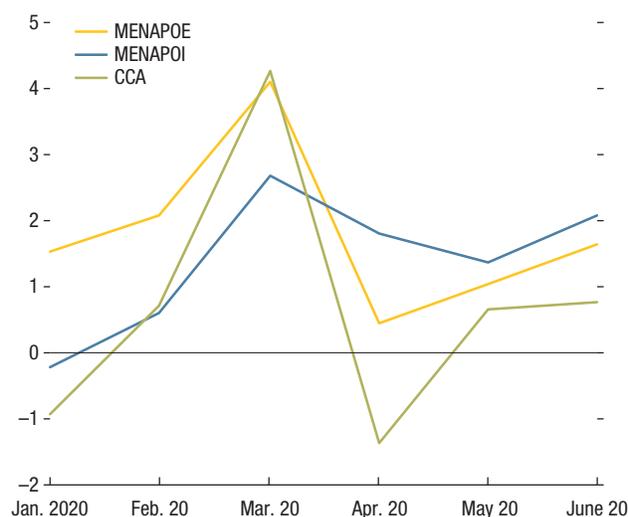
Figure 4.7. Financial Policy Response to COVID-19
(Share of countries implementing measure, percent)



Sources: Announcements by national authorities; IMF Policy Tracker; and IMF staff calculations.
Note: CCA = Caucasus and Central Asia; EMDE = emerging market and developing economies; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers. Ratio is calculated as the number of countries that implemented the measure, divided by number of countries in the relevant region.

developing economies, it does not appear to have been used as much among MENAP countries. Some country-specific measures included reinforcing the monitoring of banks' liquidity risks (*Djibouti*), developing pandemic-specific stress tests (*Pakistan*), postponing the implementation of the International Financial Reporting Standard-9 (*Afghanistan*), and alleviating a temporary shortage of liquidity by introducing foreign exchange currency swaps and broadening the existing collateral base for refinancing operations (*Georgia*). Several financial supervisors suspended provisioning requirements for loans, benefiting from a temporary payment moratorium (*Algeria, Morocco*), and some others proactively asked banks to preemptively provision for losses from the pandemic (*Georgia*). The size of packages announced by central banks to support financial stability varied, with some as large as 20 percent of GDP (*United Arab Emirates*). Furthermore,

Figure 4.8. Credit Growth
(Month over month, percent change, weighted average, January 2019 = 100)



Sources: National authorities; and IMF staff calculations.
Note: CCA = Caucasus and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers. MENAPOE consists of Iran, Oman, Qatar, Saudi Arabia; MENAPOI consists of Afghanistan, Egypt, Jordan, Morocco, Lebanon, Pakistan; CCA consists of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, and Uzbekistan, based on limited data availability in 2020:Q2.

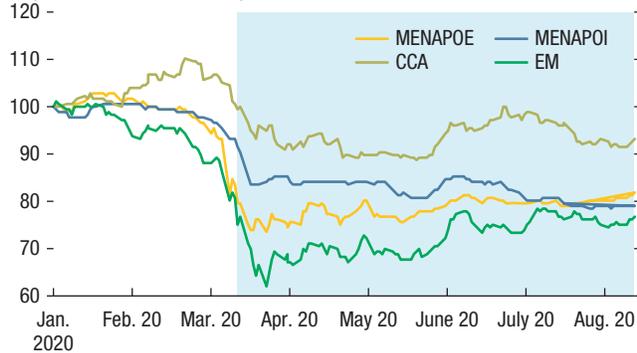
most MCD countries have implemented a wide range of policies to support SMEs, including moratoriums on debt repayments, direct lending through public institutions, and extension of guarantees (Box 4.2).

An assessment of implemented policies remains preliminary at this juncture because the data have yet to fully manifest their effects. Based mainly on anecdotal evidence, macroprudential relaxation and liquidity provision measures that authorities have adopted (Figure 4.6) may have helped slow a procyclical cut in credit in the MENAP and CCA regions (Figure 4.8),⁷ supported economic activity, and as a result, helped mitigate the risk of sudden asset impairment. Liquidity support to firms and households, together with payment deferrals, helped postpone or prevent some short-term financial risks from materializing, including an increase in NPLs. In response to supportive policies in both the region and worldwide,

⁷This is based on limited credit data available across MCD countries from the second quarter of 2020.

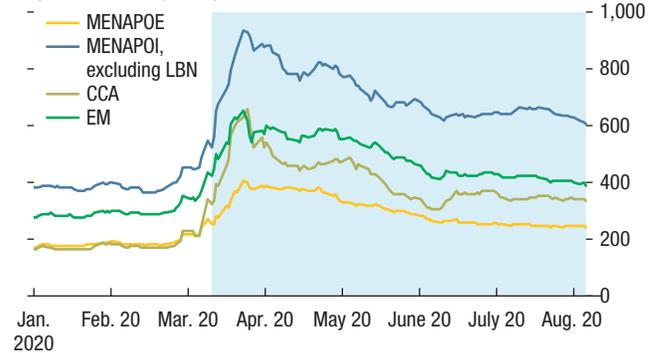
Figure 4.9. Financial Conditions

**1. Financial Sector Stock Indices
(December 2, 2019 = 100)**



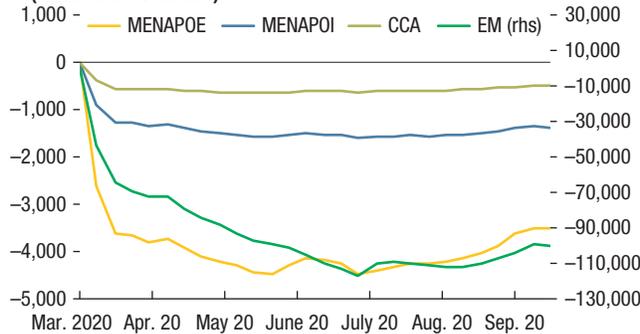
Sources: Bloomberg Finance L.P.; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; EM = emerging market economies; MENAPOE = Middle East and Central Asia oil exporters; MENAPOI = Middle East and Central Asia oil importers. Country abbreviations are International Organization for Standardization (ISO) country codes. MENAPOI averages the financial sector stock indices of EGY, JOR, and TUN. MENAPOE averages the financial sector stock indices of BHR, KWT, OMN, QAT, SAU, and UAE (Dubai and Abu Dhabi). CCA is the average stock price of banks in the Kazakhstan Stock Exchange Index and Georgian banks in the London Stock Exchange. EM is the MSCI Emerging Markets Financials Index.

**2. Sovereign Bond Spreads
(Median, basis points)**



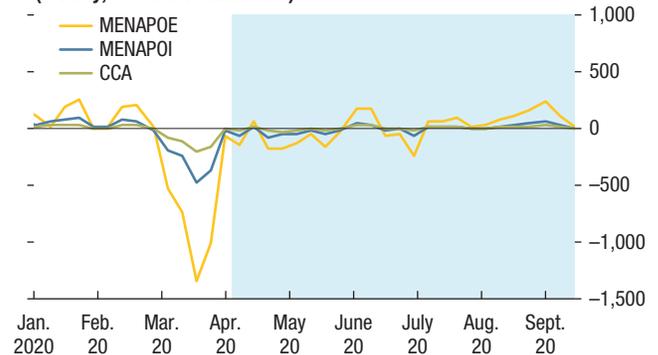
Sources: Bloomberg Finance L.P.; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; EM = emerging market economies; LBN = Lebanon; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

**3. Cumulative Capital Outflows
(Millions of US dollars)**



Sources: Haver Analytics; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; EM = emerging market economies; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers; rhs = right-hand scale.

**4. Capital Outflows
(Weekly, millions of US dollars)**



Sources: Haver Analytics; and IMF staff calculations.
 Note: CCA = Caucasus and Central Asia; EM = emerging market economies; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

financial conditions appear to have stabilized—in line with emerging markets—after initial tightening at the onset of the crisis (Figure 4.9).

That said, policymakers need to take into account that utilizing buffers now inevitably means reduced capacity to absorb potential future shocks, for example, if the impact of the pandemic is

greater or more persistent than anticipated. These risks are discussed in the next section.

Securing Financial Stability

The financial sector policy agenda should strike a careful balance between supporting the recovery

through sustained provision of credit and preserving financial stability.

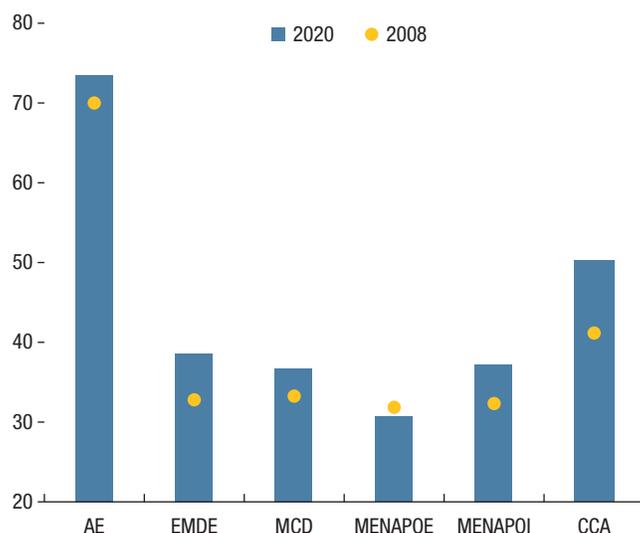
- The medium- and long-term financial stability repercussions of macroprudential relaxation should be carefully assessed to account for banking sector risks, including those identified in the stress-testing exercise. These risks may stem from (1) further exacerbation of some of the pre-COVID-19 vulnerabilities to banks' balance sheets (discussed in the first section), including stronger bank-sovereign nexuses, as MENAP countries are expected to increase domestic financing in 2020 (Chapter 3); (2) state-owned banks' large and increased exposure to poor quality loans of state-owned enterprises (*Algeria, Iran, Iraq*); (3) potential evergreening of asset quality problems and increased NPLs in the future; (4) lending to lower-quality borrowers and excessive credit risk taking, including through credit to sectors most affected by COVID-19 (leisure, airlines, auto, oil and gas) with muted prospects for recovery; and (5) easing of countercyclical capital buffers and capital and liquidity requirements in many countries (Figure 4.7). Even so, some banking systems in MCD countries—particularly in MENAP oil importers—entered the pandemic with limited capital buffers and might encounter large losses and potential recapitalization costs if credit and foreign exchange risks materialize, as the stress-testing exercise showed. Hence, governments should carefully calibrate the timing of any unwinding of financial sector support, including regulatory forbearance.
- Authorities may implement further relaxation of macro-financial policies where capital and liquidity buffers still allow it, while encouraging appropriate loan provisioning or restructuring by banks.
- The trade-offs associated with macroprudential relaxation should be carefully considered on a case-by-case basis, taking into account the uncertainty about the economic outlook and the importance of avoiding procyclical effects. On the latter, for example, if financial indicators point to lending or prudential constraints becoming binding, macroprudential relaxation may need to speed up to avoid drying up of credit.
- A more supportive macro-financial policy would be more effective if coordinated with other policy initiatives and if its prudential and financial stability implications are communicated clearly. Close tracking of external and exchange rate sustainability implications of supportive policies should continue, especially in highly dollarized banking systems (*Armenia, Georgia, Kyrgyz Republic, Tajikistan, Uzbekistan*) and in countries with fiscal dominance.
- It is critical to record NPLs transparently and to set aside sufficient provisions immediately, reflecting the effective riskiness of exposures, to preserve the credibility of supervisory frameworks. Any further support to borrowers should be transparent, temporary, and most important, targeted: to avoid funding insolvent borrowers—with careful assessments made of sectors permanently shrunk by the pandemic—and to align incentives with best credit risk management practices (*Afghanistan, Algeria, Armenia, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyz Republic, Pakistan*).
- Undercapitalized banks (*Algeria, Azerbaijan, Iran, Lebanon, Libya, Mauritania, Pakistan, Tunisia*) should be considered on a case-by-case basis. Banks with eroded capital and liquidity buffers may be assisted with a mix of private and official support—including capital injections, emergency liquidity assistance, and guarantees—considering fiscal space (see Chapter 3),⁸ contagion risks, and enhanced supervision. If needed, they could be ring-fenced with a precise communication strategy to prevent contagion and maintain central banks' and regulators' credibility.

⁸Government intervention should be the last resort, only to preserve financial stability. Where possible, recapitalization should be based on private sector investments to minimize moral hazard, and the authorities should reverse public sector injections as soon as market conditions allow it.

After the crisis abates, authorities should turn their efforts to strengthening institutions for medium-term financial stability and access to finance.

- Regulators should continue to monitor developments and stand ready to preserve financial stability as public emergency support is removed, beginning with less-effective programs. They should encourage banks to repair their balance sheets progressively by strengthening liquidity and other financial soundness indicators, to comply with pre-COVID-19 regulatory requirements, and to rebuild their buffers (*Iraq, Iran, Pakistan*) as the resolution of unviable, nonsystemic banks starts and the delayed reform of large state-owned banks advances (*Iraq, Iran*).
- The experience of the pandemic may prime some MCD policymakers to strengthen risk-based supervisory frameworks (*Algeria, Armenia, Georgia, Iran, Pakistan, West Bank and Gaza*) and their bank resolution frameworks (*Georgia, Iran, Pakistan, West Bank and Gaza*).
- Frameworks for resolving insolvency have been improving in recent years, but there is room for streamlining insolvency proceedings to facilitate NPL resolution (Figure 4.10).
- Increasing access to financial services could enhance the capacity of banks and other financial institutions to channel savings to productive uses. Public support may further boost household and SME financial inclusion in the MCD region to build on the authorities' continued efforts in this area, but the benefits of such support should be balanced with fiscal space. Increasing

Figure 4.10. Resolving Insolvency
(Index, 0–100, 100 is best)



Source: World Bank Doing Business Indicators 2020.

Note: The Resolving Insolvency Index measures the time, cost, and outcome of domestic insolvency proceedings, as well as the strength of legal frameworks applicable to judicial liquidation and reorganization proceedings. AE = advanced economies; CCA = Caucasus and Central Asia; EMDE = emerging market and developing economies; MCD = Middle East and Central Asia; MENAPOE = Middle East and North Africa oil exporters; MENAPOI = Middle East and North Africa oil importers.

financial inclusion should remain a priority for policymakers during and after the pandemic (Box 4.2).

The IMF continues to provide financial policy advice and capacity development to countries in the region. In this context, delivery of remote technical assistance has recently increased markedly to help countries address financial stability issues raised by the crisis. Since April 2020, COVID-19-related technical assistance requests and delivery have focused on central bank risk management, top-down stress testing, and development of securities markets, among others.

Box 4.1. Macro-Level Stress Test Assumptions

The stress test is performed as a sensitivity analysis based on aggregate balance sheets for each Middle East and Central Asia (MCD) country.¹ All else equal, the test's scenario studies the cumulative balance sheet and capital adequacy implications of two shocks:

- Asset impairment.** A severe deterioration in the macroeconomic outlook (including as a result of a decline in hydrocarbon revenue for oil exporters) requires additional provisioning for existing exposures, including through the application of the expected credit loss model or equivalent supervisory standards. In addition to increases in riskiness of exposures, disruptions to firms' cash flows (including of small and medium-sized enterprises) and household incomes could trigger outright bankruptcies and losses. The asset impairment shock in the stress test is calibrated as a one-off reclassification of 15 percent of *performing loans* into the *nonperforming loan (NPL)* category. However, countries with weaker asset quality and significant related-entity lending could face a larger shock. It is further assumed that the new NPLs should be provisioned at an average rate of 50 percent, which is slightly below the current MCD average to account for a gradual increase in provisioning of new NPLs.
- Foreign exchange (FX) depreciation.** FX depreciation could affect banks in the following ways: (1) directly with an impact on their profit and loss that depends on their net open FX positions; and (2) indirectly through a further increase in NPLs for FX loans to unhedged borrowers. This shock is calibrated as a one-off depreciation of 30 percent from the exchange rate level at the end of 2019 and is applied to all MCD countries, regardless of their FX regime. The indirect channel is calibrated as an increase of 6 percent in FX NPLs, also provisioned at 50 percent, as in the credit risk shock.
- Scenario plausibility.** The shocks calibration produces a post-shock NPL ratio for the MCD region of approximately 16.5 percent, or a tripling of the aggregate NPL ratio. The calibrated shock is lower than what some countries experienced after the global financial crisis and, more generally, the scenario outcome is also lower than the 22 percent ratio that a recent paper (Ari, Chen, and Ratnovski 2019) finds as the NPL average in crisis episodes with elevated NPLs. Still, in some countries, a shock tailored to specific circumstances not examined in this regional overview may be more realistic. Given that the pandemic's macroeconomic shock is several standard deviations worse than previous shocks, this scenario may still have considerable downside risks and prove optimistic. On the upside, the shock scenario's FX component is less likely to materialize in countries with a fixed FX regime and stable fundamentals to sustain it.

¹Results exclude Iraq, Libya, Mauritania, Syria, Turkmenistan, and Yemen because of data limitations. Aggregate ratios in the stress test can be interpreted as weighted averages across banks.

Box 4.2. Public Interventions to Support Small and Medium-Sized Enterprises' Financial Inclusion

Small and Medium-Sized Enterprises' Financial Inclusion in the Middle East and Central Asia Region

The Middle East and Central Asia (MCD) region lags most other regions in financial inclusion of small and medium-sized enterprises (SMEs). In line with world averages, SMEs represent about 95 percent of all registered firms and employ about half of the region's total labor force (the other half is employed by large firms), yet SME access to finance is the lowest in the world, with only 7 percent of total bank lending (Figures 4.2.1 and 4.2.2; for details see IMF 2019).

A reduction in the SME financial inclusion gap could bring several macroeconomic benefits to MCD countries. As argued in IMF (2019), improving SME financial inclusion can help increase economic growth and job creation. It may also enhance the effectiveness of fiscal and monetary policy and, under adequate supervisory and regulatory frameworks, could contribute to financial stability. Capital markets and fintech could facilitate greater SME financial inclusion, either by providing the supply of bank credit or by offering new financing channels (for details see IMF 2019).

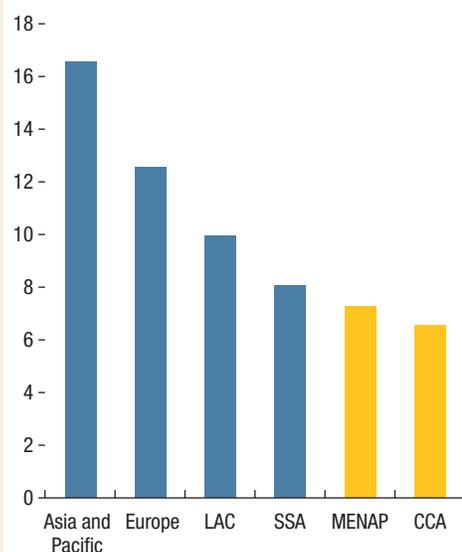
Supporting SME Financial Inclusion before the Pandemic

MCD countries have implemented several policies to support SME financial inclusion. These include direct interventions to enhance access to bank credit, such as through public credit guarantee programs (PCGs), state-owned or development banks, interest rate regulations, and tax incentives.

While our analysis shows that the best solution to promoting SME financial inclusion requires a broad policy approach that would strengthen institutions, the business environment, and macro fundamentals (IMF 2019), certain public interventions could serve as an intermediate solution by helping address some market failures:

- Well-designed PCGs may help reduce collateral requirements and credit risk for lenders. Best practice underscores that PCGs should have sound governance and accountability mechanisms in place, including transparent reporting. While PCGs help increase SME financial inclusion, they also raise risks if not designed adequately. These include possible misallocation of resources and moral hazard (for principles of PCG design, see World Bank and FIRST Initiative 2015). There are also transfer risks to the public sector. Therefore, fiscal risks related to PCGs should be closely monitored and assessed by authorities. PCGs are funded by public institutions, including state banks or foreign donors (*Algeria, Jordan, West Bank and Gaza*) or by public and private institutions (*Egypt, Lebanon, Morocco, Tunisia*) (OECD, EU, and ETF 2018).

Figure 4.2.1. SME Lending by Region
(Percent of total lending)

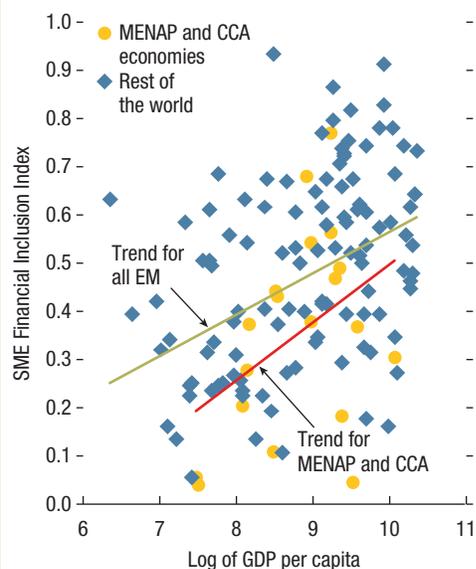


Sources: Financial Access Survey; World Bank, World Development Indicators; World Bank Enterprise Surveys; and IMF staff calculations.

Note: CCA = Caucasus and Central Asia; LAC = Latin America and the Caribbean; MENAP = Middle East, North Africa, Afghanistan, and Pakistan; SME = small and medium-sized enterprise; SSA = sub-Saharan Africa.

Box 4.2 (continued)

Figure 4.2.2. SME Financial Inclusion Index for Emerging Markets



Sources: Financial Access Survey; World Bank, World Development Indicators; World Bank Enterprise Surveys; and IMF staff calculations.

Note: The Financial Institution Depth index is a composite index, which measures the depth of the banking system, pension and mutual funds, and the insurance sector. The higher the index number, the better the financial inclusion. For details on the calculation, see IMF (2019). CCA = Caucasus and Central Asia; EM = emerging market economies; MENAP = Middle East, North Africa, Afghanistan, and Pakistan; SME = small and medium-sized enterprise.

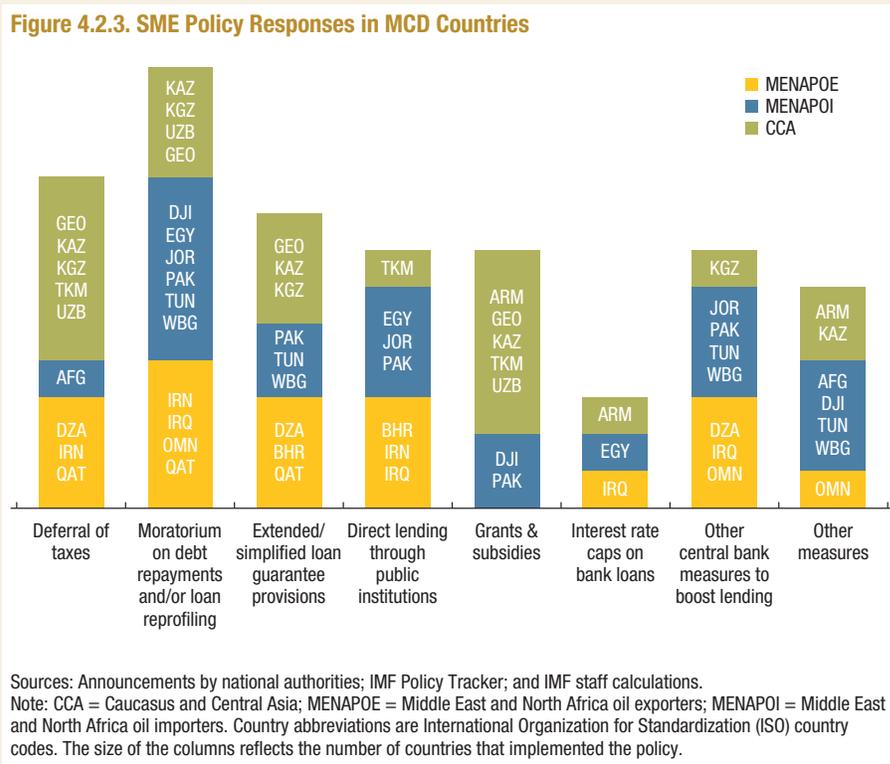
- Development banks play a significant role in allocating credit to SMEs, including in *Jordan* (Governorate Development Fund), *Tunisia* (Bank for Financing Small- and Medium-Sized Enterprises), and *Armenia* (Armenian Development Fund) (OECD, EU, and ETF 2018). International experience with these types of banks raises serious concerns, however, with risks emerging from their lack of diversification, poor asset quality, and regulatory forbearance.
- Experience shows that interest rate caps can reduce SME lending instead of making it more affordable. Interest rates, in principle, should be set on a commercial basis but could be subsidized using fiscal resources where fiscal space is available.
- Relaxing prudential requirements, for example by changing risk weights used to determine regulatory capital ratios, is discouraged because it may jeopardize financial stability, while the effectiveness of such measures is not established.

Supporting SME Credit Supply during the COVID-19 Crisis

The COVID-19 shock has severely affected SMEs. SMEs tend to have lower cash buffers and frequently operate in the informal sector, which makes them more vulnerable than large firms during the pandemic. Given uncertainties about the pandemic's path, even illiquid (though not yet insolvent) SMEs may be compelled to close. However, the same uncertainties make it very difficult to identify *ex ante* viable firms and calibrate solvency support.

Given the magnitude of the crisis, the policy support needs to be broader if fiscal space is available. Analysis suggests expanding the pre-pandemic framework to ease financing constraints on SMEs through the following main channels. *First*, there is a case to **expand PCGs**. Amid increased credit risk, lenders—even with available funding and ample capital buffers—can be reluctant to lend to firms facing financial difficulties. Governments in many countries (*including* emerging markets) have responded by providing or extending credit guarantees (either directly or indirectly through existing public programs, including public banks)—to help limit lenders' potential credit losses (Jeasakul 2020). *Second*, timely, temporary, and targeted fiscal measures can help viable firms, including in informal sectors. Support may be channeled to these firms by working with existing institutions that serve these groups, such as microcredit institutions and informal sector organizations (Shang, Brooks, and An 2020). *Third*, for programs that rely on lenders' balance sheets, central banks can provide **term funding** to eligible financial institutions at a cost consistent with policy rates (potentially below market funding costs) (Jeasakul 2020). *Fourth*, for programs that operate through special purpose vehicles, central banks can finance the government-backed special purpose vehicles' acquisition of loans (taking the vehicles as collateral) (Jeasakul 2020). *Fifth*, combining grants with a temporarily higher future corporate tax rate (to cut

Box 4.2 (continued)



costs and induce self-selection of firms) would act as an equity injection for SMEs (Blanchard, Philippon, and Pisani-Ferry 2020). As the crisis abates, this additional support could be withdrawn smoothly.

Many MCD countries responded with specific programs to help SMEs cope with the pandemic and boost their financial inclusion. These measures include a deferral of taxes (*Algeria, Kazakhstan, Kyrgyz Republic, Qatar*), a moratorium on debt repayments (*Djibouti, Iran, Iraq, Kuwait, Oman, Qatar, West Bank and Gaza*), and extended provision of loan guarantees (*Bahrain, Kazakhstan, Pakistan*), among others (Figure 4.2.3). Overall, most of these measures go in the right direction and are in line with the experience of many other countries. All of these policies would require new expenditures or may generate contingent liabilities; thus, they have to be temporary, targeted, and transparent, and careful consideration of fiscal space is warranted (see Chapter 3).

To support the economic recovery, MCD countries should continue to implement reforms aimed at expanding SME financial inclusion. Building on the progress made so far, the authorities should further develop *adequate* institutions and improve the business environment to boost SME financial inclusion. Lasting SME financial inclusion could be a key source of sustainable and inclusive growth over the medium term.

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