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Macroprudential Policy in the GCC Countries

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EXECUTIVE SUMMARY

Since the global financial crisis, major changes have been made in the approach to financial regulation across the world. To ensure macroeconomic stability, economic policy has to include financial stability as a key objective. Considerable work has been undertaken at the IMF, the Financial Stability Board (FSB), and in many other places on the theory and practice of macroprudential policies. Most of this work, however, has focused on countries with flexible exchange rates, diversified economic structures, and broad and well developed financial sectors.

Less focus has been placed on resource-rich countries with fixed exchange rates. It can be argued that in these countries macroprudential policies have an even more important role to play in managing financial stability risks, given the volatility of the economic and credit cycles and the limited scope for an independent interest rate policy. To begin to fill this gap, this paper considers the role of macroprudential policies in the Gulf Cooperation Council (GCC) countries.

Several characteristics of the economies, financial sectors, and policy frameworks in the GCC countries make macroprudential policy a particularly important policy tool. Interest rate policy is constrained by the pegged exchange rate regimes, so fiscal policy—particularly government spending, given limited domestic taxation—is the main tool for managing economic cycles. However, because of time lags in implementation and rigidities in expenditure, fiscal policy is not always flexible enough to prevent credit booms and the buildup of systemic risk in the financial sector. Other tools are also needed. Macroprudential policy needs to play a major role, supporting fiscal policy in managing financial cycles associated with oil prices.

The experience of 2008–09 demonstrates the vulnerability of the region to credit and asset price cycles. Higher oil revenues in that period led to large government fiscal surpluses, increases in government spending that boosted activity in the non-oil sectors of the economy (particularly construction), and increased liquidity in the banking sector. Credit and asset prices rose, moving closely with the oil price cycle, and consumer and business confidence increased. When these factors reversed, they caused considerable difficulties in some countries. The heavy reliance on volatile hydrocarbon revenues, the importance of real estate as a major asset class for investment, the underdeveloped fixed-income and derivatives markets that limit the range of

liquidity and risk management tools, and the shortcomings in crisis resolution frameworks—all of these conditions underline the importance of having macroprudential policy in GCC countries' toolkit to limit systemic risk in the financial system.

Policymakers are keen on strengthening their macroprudential policy toolkit. This paper discusses the importance of macroprudential policy in the GCC countries and looks at the experience with macroprudential policies in the cycle in the second half of the 2000s. It uses the broad frameworks being developed in the Fund and elsewhere to discuss how existing frameworks and policy toolkits in the region can be strengthened, taking into account the particular characteristics of the GCC economies. The recommendations focus on clarifying the mandate for financial stability, developing a more formal institutional framework in the GCC, and expanding the range of macroprudential instruments.

There is room to strengthen the institutional arrangements underpinning the GCC countries' approach to financial stability. Macroprudential policies have a long history in the GCC countries, but they have been implemented by central banks without a formal framework or adequate legal backing. A more formal and transparent macroprudential institutional and policy framework would help ensure that responsibilities and coordination among regulators and other relevant parties are well established. It is recommended that the central banks be given the formal mandate to ensure financial stability in the GCC, because they can bring both expertise and incentives to the task of mitigating systemic risks.

GCC countries could further develop effective early-warning systems and conduct regular systemic assessments. The macroprudential framework should be supported by an effective early-warning system (EWS) to identify and monitor systemic risks. Macro stress testing should also become an integral part of systemic surveillance. These activities could best be achieved by setting up well-staffed macroprudential units within the entities in charge of macroprudential supervision.

The GCC countries were was ahead of many countries in implementing some macroprudential measures, but there is still scope for refining the existing macroprudential toolkit. More targeted prudential interventions are required that act directly

to constrain excessive credit and leverage as well as exposure to aggregate shocks. This paper suggests actions in five areas:

- To help build and maintain adequate capital buffers in the banking sector, the high bank capitalization ratios in the GCC countries could be usefully complemented by an enhanced role for Pillar 2 and a further move toward risk-based supervision.
- To help alleviate procyclicality in credit and asset markets, time-varying loan-to-deposit and loan-to-value ratios could be introduced.
- To limit the buildup of excessive exposure to specific sectors or categories of borrowers, sectoral exposure limits, particularly for real estate and personal loans, could be used more. (Real estate should be defined to include all activities related to the construction and purchase of buildings.)
- To support liquidity management, the development of domestic interbank money and debt markets is important. GCC regulators are in the advanced stages of developing regulations on liquidity risks to comply with Basel III requirements.
- Finally, the effectiveness of macroprudential policies would be enhanced by structural reforms, including modernizing the insolvency regimes and strengthening crisis management and resolution systems.

I. INTRODUCTION

The global financial crisis triggered major changes in the approach countries take in financial regulation, with the recognition that to ensure macroeconomic stability, economic policy has to include financial stability as an additional objective. The crisis highlighted the need for a better understanding of macrofinancial linkages and underscored the importance of macroprudential policies in addition to microprudential regulation and supervision, as well as strong fiscal and monetary policy frameworks. A general goal of macroprudential policy is to limit the risk of systemwide distress that has significant macroeconomic costs (Borio and Drehmann, 2009). The other major objective is to strengthen the financial system's resilience to shocks.

Macroprudential policy complements, but does not substitute for, sound macroeconomic and structural policies. In fixed exchange rate regimes where the independence of monetary policy is limited, fiscal policy is the main policy tool for demand management. Efforts to reduce the procyclicality of fiscal policy and to prevent the buildup of expenditure rigidities are essential. Macroprudential policy can give valuable support to the efforts of fiscal policy in managing the financial cycles in these economies. It should be complemented by an effective supporting environment for mitigating systemic risk and reducing moral hazard, and, especially, by a strong crisis management and resolution framework.

Maintaining financial stability requires flexible and adaptive macroprudential policies. A macroprudential policy framework should ideally encompass (i) a system of early warning *indicators* that signal increased vulnerabilities in financial stability; (ii) a set of *policy tools* that can help contain risks beforehand and address the increased vulnerabilities at an early stage and can also help build buffers to absorb shocks after the fact; and (iii) an *institutional framework* that ensures the effective implementation of macroprudential policies.

GCC central banks have used a large number of macroprudential measures over the years to limit systemic risks and manage financial cycles. Nevertheless, there is scope for the GCC countries to learn from recent international experiences with macroprudential policies to better

understand, identify, and mitigate spillovers through the financial sector and, in particular, to build up appropriate buffers and to limit excessive leverage and credit booms in good times.

The remainder of the paper is organized as follows. In Section II we explain why macroprudential policies are particularly important for the GCC countries. In Section III we outline the wide range of macroprudential instruments being discussed in the emerging literature. In Section IV we describe the experience of GCC countries with macroprudential instruments. In Section V we discuss international examples of macroprudential institutional frameworks as well as the existing frameworks in the GCC countries. In Section VI we present policy recommendations.

II. WHY IS MACROPRUDENTIAL POLICY IMPORTANT IN THE GCC?

Policymakers in hydrocarbon-exporting countries face significant challenges in managing the volatility associated with changing conditions in global energy markets. Swings in the resource-exporting sector spill over to the rest of the economy. During periods of high energy prices, the external balance and government finances strengthen significantly, domestic liquidity and confidence rise, and credit and asset price booms often develop. As financial institutions increase their lending during the upswing of the cycle, they become more exposed, particularly to the real estate sector (for instance, in Qatar and the United Arab Emirates prior to the global financial crisis). When energy prices drop, this cycle quickly reverses, putting particular stress on borrowers and financial institutions that have become overly exposed during the upswing. Although such cycles may be driven largely by exogenous factors, they need to be managed by domestic policies.

Since many hydrocarbon-exporting countries have some form of fixed exchange rate regime, fiscal policy is usually their first line of defense in managing these cycles. Interest rate policy is constrained by the requirements of the exchange rate peg, and fiscal policy, particularly government spending as domestic taxation is often limited, is the key tool for managing economic cycles. However, given implementation time lags and expenditure rigidities, fiscal policy is not always flexible enough to prevent credit booms and the buildup of systemic risk in the financial sector. Other tools are also needed. Macroprudential policy can play a major role, supporting fiscal policy in managing the financial cycles associated with oil price cycles.

Macroprudential policy is a particularly important policy tool, given the economic and financial characteristics of the GCC countries. The recent experience of 2008–09 demonstrates the vulnerability of the region to credit and asset price cycles (Box 1). The heavy reliance on volatile hydrocarbon revenues and a history of procyclical fiscal policy in some countries, limited monetary policy independence under the pegged exchange rates, the importance of real estate as a major asset class for investment, the fact that underdeveloped financial markets provide limited risk management tools, and the shortcomings in crisis resolution frameworks all highlight

the need for macroprudential policy to limit systemic risk in the financial system. The following paragraphs look at each of these characteristics in turn.

Their reliance on hydrocarbon revenues means that GCC economies are closely linked to developments in the global oil market (Figure 1). Higher oil revenues lead to large government fiscal surpluses, increases in government spending that boost activity in the non-oil sectors of the economy, particularly construction, and increased liquidity in the banking sector. Credit and asset prices also rise, moving closely with the oil price cycle, and consumer and business confidence increases.

Box 1. The 2003–08 GCC Credit and Asset Price Boom, the Impact of the Global Crisis, and the Policy Response

The 2003–08 oil price boom led to large fiscal and external balance surpluses, buoyant economic activity, and rising consumer and investor confidence in the GCC countries.¹ Abundant liquidity fueled credit growth, inflation, and asset price increases. During this period, the real annual average credit growth of the GCC banks was 23 percent, which led to increasing bank leverage in Qatar and the United Arab Emirates. It also led to a near-doubling of the ratio of private sector credit to non-oil GDP, which reached 122 percent by end-2008. In some GCC countries, credit growth went largely into construction and real estate lending, fuelling a real estate boom; some countries experienced an increase in lending for the purchase of securities. The GCC stock markets posted 22–60 percent gains in 2007. In some countries, notably the United Arab Emirates, speculative investments contributed to marked increases in real estate prices. These developments took place notwithstanding that GCC countries implemented several measures of a macroprudential nature to limit credit growth (see Section IV).

Most of this credit growth was financed by domestic deposits; but banks' foreign liabilities increased in Kuwait, Oman, Qatar, and the United Arab Emirates, partly because banks issued foreign currency-denominated medium-term notes to address mismatches in asset-liability maturity. However, banks also used short-term speculative foreign deposits to finance their lending, exacerbating maturity mismatches and creating a refinancing risk on their balance sheets. On the corporate sector side, the boom was associated with a rise in leverage, increasing the sector's vulnerability to funding availability and cost.

The credit and asset price boom came to an abrupt end in late 2008 as the global financial crisis hit the GCC. As global deleveraging took hold and oil prices and production fell, the GCC's fiscal surpluses declined markedly (except in Qatar), stock markets fell by a combined 41 percent (\$400 billion) between September 2008 and end-2008, real estate prices fell significantly (particularly in Dubai), credit default swap (CDS) spreads on sovereign debt widened across the board (but more so for Bahrain and Dubai), and external funding conditions tightened.

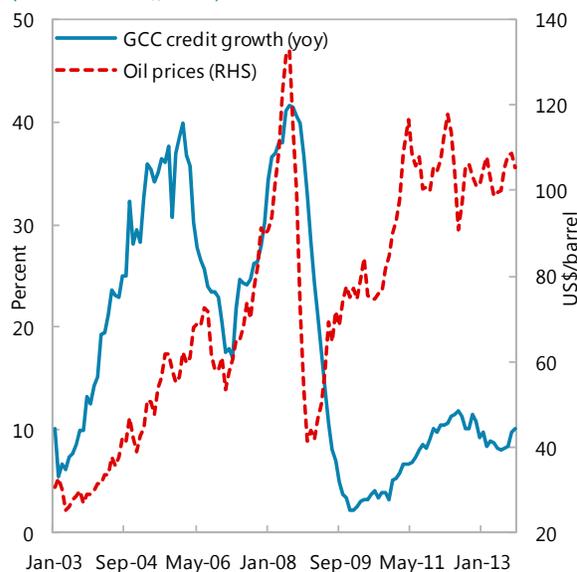
Decisive policy actions by the authorities helped moderate the effect of the crisis. In general, the central banks provided liquidity support and governments provided direct liquidity injections by placing long-term deposits in banks. Specific actions included easing reserve requirements (Bahrain, Oman, Saudi Arabia), lowering policy rates (except in Qatar), providing deposit guarantees (Kuwait, Saudi Arabia, United Arab Emirates), injecting capital into banks (Qatar), and purchasing banks' holdings of equity and real estate assets (Qatar).

The experience of the GCC countries during the crisis brought home the importance of expanding central banks' traditional mandate to better incorporate financial stability as a complementary objective.

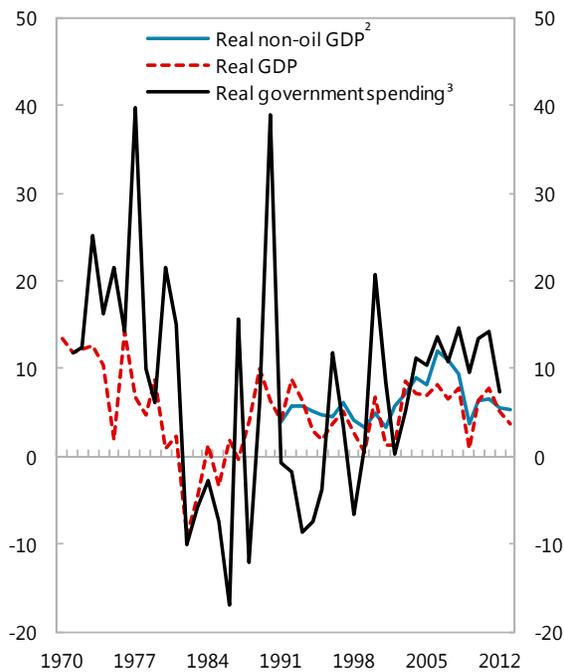
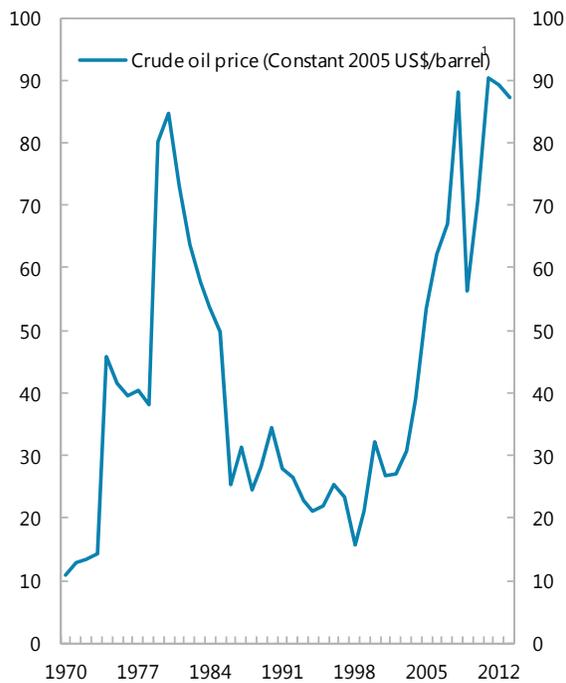
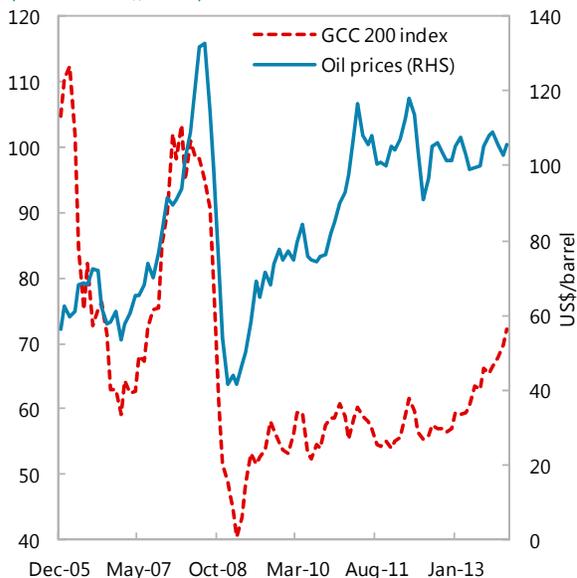
¹ For a detailed account of the impact of the global financial crisis and policy responses in the GCC, see Khamis and others (2010).

Figure 1. Oil Prices and the GCC Economies

Oil Prices and Credit Growth
(Percent and US\$/barrel)



Oil Prices and Stock Index
(Index and US\$/barrel)



Sources: Country authorities; WEO; and Bloomberg.

¹Deflated by US CPI.

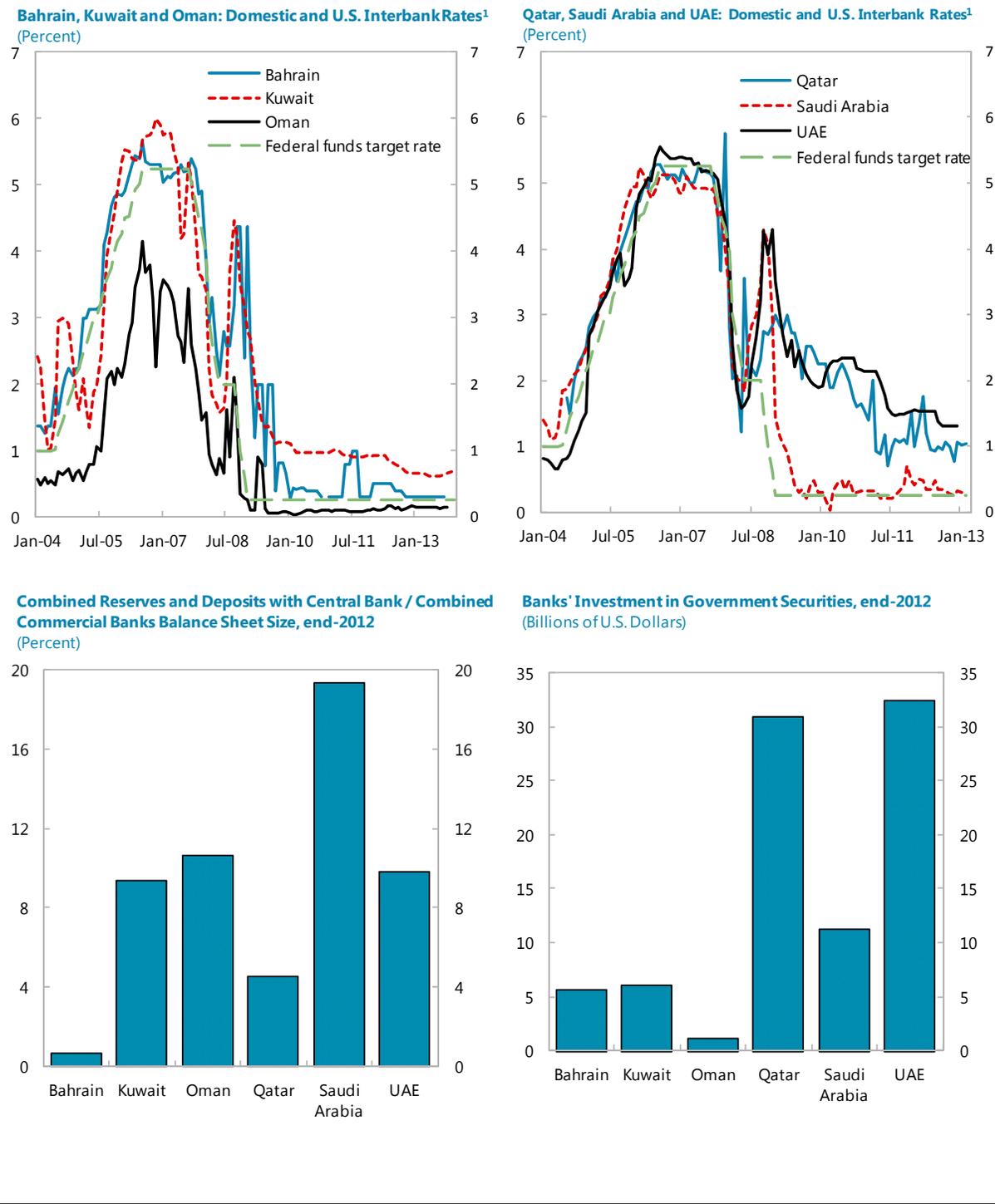
²Growth rates weighted by PPP GDP.

³Deflated by domestic CPI.

Limited monetary policy independence in the GCC, and persistent structural liquidity surpluses in upswings, add to the difficulties of managing aggregate demand and containing credit expansion. With the exception of Kuwait, GCC countries have pegged their exchange rates to the U.S. dollar, and given their relatively open capital accounts they have limited room to deviate from U.S. interest rates. Their monetary policy is further constrained by limited capabilities in liquidity management, since liquidity forecasting is in its infancy and the central banks' liquidity management relies primarily on reserve requirements and standing facilities (also in the form of certificates of deposit) for liquidity absorption. Reserve requirements are too inflexible a tool for effective liquidity management, and a standing facility is a passive instrument, under which the amount of liquidity absorbed is driven by the banks and not by the central bank. In addition, the monetary transmission mechanism is constrained by the shallow nature of money markets in these countries. Inadequate sterilization of the liquidity surplus and the weak monetary transmission mechanism contribute to high credit expansion.

Domestic fixed income markets are underdeveloped in the GCC, limiting the range of risk management tools (Figure 2). Given their persistent fiscal and external surpluses and accumulated savings, GCC governments do not need to issue debt to finance the budget. The lack of liquid money, bond markets, and derivative markets limits the financial sector's interest rate and liquidity risk management tools.

Figure 2. GCC Financial Indicators

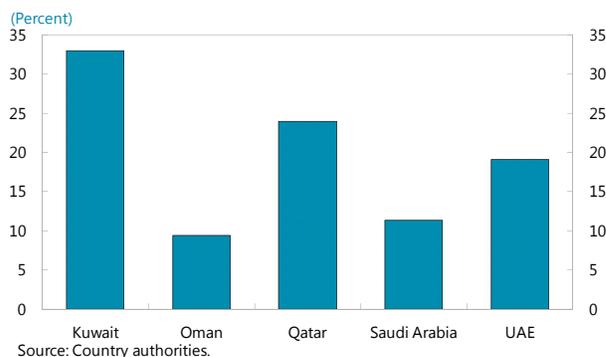


The undiversified nature of GCC economies and lack of fixed income markets raises the prominence of real estate as an asset class for investment and collateral for the banking system.

Given the dominance of the hydrocarbon sector, and the relatively small share of other economic sectors such as manufacturing, real estate lending has a significant share in banks' credit portfolio, particularly in Kuwait, Qatar, and the United Arab Emirates (Figure 3). As in many other countries where the use of assets other than real estate as collateral for loans is not

widespread and creditor rights are relatively weak, real estate serves as the most important form of collateral.² Consequently, episodes of real estate boom and bust cycles raise systemic risk in the financial system.

Figure 3. Share of Real Estate and Construction Loans in Total Bank Loan Portfolio, December 2012

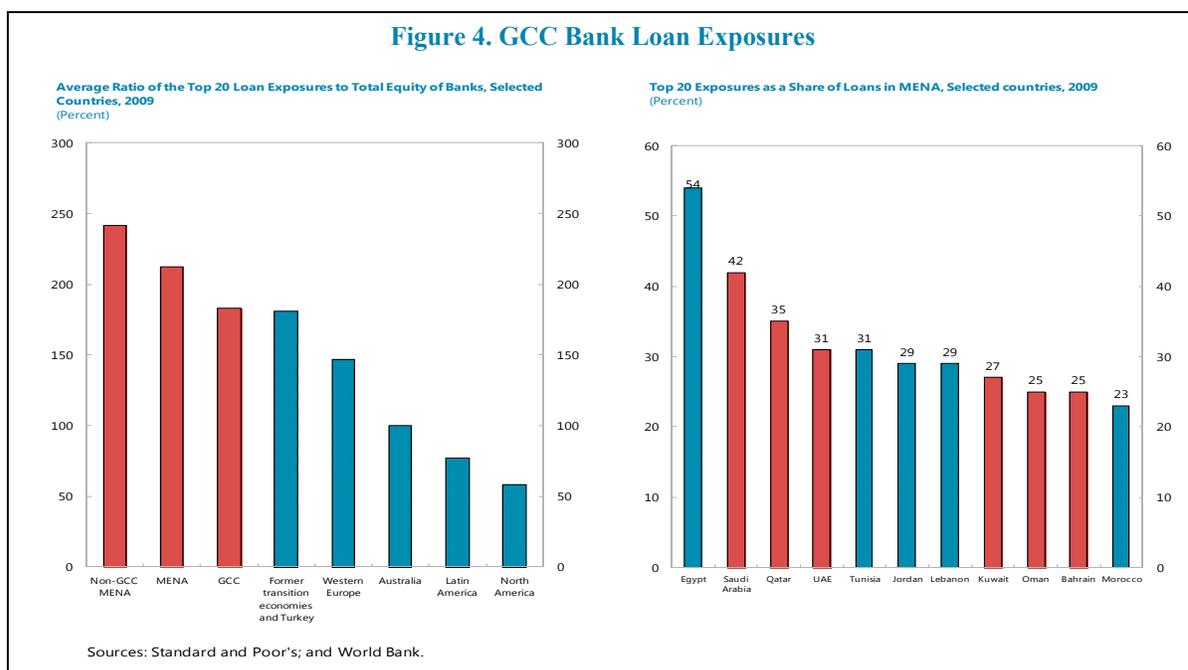


Weak corporate governance practices in the GCC and high credit concentrations reduce banks' resiliency. GCC countries have high credit concentrations (by international comparison), reflecting their economic structures and SMEs' limited access to finance (Figure 4) (World Bank, 2011). Disclosure requirements are often limited to only some of a group's entities, which makes it difficult to identify all group members and monitor their links. In some cases, corporate and personal assets have not been separated. Supervisors also face difficulties in identifying risks from multiple unconsolidated exposures to private conglomerates. The region's corporate governance practices and shortcomings in financial disclosure make it hard to track the ultimate beneficiaries of loans on a consolidated basis. The high share of expatriates and their relatively high turnover in some GCC countries may contribute to increased short-term risk taking.

Preventing the buildup of systemic risk is all the more important in the absence of effective crisis resolution frameworks and insolvency regimes. GCC countries have implicit deposit insurance schemes that provide de facto full guarantees; these have led to the understanding that banks are "not allowed to fail." In the case of insolvency regimes, the main

² In addition, enforcement of collateral rights has been weak in the GCC.

reason for the lack of effectiveness appears to be inefficient enforcement and implementation (Uttamchandani, 2010). Court processes tend to be slow, procedures expensive and drawn-out, and recovery rates low. Qatar, the United Arab Emirates, and Saudi Arabia report very low usage of their bankruptcy systems. To strengthen market discipline, central banks have been underlining the importance of proper risk assessment by banks.



Lastly, the increasing share of Islamic finance in GCC economies calls for further broadening of risk management practices and instruments. Although the main risk categories are the same for Islamic and conventional financial institutions, risk management practices and instruments need further improvement. In particular, liquidity and risk management tools for Islamic finance institutions are even less developed than for conventional financial institutions (for example in Oman, where Islamic banking has only recently been introduced). Real estate finance is naturally suited to Islamic financial instruments, often leading to a higher exposure of these institutions to the real estate sector (as in the United Arab Emirates and Bahrain). One major difference for Islamic banks as compared to conventional finance is their obligation to comply with Shariah principles; this form of compliance risk is part of the operational risk that, although limited, may under certain circumstances turn into systemic risk.

In sum, fiscal policy is the key tool for managing demand in the GCC, but given the characteristics of the economies, macroprudential policies have an important role to play in managing financial cycles. Ensuring that fiscal policy is not procyclically adding to demand pressures in the economy as oil prices rise is essential to stopping boom-bust cycles; however, in the absence of an independent interest rate policy, macroprudential policies need to support fiscal policy to ensure that the financial sector does not become overextended and itself contribute to excess demand pressures.

III. MAIN TYPES OF MACROPRUDENTIAL INSTRUMENTS

A wide range of instruments and measures have been proposed in the literature for use as macroprudential tools. In practice, it is difficult to clearly delineate prudential instruments or even a crisis management tool as either “micro” or “macro”; the same instruments may serve multiple objectives, depending on how they are used.³ Without being exhaustive, Annex 1 provides taxonomy of the various tools that can be potentially useful for macroprudential purposes, depending on the nature of the risk to financial stability.

The choice of instruments to be included in the macroprudential toolkit should be based on a set of desirable features.⁴ Generally, such features should (i) be effective in limiting the buildup of systemic risk and creating buffers to be used in periods of stress; (ii) offer limited opportunity for arbitrage (regulatory, cross-border); (iii) aim at the roots, not the symptoms, of systemic risk (notably by inducing private sector agents to internalize the systemic consequences of their decisions); and (iv) have characteristics that are the least distortionary to the financial system and the economy.

The macroprudential toolkit comprises instruments aimed at containing risks in advance and absorbing shocks afterwards. Most of the instruments, including the various risk management methodologies, financial reporting practices, funding liquidity standards, collateral arrangements, risk concentration limits, and compensation schemes, are designed to prevent risks from building up to dangerous levels. Some of the instruments, such as certain elements of the supervisory review (Pillar 2) and profit redistribution restrictions, address the increased vulnerabilities at an early stage. Finally, there are instruments whose role is to help absorb the shocks when they occur and limit the damage to the financial sector and the real economy. These instruments include the various insurance mechanisms, and managing financial institutions’ failure and resolution.

³ See Box 5, on “Adjusting *Micro*prudential Tools to Account for Systemic Risk,” in IMF 2011.

⁴ See Section IV, on general considerations for the choice of instruments, in IMF 2011.

Some of the instruments imply sophisticated methodologies, whereas others can be introduced in simpler environments and are less data-intensive. For example, risk measures calibrated through the cycle and certain accounting methodologies assume that macroeconomic and financial data are available across several credit cycles, which is not the case for GCC countries. Nevertheless, the concept of smoothing through the cycle is useful even in the absence of sufficient data, and more basic rule-of-thumb instruments can be considered.

Countries have been actively using many of these tools, even before the global financial crisis. For example, Spain introduced dynamic provisioning in 2000 to slow the rate of surging credit growth and build a buffer for bad times. Several Eastern European countries have used FX lending restrictions and higher reserve requirements on foreign liabilities channeled into domestic credit growth in the run-up to the crisis. Most GCC countries have placed caps on debt-to-income (DTI) ratios to limit personal credit growth. And Korea and Hong Kong SAR have used limits on loan-to-value (LTV) and debt-to-income ratios on mortgage lending to contain systemic risks from the housing price boom and the associated household debt growth.

Other instruments have evolved as countries have continued to learn lessons from the global financial crisis. These new instruments include the countercyclical capital buffer, capital surcharges for systemic institutions—one of the components of the Basel III regulations developed as a response to the crisis—through-the-cycle margining for collateral, the various proposals to make compensation schemes less conducive to short-term risk taking, or insurance mechanisms such as contingent capital infusions. Most of these instruments are still in the design stage and have not been introduced widely.

IV. THE EXPERIENCE WITH MACROPRUDENTIAL POLICY

TOOLS IN THE GCC

GCC central banks have been using several macroprudential instruments over many years.

GCC countries implemented a number of macroprudential tools before the global financial crisis, particularly in order to contain retail lending; but these measures often came late in the credit boom. This section reviews the macroprudential tools that have been used and discusses the experience with them. Annex II provides an overview of the major macroprudential instruments currently in use in the GCC.

- **Capital, provisioning, and liquidity requirements for banks.** Most of the GCC countries have established a fixed ratio for general provisions, but none have dynamic or countercyclical measures, except Saudi Arabia, where banks are required to maintain a provisioning ratio of 100 percent of nonperforming loans (NPLs); this requirement was raised as high as 200 percent at the height of the economic cycle. In Kuwait, Oman, Qatar, and the United Arab Emirates, the general provisioning ratio was adjusted after the crisis.⁵ Other requirements for banks, such as reserve requirements on bank deposits and liquidity requirements, have been commonly used in the region.
- **Ceilings on personal loans.** Personal lending regulation assumes macroprudential significance because of its high share in total lending and the moral hazard problem related to the debt-bailout expectations of nationals.⁶ Debt-service-to-income ratios are commonly used in the region, except in Oman and Kuwait. Most countries have imposed a cap on monthly repayments as a share of the monthly salary of the borrower. This limit ranges between 33 percent (for Saudi Arabia) and 50 percent for Bahrain, Qatar, and the United Arab Emirates. While the United Arab Emirates has set a ceiling on the total amount of personal

⁵ The United Arab Emirates is raising general provisions to 1.5 percent by 2014 to increase banks' resiliency against the possibility of losses that have not yet been identified.

⁶ In Kuwait, debt relief measures have been approved several times for nationals for personal loans taken from commercial banks, most recently in 2012. The United Arab Emirates set up an AED10bn (USD2.7bn) debt settlement fund to clear the defaulted debts of its citizens in 2011, but to date there has only been limited utilization.

loans, Oman has no such ceiling. Qatar has imposed a differential ceiling on individual loans to nationals and expatriates. The use of loan-to-value (LTV) ratios is still uncommon. Only Qatar and Saudi Arabia have taken explicit measures, while business practices in other countries have resulted in the ratio being around 80 percent.

- **Limits on exposure.** Ceilings on credits for banks, such as loan-to-deposit ratios, are common in the region, with the range of ratios varying from 60 percent in Bahrain to 90 percent in Qatar. The only exception is the United Arab Emirates, where there is a related regulation prohibiting loans that exceed stable resources. In order to avoid concentration risks, all GCC countries have set up limits on exposure concentrations, such as a maximum limit of credit facilities to a single borrowing group. Also, limits on real estate exposure have been introduced in all countries other than Kuwait and Saudi Arabia. Limits on foreign exchange risk are uncommon: only Oman and Qatar have a cap on foreign currency lending and foreign exchange positions. Kuwait has a policy requiring that foreign exchange loans to be extended only to borrowers with foreign exchange cash flows.

The macroprudential instruments in place before 2008 were not sufficient to keep credit and asset price growth in check, and in many cases the exceptions granted by the authorities undermined the effectiveness of regulatory caps. Specifically:

- As a result of high retail credit growth in the 2000s, the share of retail loans to total loans reached high levels in some GCC countries. To mitigate the risk of high leverage for banks and individuals, most GCC countries had already put personal lending regulations in place before the crisis. These regulations were gradually tightened, effecting a gradual decline in the share of retail loans to total bank loans, but in 2008 retail loans still made up 30 percent or more in banks' total loan portfolios in Bahrain, Kuwait, and Oman. Personal loans might also have been used for equity purchases, though the extent of this practice is difficult to ascertain; only the Central Bank of Kuwait reports bank lending for equity purchases separately (see Mansur and Delgado, 2008; Fitch, 2009).
- GCC countries have been ahead of many other countries in imposing loan-to-deposit ratios. These ratios helped contain liquidity risk and the reliance on wholesale funding. However,

constant loan-to-deposit ratios (LTDs) failed to sufficiently slow credit growth in the run-up to the crisis: the deposit base was expanding due to high liquidity in the system (the average annual real growth in credit to the private sector in the GCC ranged between 17 percent for Oman to 35 percent for Qatar during 2003–08). A gradual tightening of LTDs might have contributed more effectively to limiting credit growth, though it would not have prevented the kind of exuberant foreign borrowing observed in the United Arab Emirates prior to 2008.

- Limits on real estate exposures were in place in GCC banking systems, but the definition of real estate in the regulations did not adequately cover real estate-related lending and financing activities. As a result, banks' actual exposure to the real estate sector turned out to be higher than suggested by the regulatory caps. LTVs for real estate lending were generally not part of the macroprudential toolkit prior to the crisis. Although mortgage lending is still only a small share of residential real estate financing, which remains largely cash-based, LTVs for real estate developers, where relevant, might have helped to stem the real estate boom. In the aftermath of the crisis, LTVs are increasingly recognized in the GCC as potentially useful instruments for containing banks' exposure to the real estate sector.

The most recent experience of credit and asset price booms underlines the fact that macroprudential policy, albeit important, is only one element in the policy mix. It cannot in itself carry the burden of preventing the buildup of vulnerabilities. Pro-cyclical fiscal policies and insufficient liquidity absorption (in cases where the deposit base expanded substantially) have contributed greatly to high liquidity in the financial system. GCC countries' efforts to reduce the pro-cyclicality of fiscal policy had been insufficient prior to the crisis (see Beidas-Strom and others, 2011). Central banks' liquidity forecasting capacity could have been strengthened, and their liquidity management frameworks were inadequate to sterilize the abundant liquidity from oil revenues and, in some cases, from capital inflows. High liquidity, in turn, fueled credit growth, inflation, and asset price increases.

V. INSTITUTIONAL FRAMEWORKS FOR MACROPRUDENTIAL POLICY

Institutional arrangements will be significantly shaped by country-specific circumstances, so there can be no “one size fits all.” Moreover, international best practices are yet to emerge. However, there appear to be two (possibly overlapping) key elements in this architecture: an authority with a clear mandate for macroprudential policy, and a formal mechanism of coordination or consultation across policies aimed at financial stability.⁷ Such an authority could be a body, such as a committee or council, or an institution, such as a central bank, supervisory agency, existing or new. The need for coordination arises because macroprudential policy interacts with other policies, as noted above. Coordination is especially important when formal authority over tools affecting specific sources of systemic risk rests with bodies other than the macroprudential authority.

General lessons for guidance. While there are advantages and disadvantages to any model, some general lessons, outlined below, can translate into basic guidance.⁸

- The central bank should play an important role in macroprudential policy.
- Complex and fragmented regulatory and supervisory structures are unlikely to lead to the effective mitigation of risks to the system as a whole.
- Participation by the Ministry of Finance is useful, but if the ministry plays a dominant role that may pose important risks.
- Systemic risk prevention and crisis management are different policy functions that should be supported by separate arrangements.

⁷ The results of a recent IMF survey (IMF, 2011) confirm a variety of existing institutional arrangements relating to financial stability and macroprudential policy in its member countries.

⁸ For a detailed analysis, see IMF (2011).

A. International Experience

A number of countries are reviewing their institutional frameworks for financial stability to support the development of a macroprudential policy function. In some cases, this involves a rethink of the appropriate institutional boundaries between central banks and financial regulatory agencies, or the setting up of dedicated policymaking committees. In other cases, efforts are underway to enhance cooperation within the existing institutional structure. The financial stability mandate is receiving legal backing in an increasing number of countries.

In several countries, particularly in Europe, prudential functions are being integrated into the central bank. Typically, these countries (for example, the Netherlands, Belgium, and the United Kingdom) have adopted some form of “twin peaks” model, leaving conduct-of-business and securities market supervision as a responsibility of a separate agency. Ireland has opted for a stronger form of integration, in which all supervision of markets and institutions is conducted by the central bank.

Establishing a financial stability committee or council is increasingly common, both in advanced and emerging market countries, to facilitate coordination among the relevant entities. However, there are differences among the committees and councils in how they are chaired and in their composition. The financial stability committee is chaired by the central bank in the European Union (European Central Bank), the United Kingdom, and Belgium. The central bank is the chair for the committee in the Philippines, Thailand and Australia.⁹ In Chile, Mexico, and Turkey, recently established committees are chaired by the Minister of Finance (Treasury). In Asia, the financial stability coordination committees are chaired by the Ministry of Finance in Hong Kong SAR, India, and Indonesia. A prominent example of the financial stability coordination entity being chaired by the Treasury is the United States.

B. Institutional Arrangements in the GCC Countries

A macroprudential mandate is generally not codified by law in the GCC countries. Qatar is an exception: the Qatar Central Bank has the legal mandate over financial stability through

⁹ For a detailed review of institutional arrangements in Asia see Lim and others (2013a).

powers to frame the policies for the regulation and supervision of all financial services (Annex IV). Qatar has also provided a formal structure for coordination among the regulatory bodies through The Financial Stability and Risk Control Committee (Financial Stability Committee). Currently, the other GCC countries have informal mechanisms for coordination between regulators. As part of the implementation of the financial stability objective, central banks in Bahrain, Oman, Kuwait, Qatar and the United Arab Emirates have set up a separate financial stability office and publish financial stability reports.

The current regulatory structure in several GCC countries needs to be strengthened through creation of a formal framework for coordination and information-sharing across regulatory agencies to close the loopholes for regulatory arbitrage. The financial system in the GCC countries is regulated and supervised by several regulators, with the banking system in all these countries under the regulation and supervision of the central bank.

- In Bahrain, the Central Bank of Bahrain is the single regulator for the financial system according to the central bank law.
- In Kuwait, under the current legal framework, the prudential regulation and the supervision of the banking sector are conducted primarily by the Central Bank of Kuwait (CBK), while a newly established Capital Markets Authority (CMA) regulates capital market institutions and investment companies.
- The Central Bank of Oman is de facto the single integrated regulator of Oman's financial services industry, with the exception of capital markets, which are regulated and supervised by a Capital Markets Authority.
- The Saudi Arabian Monetary Agency (SAMA) is responsible for regulating commercial banks, insurance companies and exchange dealers, and mortgage, leasing and finance companies, while the Capital Markets Authority exercises supervision over the capital markets.
- In Qatar, the QCB regulates the banking system and insurance sector, while the Qatar Financial Markets Authority regulates the securities market. The Qatar Financial Center Regulatory Authority regulates the institutions licensed by the Qatar Financial Center. However, the QCB is responsible for ensuring financial stability, and the recommendations

made by the Financial Stability Committee (chaired by the governor of the QCB) are implemented by the respective regulators, consistent with the legal and regulatory mandates under their respective laws.

- There are multiple regulators of the financial system in the United Arab Emirates. The Central Bank of the United Arab Emirates regulates the banking system. Of the three stock exchanges in the country, the Dubai Financial Market and the Abu Dhabi Securities Exchange are both governed and regulated by the Securities and Commodities Authority. The third, NASDAQ Dubai, located in the Dubai International Financial Centre, is governed by an independent regulator (the Dubai Financial Services Authority). The insurance sector is regulated by the Insurance Authority, established in 2008.

VI. MOVING MACROPRUDENTIAL POLICIES FORWARD IN THE GCC

The GCC countries have scope to strengthen their macroprudential frameworks and toolkits for better management of financial cycles. In particular, further steps could be taken to build appropriate buffers and to limit excessive leveraging and credit booms in good times. It should be noted, however, that the most sophisticated methodologies for measuring risk and calibrating instruments are likely not suitable for GCC financial systems at this point, because experience with full economic cycles is limited and data for model calibration are insufficient. These issues are considered below.

A. Setting Up Institutional Arrangements for Macroprudential Policy

Macroprudential policies have a long history in the GCC countries; to date, however, they have been implemented by central banks without a formal framework or adequate legal backing. Drawing on the emerging international experience, it would be desirable to develop a more formal and transparent macroprudential institutional and policy framework, notably with respect to the mandate for financial stability, the coordination framework, the definition of objectives, the elaboration of analytical methods, and the policy toolkit. The development of a full-fledged macroprudential framework may require some time, because understanding of these issues is still evolving. Nevertheless, a number of countries, including Qatar, are introducing institutional arrangements for macroprudential policy.

It seems advisable to give the central banks the formal mandate to ensure financial stability in the GCC countries; they bring the expertise and incentives to the task of mitigating systemic risks. This arrangement would be in line with the results of an IMF survey on institutional arrangements (see Nier and others, 2011a; and Nier and others, 2011b). In addition, some countries with relevant experience for the GCC, namely Hong Kong SAR and Singapore, have clear mandates established by legislation or executive decision (Annex III). A formal coordination framework between the different regulatory agencies in the GCC countries is essential to identify systemic risks, reduce regulatory overlaps and gaps, and mitigate risks. As a

way to institutionalize macroprudential policy coordination, the GCC countries could establish a financial stability committee or council with cross-institutional membership. While reflecting country-specific circumstances, a formal institutional framework would encourage the effective identification of risks as they are developing; provide strong incentives to take timely and effective action to curb those risks; and facilitate the coordination of policies that affect systemic risk.

B. Strengthening Macroprudential Analysis

GCC countries now generally conduct regular systemic assessments and publish financial stability reports. Currently, Bahrain (since 2007), Qatar (since 2010), Oman (since 2013), Kuwait (since 2013), and the United Arab Emirates (since 2012) publish financial stability reports. These reports help improve the transparency of risk recognition in the financial system and facilitate broad communication with the public. Macro stress testing should also become an integral part of systemic surveillance. These activities could best be achieved by setting up well-staffed macroprudential units within the entities in charge of macroprudential supervision.

In addition, the macroprudential framework should be supported by an effective early-warning system (EWS) to identify and monitor systemic risks. The EWS involves consolidating quantitative work with qualitative insight, informed by the views of policymakers, market participants, analysts and academics. Quantitatively, the EWS should be based on timely, disaggregated, high-frequency indicators.¹⁰ A comprehensive set of quantitative indicators typically includes (i) macro aggregates and forecasts (domestic, external, and sectoral imbalances) as indicators of the state of business and financial cycles; (ii) leverage ratios in the financial, corporate, and household sectors; (iii) foreign borrowing by financial and nonfinancial entities by maturity and instrument; (iv) indicators of real estate and equity markets; (v) indicators of domestic credit growth; (vi) indicators of banks' sectoral exposures; and (vii) indicators of liquidity and funding practices.¹¹ Qualitative aspects could involve assessments of credit underwriting standards and risks arising from linkages in the financial sector. The EWS should be

¹⁰ IMF 2013c highlights the need for prominence to be given to data for monitoring the buildup of sectoral risks and cross-border financial linkages, to complement high-frequency data that help detect an imminent materialization of risks.

¹¹ See IMF (2011) for a useful summary on systemic risk assessment and monitoring.

under regular review to incorporate lessons from new crisis situations, either domestically or abroad.

GCC countries are in different stages of developing a formal EWS. Countries have developed diagnostic tools that include monthly reports to capture trends in major banking soundness indicators, and other granular analysis to identify risks at an early stage. Further, the financial stability unit (FSU) in the United Arab Emirates is developing a stress index and working on formalizing its EWS dashboard. The FSU in Oman is developing a database on key variables relating to the macroeconomy, financial markets, financial institutions, and financial safety nets/infrastructure, as part of a move toward formulating an EWS for macrofinancial surveillance. Qatar's real estate price index is part of its EWS toolkit. Saudi Arabia has strengthened its off-site surveillance system and is developing its EWS.

C. Choosing the Appropriate Macroprudential Instruments

There is scope to expand the range of macroprudential instruments in the GCC. This section provides some recommendations on specific macroprudential instruments that the GCC authorities could consider introducing, given the specific characteristics of the economies and financial systems in the region.

Building and maintaining sizeable buffers in the banking sector

The region's high macroeconomic volatility, due to dependence on hydrocarbon revenues and a history of procyclicality in some countries, together with its lack of economic diversification, nontransparencies in its financial and non-financial sectors, and high credit concentrations all call for sizeable capital buffers in the GCC banking systems.

GCC regulators should continue to ensure that banks maintain higher capital than required by minimum international standards. Most GCC banks are currently highly capitalized, and over the past few years they have aimed at capital levels between 15 and 20 percent, well above the existing minimum regulatory requirements that range from 8 percent (Saudi Arabia¹²) to

¹² This would change in accordance with Basel III rules to 10.5 percent by 2019. Also, SAMA maintains a higher effective capital ratio requirement for banks than the regulatory minimum.

12 percent (Bahrain, Kuwait, United Arab Emirates) (see Annex Table 1). This additional capital in the GCC compensates for the special characteristics of these countries, as well as concerns about asset quality in the aftermath of the crisis in some countries. Since well-run banks in advanced countries are expected to operate at higher capital levels than before the crisis, GCC banks may need to consider increasing the capital buffer expected of them to compensate for the above risks. One mitigating factor is the high share of Tier 1 capital, as compared to the share in the banking systems of advanced and emerging economies. GCC banks could somewhat reduce the need for the extra capital through improved corporate governance and disclosure, as well as by requiring that their large borrowers receive credit ratings.

The more pronounced cycle that results from oil price volatility makes calibrating cyclical buffers more challenging. The countercyclical capital buffer, an important component of the Basel III framework, is a preemptive measure that requires banks to build up capital gradually as imbalances in the credit market develop, to provide additional loss-absorbing capacity in downturns. Regulators will need to develop a set of indicators to guide the activation and deactivation of this buffer, either on a broad basis or to target specific segments of the credit market. Tailoring to specific country circumstances and supervisory judgment will both be key for appropriate calibration.

Certain provisioning rules can also serve macroprudential purposes. Another tool aimed at alleviating procyclicality is the dynamic provisioning framework. Designing such a framework tailored to GCC banking systems would face calibration challenges, given the relatively short historical data and the nature of the cycle in hydrocarbon economies. While general provisions are a more rudimentary tool, they can be useful in building buffers to absorb shocks in bad times. Some of the GCC countries, notably Kuwait, Qatar, and the United Arab Emirates, have raised general provisions to increase banks' resiliency against the possibility of losses not yet identified. Saudi Arabia requires banks to maintain a provisioning ratio of 100 percent in the upcycle (reaching as high as 200 percent at the height of the economic cycle).

Rules on limiting dividend payments in good times can help build capital buffers for use in bad times. Restrictions on dividend distribution by supervisory authorities in effect force banks to gradually build up capital in cases where they would not voluntarily do so. Banks in Kuwait

and Saudi Arabia were mandated by law to build up general reserves as a share of paid-up capital. Such a policy has been implemented in recent years in the United Arab Emirates, with the aim of building buffers in an environment where the recognition of NPLs has been gradual. In the context where banks generate healthy operational profits but face the legacy of high NPLs, restricting dividend distribution can help build resiliency in the banking sector.

Dampening credit and asset price booms

The reliance on hydrocarbon resources in the face of volatile hydrocarbon prices, a history of procyclical fiscal policy in upswings, limited monetary independence, persistent liquidity surpluses, and the importance of real estate as a major asset class for investment make GCC financial systems prone to procyclical systemic risk. These characteristics call for macroprudential measures to help break the boom-bust cycle.

Moving closer to risk-based supervision where it has not been fully adopted, enhancing the role of the Pillar 2 framework, and linking the supervisory review process to the cycle would help with risk mitigation. In the upswing, this would help ensure that certain practices such as credit evaluation, collateral valuation, or compensation practices are not getting relaxed. In the downturn, it would help ensure that NPL classification and provisioning practices are strong enough.

Time-varying LTD ratios could help manage the problem of procyclicality. Such LTD ratios are being used already, for example in Austria and China. Although some forms of LTD ratio have been in place in all GCC countries, they have not been effective in preventing credit boom and bust cycles. While LTD ratios are important instruments, the rise in deposits in upswings due to procyclical fiscal policies and inadequate sterilization of liquidity allowed GCC banks to rapidly expand their credit portfolios. Time-varying LTD ratios—imposing lower ratios in upswings to slow down credit growth even as the deposit base is expanding—could mitigate procyclicality. As with countercyclical buffers, defining the cycle poses analytical challenges; nevertheless, to some extent, relatively simple guideposts, such as credit growth, could be developed. Even in the case of a simple LTD ratio, the indicator has to be designed carefully to avoid giving banks the wrong incentives in their funding structures, and consistency with other regulators should be ensured.

For example, excluding or limiting debt securities—which often have longer maturities than customer deposits—in the denominator could discourage banks from extending the maturities of their liabilities. One approach is to design an LTD ratio using varying weights for deposits of different maturities. Kuwait recently redefined its LTD ratio by allowing long-term deposits to be 100 percent loanable, but applying a haircut of 25 percent on short-term deposits.

Appropriately calibrated and time-varying LTV ratios for real estate lending and debt-service-to-income (DTI) ratios for retail lending should be a part of the macroprudential toolkit in the GCC. As shown by several high credit growth and asset price boom-bust episodes in the GCC, containing retail and real estate lending is crucial to protecting the financial system, and it can also help prevent overheating. Most GCC regulators had set limits on DTI ratios and loan tenors for retail lending, but only Qatar had a cap on LTV ratios for real estate lending. Although mortgage lending is currently nascent in the GCC, setting appropriate limits on LTV ratios and adjusting them to market conditions will become important as mortgage lending picks up. The recent experience of Hong Kong SAR and Singapore illustrates the use of LTV and DTI ratios as macroprudential instruments to contain property lending and price growth (see Box 2).

Caps on LTV ratios for commercial properties are equally important in the GCC context.

Commercial properties suffered a larger price decline in several GCC countries (Kuwait, Qatar and the United Arab Emirates) after 2008 compared to residential real estate, reflecting overinvestment in this segment. Of the GCC countries, only Qatar imposed a limit on LTV for real estate finance other than to individuals. Other countries, such as Hong Kong SAR, have also imposed and tightened LTV caps on commercial properties.

While the design of compensation schemes are not among the chief causes of systemic risk in the GCC, the large share of expatriate employees in the financial sector necessitates attention to the design of remuneration packages. Guidelines linking performance-related pay to ex ante longer-horizon measures of risk and back-loading of pay-offs can help reduce incentives to focus on short-term profits. High staff fluctuation, in some cases where expatriate employees dominate the workforce, may give rise to excessive risk-taking that could be curtailed by appropriately designed compensation packages.

Box 2. Property market regulatory measures in selected countries

A number of economies have used macroprudential policies in recent years to protect their financial systems from stress induced by volatile asset prices, particularly in the property market.

Empirical Studies. There is some international evidence that the use of LTV caps decelerates property price growth, and both LTV and DTI caps slow property lending growth. Ahuja and Nabar (2011) find that the use of LTV caps appears to strengthen bank capital buffers and bank performance in economies with pegged exchange rates and currency boards, while lowering NPLs in the broader sample. Comparing the subset of fixed exchange rate and currency board economies against the broader sample, they find that such instruments are used more frequently in the first group. In the broader sample, interest rate tools can also be deployed to control credit aggregates, which could explain why the reliance on LTV and DTI instruments appears to be smaller.

Hong Kong SAR. With the currency board ruling out an independent monetary policy, the Hong Kong SAR authorities have to rely on macroprudential measures to contain the property market boom. Faced with a credit-asset price cycle since 2009, the authorities have introduced several changes to LTV and DTI cap policies. The aggressive tightening of LTV ceilings caused average new residential mortgage LTV ratios to decline steadily in 2011. Another important strategy has been to increase public land sales to ensure adequate supply, and managing house price inflation expectations. In addition, the authorities have also imposed transaction taxes in the form of a Special Stamp Duty, to discourage speculative short-term trading of residential properties. Although past measures have reduced transaction volumes and created significant buffers in the financial system, house prices have continued to rise. A relentless run-up in house prices led to another round of tightening measures for the local property market in February 2013, including (i) a further rise in Special Stamp Duty for all transactions, (ii) a further tightening of mortgage underwriting standards, (iii) a lower LTV cap on commercial properties, and so forth. The empirical analysis for Hong Kong SAR suggests that the residential property price inflation appears to fall only about two years after the change in the LTV ratios; a tightening of LTV limits appears to have little effect on total mortgage lending. The challenge is to calibrate their macroprudential tools in combination with land sale policy.

Singapore. The objective of the monetary policy framework in Singapore is to maintain price stability by managing the nominal exchange rate; the Singapore authorities consider that capital flow and asset price considerations are best managed with macroprudential tools. An escalating series of macroprudential measures were introduced during 2009–12, focusing on both domestic and foreign buyers of real estate. Since 2009, the LTV cap has been lowered from 90 percent to 40 percent in some cases, and the Special Stamp Duty has been repeatedly extended and increased. These measures were sufficiently effective that price growth slowed sharply in late 2011, although exogenous factors also likely contributed.

Limiting the buildup of excessive exposure to targeted sectors or borrowers

The limited range of domestic financial assets for investment, particularly fixed income products, and the importance of real estate as a major asset class in undiversified GCC economies have contributed to property price booms and excessive exposure by banking systems to the real estate sector, building a case for targeted exposure limits.

Well-calibrated and strictly enforced risk concentration limits can help contain the buildup of excessive exposure to certain sectors or borrower groups. Given the undiversified nature of GCC economies, real estate is a particularly important asset class. While the focus internationally has been mainly to cap LTVs for individual mortgages, this approach is not sufficient in the GCC. The low share of residential properties financed by mortgages in the GCC, as well as the importance of lending to developers for both residential and commercial purposes, raise the importance of establishing caps on real estate exposure. Limits on real estate exposure have been employed by GCC countries other than Kuwait and Saudi Arabia; nevertheless, several GCC countries experienced episodes of real estate boom-bust cycles in recent years, suggesting that the existing regulations were insufficient or not enforced strictly. Real estate exposure and property price increases were high in the run-up to the global financial crisis in some GCC countries (United Arab Emirates, Qatar, and Kuwait in particular). The subsequent sharp decline in real estate prices indicates that there is scope to improve the calibration of real estate exposure limits and to strengthen enforcement.

Special consideration is needed to define real estate exposure appropriately. To prevent excessive lending to the sector, the definition should encompass all finance activities related to the purchase and construction of buildings in which the bank depends on real estate or real estate collateral as a source of repayment. For example, Qatar broadened the definition of real estate exposure in 2011 to include all real estate-related activities. The definition also includes finance granted for purposes other than real estate, where the bank depends on real estate or real estate collateral as a source of repayment or security. This conservative definition helps contain real estate exposure; however, it restricts banks' ability to expand lending to certain sectors, such as SMEs, where real estate is overwhelmingly used as collateral. Developing movable collateral frameworks could help mitigate this problem. Real estate regulation should

ensure a level playing field between Shariah-compliant and conventional banks, taking into account the special characteristics of the former group.¹³

Large exposure limits to individual borrowers and borrower groups also need to be redefined and more strictly enforced in some cases. High credit concentration, a common phenomenon in GCC banking systems, is partly due to the prevalence of large family business groups in all GCC countries and to the importance of large government-related entities (GREs) in the development model of some GCC countries. The existing large exposure limits to individual borrowers could be complemented by additional aggregate limits to certain borrower types, such as the aggregate limits on lending to GREs being contemplated in the United Arab Emirates. Excessive lending by Emirati banks to GREs led to asset quality problems and a wave of loan restructuring deals in the aftermath of the global financial crisis, and the ensuing debt overhang and high NPLs are weighing on the banking sector's ability to resume healthy lending activity.

Facilitating banks' liquidity management to limit liquidity risk

Shallow domestic money and debt markets, passive liquidity management frameworks, and persistent structural liquidity surpluses in the financial system make liquidity management challenging for GCC banks.

GCC regulators are expected to follow the new Basel III liquidity requirements, but there may be challenges in agreeing on definitions of liquid assets and in developing market liquidity. The Basel III criteria for high-quality liquid assets are ill-suited to the GCC, where domestic debt markets are underdeveloped. Moreover, the net stable funding requirement means that banks need to match the maturity of their funding more closely with the maturity of their assets. In the GCC context, this could mean more retail deposits, issuing long-term liabilities, or cutting back on long-duration assets. This creates a tension, given the absence of domestic term funding markets and the demand for longer-term lending for mortgages, infrastructure, and SME investment.

The Basel III liquidity requirements should give an impetus to domestic debt market development in the GCC. It has to be noted, however, that developing liquid debt markets in fiscal surplus countries is challenging. Qatar has been making efforts to develop its domestic

¹³ The exposure to real estate of Shariah-compliant banks in the GCC has been high, and unlike conventional banks, they are allowed to hold equity-like real estate exposures in their balance sheets.

government securities market, but it will take time to reach sufficient depth and liquidity (Arvai, 2012). The other GCC countries have yet to make concerted efforts at domestic debt market development.

Funding risks related to capital inflows need to be contained. While foreign exchange risk has traditionally not been a major concern in the GCC, given their strong external positions, funding risk may become a concern in countries experiencing a rapid buildup of net foreign liabilities that may involve significant maturity mismatches. There is a need to limit the buildup of liquidity risk that can occur when short-term foreign borrowings are channeled into funding medium- and long-term domestic lending. Potential measures to limit foreign funding risks include higher reserves required for short-term foreign liabilities and limits on foreign currency lending. Liquidity requirements aimed at more closely matching the maturity of liabilities with the maturity of their assets can be calibrated specifically to target foreign liabilities.

Structural measures supporting macroprudential policy

Certain structural characteristics, such as weak corporate governance practices and financial disclosure, as well as high credit concentration, raise GCC banking systems' vulnerability to systemic risk. At the same time, preventing the build-up of systemic risk is all the more important in the absence of effective crisis resolution frameworks and insolvency regimes.

The effectiveness of macroprudential policies can be greatly enhanced by strengthening the supporting environment for mitigating systemic risk and reducing moral hazard. Credit reporting systems, with information that allows lenders to assess the indebtedness and creditworthiness of individual and corporate borrowers, are essential. GCC countries have introduced modern private credit bureaus in recent years. Insolvency regimes need to be modernized in all GCC countries. Crisis management and resolution systems are generally weak, lacking essential elements such as explicit deposit guarantee schemes (except in Bahrain and Oman), well-defined frameworks for coordination and information sharing between various supervisory authorities, and clear mechanisms for funding resolution. As a final point, improving corporate governance and disclosure standards, as well as risk management practices in the financial sector, are of utmost importance to mitigating systemic risk in the GCC.

ANNEX I. MACROPRUDENTIAL INSTRUMENTS	
1. Risk measurement methodologies	Examples
By banks By supervisors	Risk measures calibrated through the cycle or to the cyclical trough Cyclical conditionality in supervisory ratings of firms; development of measures of systemic vulnerability (e.g., commonality of exposures and risk profiles, intensity of inter-firm linkages) as bases for calibration of prudential tools; communication of official assessments of systemic vulnerability and outcomes of macro stress tests
2. Financial reporting	
Accounting standards Prudential filters Disclosures	Use of less procyclical accounting standards; dynamic provisions Adjust accounting figures as a basis for calibration of prudential tools; prudential provisions as add-on to capital; smoothing via moving averages of such measures; time-varying target for provisions or for maximum provision rate Disclosures of various types of risk (e.g., credit, liquidity), and of uncertainty about risk estimates and valuations in financial reports or disclosures
3. Regulatory capital	
Pillar 1 Pillar 2	Systemic capital surcharge; reduction in sensitivity of regulatory capital requirements to current point in the cycle and with respect to movements in measured risk; introduction of cycle-dependent multiplier to the point-in-time capital figure; increase in regulatory capital requirements for particular exposure types (higher risk weights than on the basis of Basel II, for macroprudential reasons) Link of supervisory review to state of the cycle
4. Funding liquidity standards	Cyclically dependent funding liquidity requirements; concentration limits; FX lending restrictions; FX reserve requirements; currency mismatch limits; open FX position limits
5. Collateral arrangements	Time-varying Loan-to-value (LTV) ratios; Conservative maximum LTV ratios and valuation methodologies for collateral; limited extension of credit based on increases in asset values; through-the-cycle margining
6. Risk concentration limits	Quantitative limits to growth of individual types of exposures; (Time-varying) interest rate surcharges to particular types of loans
7. Compensation schemes	Guidelines linking performance-related pay to ex ante longer-horizon measures of risk; back-loading of pay-offs; use of supervisory review process for enforcement
8. Profit distribution restrictions	Limit dividend payments in good times to help build up capital buffers in bad

	times
9. Insurance mechanisms	Contingent capital infusions; pre-funded systemic risk insurance schemes financed by levy related to bank asset growth beyond certain allowance; pre-funded deposit insurance with premia sensitive to macro (systemic risk) in addition to micro (institution specific) parameters
10. Managing failure and resolution	Exit management policy conditional on systemic strength; trigger points for supervisory intervention stricter in booms than in periods of systemic distress.
Source: Galati and Moessner (2011).	

ANNEX II. CURRENT MACROPRUDENTIAL INSTRUMENTS IN THE GCC

Countercyclical capital requirements	No	No	No	No	SAMA has encouraged Saudi banks to increase their capital on a countercyclical basis. During the period 2003-2007, capital of the banking system increased 2.5 times; between 1992 to 1997 the capital of banks rose by 100%.	No
General provisions	Discretionary provision requirement.	Fixed level: 1% of cash items & 0.5% of non cash items	Fixed level: 2% of the outstanding performing 'personal loans' and 1% of outstanding performing 'other loans.'	Yes. 1.5%	Fixed level: 1%. Banks have been directed to maintain NPL ratio of over 100 percent during upcycle.	Gradually being raised to 1.5% of credit risk weighted assets that do not have a specific provision against them.
Dynamic provisioning	No	No	No	No	No	No
Leverage ratios (capital to assets)	Yes. 5% for retail banks and 10% for wholesale banks	No	No	No	Yes. [Deposit/(Capital +Reserve)] Not to exceed 15 times. In addition SAMA has introduced Basel leverage ratio since 2011.	No
Reserve requirements on bank deposits	Yes. 5% of total deposits.	No	Yes. 5%.	Yes. 4.75%.	Yes. 7% on demand deposits. 4% on time and saving deposits.	Yes. 14% for demand deposits; 1% for time deposits
Limits on real estate exposure	Yes. 30% cap on real estate lending of banks as share of total bank lending.	No	Yes. 60 % of the bank net worth or 60 % of all time and savings deposits other than government and inter-bank deposits, whichever is higher.	Yes. For conventional banks, real estate lending not to exceed 150% of bank's capital and reserves (Tier 1). For Islamic banks, investment in real estates should not exceed 25% of the bank's capital and reserves.	No	Yes. 20% of deposits. Current definition of real estate exposure: loans for the construction of commercial and residential buildings.
Limits on other sectoral exposure	No	Lending to shares should not exceed 10 percent of total lending.	Yes. Limits on personal loans: 40% of total credit. Housing loans: 10% of total credit. Non-residents: 5% of Net worth. Aggregate non-resident exposure: 30% of Net worth	Banks may not provide customers with any finance for the purposes of trading in securities	No.	Regulation pending on large exposure limits for aggregate exposure to local governments and government-related entities.
Loan-to-value (LTVs) ratios	No limit (business practice is around 80%)	For residential loans for vacant plots, 50 percent of the cost of the property; the percentage would go up to 60 percent if the property is an existing home, or 70 percent if it is a new building to be constructed	No limit (business practice is around 80%)	70% for individuals, 60% for commercial companies	Yes. For real estate finance companies the regulations impose an LTV of 70%.	Regulation on differentiated LTVs for nationals and expatriates, as well as for first and second properties is pending.

	BAHRAIN	KUWAIT	OMAN	QATAR	SAUDI ARABIA	UAE
Debt/Loan-to-income (DTI/LTI) ratios	Yes. Maximum debt service ratio of 50% of monthly salary.		No	Yes. Credit to individuals capped at 50% of monthly salary and allowances, not to exceed QR 2.5 million per person.	Yes. Total monthly repayments (for both personal loans and credit cards) should not exceed 33% of a borrower's salary.	Yes. Borrowing limits for personal loans: (i) 20 times of salary or monthly income; (ii) loan tenor of 48 months (iii) debt-service ratio of 50 percent of the borrower's monthly salary.
Limits on loan-to-deposit ratios	Yes. A voluntary 60-65% for most banks and 70-75% for those without large investments outside loans.	LTD ratio replaced by a maximum available funding, with the following limits: (i) Remaining maturity up to 3 months: 75%; (ii) remaining maturity from 3 months until one year: 90%; and (iii) remaining maturity more than one year: 100%.	Yes. 87.5%	Yes. 90% for credit ratio (loan-to-deposit ratio).	Yes. 85%.	Yes. Max 100% for the Advances to Stable Resources Ratio.
Ceiling on credit or credit growth	No	No.	No	No	No, but credit growth is an important indicator followed by SAMA on a monthly basis; especially credit to the private sector.	No
Liquidity requirements	Yes. 25%, Liquid assets/total assets	Yes. 18%, Liquid assets /domestic currency customer deposits.	Yes.	Yes. 100%, Current assets / liabilities weighted by liquidity characteristics	Yes. 20%, Liquid assets/deposits. In addition, SAMA has introduced Basel LCR and NSFR since January 2012.	Basel III-type regulation is pending.
Caps on foreign currency lending	No	FX loans can only be extended to borrowers with FX cash flows.	Yes. Lending to non-residents in foreign currency abroad is limited to 5% of net worth.	FX loans can only be extended to borrowers with foreign currency cash flows.	No	No
Limits on foreign exchange positions	No	No	Yes	Foreign currency liabilities cannot exceed foreign currency assets.	No	Up to banks' internal risk management systems
Limits on exposure concentration (individual large exposure, % of total capital)	Yes. 15% of regulatory capital.	Yes. 15%, with aggregate large exposures limited to no more than 400%.	Yes 15%.	Yes. Max limit of credit facilities to a single borrowing group is 20% of bank capital and reserves. Total credit facilities granted to all customers and their borrower groups, at 10% or more of bank's capital and reserves, must not exceed 600% of bank's capital and reserves. Total credit facilities granted to related parties must not exceed 100% of bank's capital and reserves.	Yes, the legal limit is 25%. In practice the limit is 15%.	Yes. 25% for commercial public sector entities, 7% for private sector and individuals.

Sources: Country authorities and IMF staff

	BAHRAIN	KUWAIT	OMAN	QATAR	SAUDI ARABIA	UAE
Debt/Loan-to-income (DTI/LTI) ratios	Yes. Maximum debt service ratio of 50% of monthly salary.		No	Yes. Credit to individuals capped at 50% of monthly salary and allowances, not to exceed QR 2.5 million per person.	Yes. Total monthly repayments (for both personal loans and credit cards) should not exceed 33% of a borrower's salary.	Yes. Borrowing limits for personal loans: (i) 20 times of salary or monthly income; (ii) loan tenor of 48 months (iii) debt-service ratio of 50 percent of the borrower's monthly salary.
Limits on loan-to-deposit ratios	Yes. A voluntary 60-65% for most banks and 70-75% for those without large investments outside loans.	LTD ratio replaced by a maximum available funding, with the following limits: (i) Remaining maturity up to 3 months: 75%; (ii) remaining maturity from 3 months until one year: 90%; and (iii) remaining maturity more than one year: 100%.	Yes. 87.5%	Yes. 90% for credit ratio (loan-to-deposit ratio).	Yes. 85%.	Yes. Max 100% for the Advances to Stable Resources Ratio.
Ceiling on credit or credit growth	No	No.	No	No	No, but credit growth is an important indicator followed by SAMA on a monthly basis; especially credit to the private sector.	No
Liquidity requirements	Yes. 25%, Liquid assets/total assets	Yes. 18%, Liquid assets /domestic currency customer deposits.	Yes.	Yes. 100%, Current assets / liabilities weighted by liquidity characteristics	Yes. 20%, Liquid assets/deposits. In addition, SAMA has introduced Basel LCR and NSFR since January 2012.	Basel III-type regulation is pending.
Caps on foreign currency lending	No	FX loans can only be extended to borrowers with FX cash flows.	Yes. Lending to non-residents in foreign currency abroad is limited to 5% of net worth.	FX loans can only be extended to borrowers with foreign currency cash flows.	No	No
Limits on foreign exchange positions	No	No	Yes	Foreign currency liabilities cannot exceed foreign currency assets.	No	Up to banks' internal risk management systems
Limits on exposure concentration (individual large exposure, % of total capital)	Yes. 15% of regulatory capital.	Yes. 15%, with aggregate large exposures limited to no more than 400%.	Yes 15%.	Yes. Max limit of credit facilities to a single borrowing group is 20% of bank capital and reserves. Total credit facilities granted to all customers and their borrower groups, at 10% or more of bank's capital and reserves, must not exceed 600% of bank's capital and reserves. Total credit facilities granted to related parties must not exceed 100% of bank's capital and reserves.	Yes, the legal limit is 25%. In practice the limit is 15%.	Yes. 25% for commercial public sector entities, 7% for private sector and individuals.

Sources: Country authorities and IMF staff

ANNEX III. CURRENT INSTITUTIONAL SET-UP FOR FINANCIAL REGULATION IN GCC COUNTRIES

Bahrain

The Central Bank of Bahrain (CBB) is the single regulator for the Bahraini financial system, according to the central bank law. In pursuit of its objective of promoting financial stability, the CBB conducts regular financial sector surveillance, keeping a close watch on developments in individual institutions as well as in the system as a whole.¹⁴ The CBB's duties include the licensing and supervision of banks (both conventional and Islamic), providers of insurance services (including insurance firms and brokers), investment business licensees (including investment firms, licensed exchanges, clearing houses and their member firms, money brokers, and investment advisors), and other financial services providers (including money changers, representative offices, finance companies, and ancillary service providers). The CBB also regulates Bahrain's licensed exchanges and clearing houses and acts as the Listing Authority for companies and financial instruments listed on the exchanges. It is also responsible for regulating conduct in Bahrain's capital markets. As part of the implementation of the financial stability objective, the CBB publishes a financial stability report.

Kuwait

Under the current legal framework, the prudential regulation and the supervision of the banking sector are conducted primarily by the Central Bank of Kuwait (CBK).¹⁵ The newly established Capital Markets Authority (CMA) commenced its supervisory role in September 2011. CMA bylaws have been passed, specifying the CMA's supervisory role over investment companies, and delineating the responsibilities of and coordination process between the CBK

¹⁴ Prior to the creation of the CBB in September 2006, the Bahrain Monetary Agency (BMA) had previously acted as the sole regulatory authority for Bahrain's financial sector. The BMA was responsible since its establishment in 1973 for regulating Bahrain's banking sector, and was given responsibility in August 2002 for regulating Bahrain's insurance sector and capital markets.

¹⁵ Until the establishment of the CMA, the Kuwait Stock Exchange, a self-regulated authority, was charged with supervising brokerage firms, entities engaged in portfolio management, and the Kuwait Clearing Company, as well as banks' and investment companies' activities related to securities trading and portfolio management on account of third parties. The supervision of the insurance industry, including brokers and agents, is the responsibility of the Ministry of Commerce and Industry.

and CMA. All investment companies are now under dual supervision by the CBK and CMA pending the separation of investment companies' activities (i.e., lending versus other investment banking activities), and the CBK and the CMA meet regularly to ensure coordination based on a Memorandum of Understanding.

The CBK has made significant progress in recent years with regard to financial stability

issues. A new Financial Stability Office (FSO) has been formed, drawing from interdepartmental competencies that include supervision and macroeconomic analysis, and is reporting directly to the governor. Significant progress has been made on the analytical front and on identification of tools that would be used to assess systemic risk. These include a quarterly off-site surveillance report, banking sector stress testing, and an early warning system (EWS) that incorporates macro and micro economic and financial indicators that would be used to signal sectorwide weaknesses.

Oman

The Central Bank of Oman (CBO) is de facto the single integrated regulator of Oman's

financial services industry. It is "committed to excellence in providing monetary and financial stability and fostering sound and progressive financial sector to achieve sustained economic growth for the benefit of the nation." However, macroprudential policy is not codified in the central bank law. The CBO employs a variety of microprudential measures that can be used to address systemic risk issues and thus have macroprudential characteristics, such as higher capital requirements and sectoral exposure limits. The CMA regulates and supervises the capital markets. The CBO established a Financial Stability Unit (FSU) for macroprudential supervision and to produce the financial stability report.

Saudi Arabia

The Saudi Arabian Monetary Agency (SAMA) is responsible for regulating commercial

banks, insurance companies and exchange dealers. The CMA exercises supervision over the capital market. Although in practice the existing law has not been an impediment to SAMA 's effective supervision over the financial system, the most recent FSAP update recommended revisions to the Banking Control Law (BCL), mainly to provide bank supervisors in SAMA with the

formal independence envisaged in international standards. The legal framework needs to be updated, mainly to formalize the independence and powers that SAMA already has in practice. SAMA has recently established a financial division. A memorandum of understanding was written between SAMA and CMA in early 2012 to strengthen coordination on supervision.

Qatar

The Qatar Central Bank (QCB) has the legal mandate over financial stability, through powers to frame the policies for the regulation and supervision of all financial services and markets in Qatar. In December 2012, the laws governing the QCB, the Qatar Financial Markets Authority (QFMA) and the QFC Regulatory Authority (QFCRA) were amended toward (i) advancing the framework for financial regulation; (ii) promoting financial stability; and (iii) expanding the ambit of regulation to cover areas requiring new and enhanced financial regulation. The amended laws also laid the foundation for increased cooperation between the regulatory bodies in Qatar.

The Financial Stability and Risk Control Committee (Financial Stability Committee) provides a formal structure for coordination among the regulatory bodies. The Financial Stability Committee is chaired by the governor of the QCB, and its membership includes the deputy governor (vice-chairman) and the chief executive officers of the QFMA and the QFCRA. Under the new law, the Financial Stability Committee is responsible for (i) identifying and assessing risks to the financial sector and markets, and recommending solutions to manage and mitigate such risks; (ii) coordinating the work of the financial regulatory authorities with a view to enhancing cooperation and information exchange in order to establish a consistent and co-operative regulatory and supervisory environment; and (iii) proposing policies related to regulation, control, and supervision of financial services businesses and markets. Whereas the recommendations made by the Financial Stability Committee are approved by the Board of Directors of the QCB, the boards of the QCB, QFCRA and the QFMA will be responsible for implementing the recommendations, consistent with the legal and regulatory mandates under their respective laws.

The QFMA and the QFCRA remain independent regulators under the management and direction of their respective Boards of Directors. The QFMA is responsible for the regulation and supervision of financial markets in Qatar including the Qatar Exchange. Authorized firms in the QFC will continue to be subject to authorization and supervision by the Regulatory Authority in accordance with the QFC Law, the Financial Services Regulations, and the Regulatory Authority's Rules.

United Arab Emirates

There are multiple regulators for the financial system in the United Arab Emirates. The central bank (CBU) regulates the banking system. Of the three stock exchanges in the country, the Dubai Financial Market (DFM) and the Abu Dhabi Securities Exchange (ADX) are both governed and regulated by the Securities and Commodities Authority (SCA). The third, NASDAQ Dubai, located in Dubai International Financial Centre, is governed by an independent regulator called the Dubai Financial Services Authority (DFSA). The insurance sector is regulated by the Insurance Authority established in 2008.

Although the CBU has established a Banking Stability Committee, currently it has no authority to include financial institutions outside the banking system in its macroprudential surveillance. Responsibility for systemic risk mitigation is divided between the Banking Stability Committee, which is ultimately responsible for any action taken, and the Financial Stability Unit, which provides the analysis and proposes regulatory reforms to address identified risks. Currently, the central bank has no powers to access information collected by other regulators. There are no formal arrangements for information sharing among regulators; information sharing is only done on a voluntary basis between the CBU and the SCA.

The new Emirati federal strategy gives the CBU the responsibility to oversee financial stability. The authorities are considering legislation governing the supervision of the financial sector to meet the demands of the United Arab Emirates' new financial markets and modernize the regulatory framework. The draft law on the Regulation of the Financial Services Sector and associated amendments to a number of federal laws could signal a move towards a twin-peaks model of financial supervision.

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