# 1. MENAP Oil Exporters: Increase Resilience and Create Private-Sector Jobs

MENAP oil exporters have been able to use the proceeds from high oil prices to support growth in a weak global environment. Accommodative fiscal and monetary policies have been appropriate, but the focus can gradually shift toward bolstering national savings and improving intergenerational equity. In the face of oil revenue volatility, some countries have the means to absorb adverse shocks, but control of government spending is the main preemptive action that can be taken to prepare for the possibility that oil prices might fall and remain low. Fiscal reforms should include public-sector wage bill restraint, which, together with broader structural reforms, would promote private-sector employment.

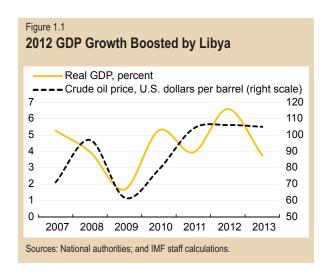
## Oil GDP Growth Falling, Non-Oil GDP Growth Healthy

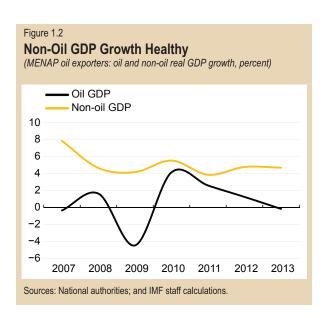
GDP growth in MENAP oil exporters is expected to rise to about 6½ percent in 2012 on the back of a strong, better-than-expected recovery in Libya (Box 1.1), and is forecast to return to 2011 growth rates of almost 4 percent in 2013 (Figure 1.1). In Iran, oil production declined, owing to tightened U.S. sanctions and the EU oil embargo, which took effect during the second half of 2012, lowering the country's growth outlook. GCC growth remains robust, but is expected to slow from 7½ percent in 2011 to 3¾ percent in 2013, mostly due to a tapering off of oil production.

Oil GDP growth in MENAP oil exporters is forecast to continue to decelerate to 1½ percent in 2012 and turn negative in 2013 (Figure 1.2). In other sectors, government spending and accommodative monetary conditions are expected to keep economic growth at a healthy rate of almost 5 percent in 2012 and 2013, despite slow growth in Bahrain and negative growth in 2012 in Yemen due to political unrest. However, non-oil GDP growth rates are not expected to match those observed before 2009, reflecting in part the difficult global environment.

Oil prices are high, but have retreated from levels reached earlier in the year due to the restoration of supply from Libya, the expansion of output in Saudi Arabia and Kuwait (both of which continue to produce oil in record volumes), and weaker

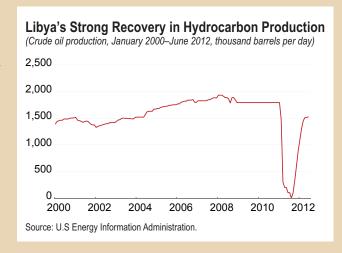
Prepared by Alberto Behar with input from country teams.





#### Libya: Moving Beyond the Revolution

Libya's post-revolution recovery in hydrocarbon production has advanced faster than expected, reaching close to 90 percent of the preconflict level. Despite daunting challenges in the aftermath of the revolution, economic activity is recovering rapidly with the restoration of hydrocarbon production (see figure). As of June 2012, total hydrocarbon output reached more than 1.52 million barrels per day, up from an average of 166,000 barrels per day during the conflict period in 2011, and is expected to increase to the preconflict level by 2013. This faster-thanexpected recovery has already given a momentous boost to Libya's hydrocarbon exports and raised the budget and current account surpluses. Nonresource sectors of the economy have also seen



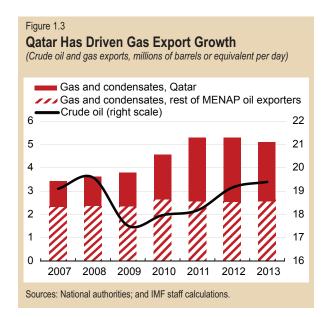
a broad-based turnaround, led by public spending on reconstruction and the release of pent-up private demand. As a result, real GDP is now projected to increase by a record-breaking 122 percent in 2012, after contracting by an estimated 60 percent in 2011. Predicated on an improvement in the security situation, economic growth is also expected to remain robust, at an estimated rate of 17 percent in 2013 and an average 7 percent per year in 2014–17.

The economic outlook remains favorable, but is subject to some downside risks. Most of the UN sanctions that had frozen the country's foreign assets—a total of 200 percent of 2010 GDP—were lifted by the end of 2011, allowing the Central Bank of Libya to reaffirm the exchange rate peg, provide foreign exchange liquidity to banks, and help normalize banking operations. Increased hydrocarbon revenues will lead to a fiscal surplus of 19 percent of GDP and increase the current account surplus to 22 percent of GDP in 2012. The normalization of imports and transaction costs is expected to lower consumer price inflation from an annual average of 16 percent in 2011 to 10 percent in 2012 and about 1 percent in 2013, despite the upward pressure on domestic prices arising from supply bottlenecks in housing and transportation. Notwithstanding these favorable developments, intensifying strains in the global economy may exacerbate downside risks to growth, lowering petroleum prices and presenting additional challenges to Libya's hydrocarbon-dependent economy.

At a historic juncture, the authorities face the challenges of stabilizing the security situation, reducing political uncertainty, and responding to the aspirations of the revolution. Unlike other Arab countries in transition, Libya has no external financing need, thanks to its vast resource wealth. Although Libya's first elections in 60 years for the General National Congress were a successful step toward political normalization, the situation—with a fragmented political landscape and tribal rivalries—is likely to remain precarious, especially until the ratification of a constitution and parliamentary elections by mid-2013.

The immediate challenges in promoting inclusive growth are to normalize the security situation, reduce political uncertainty during the transition stage, and exercise fiscal discipline while maintaining macroeconomic stability. As a short-term response to the aspirations of the revolution, the interim government has raised wages and subsidies. Although Libya can afford elevated levels of current expenditures during a transitional period, the increase in wages and subsidies is eroding the country's fiscal buffers and undermining prospects for fiscal sustainability. Beyond the short term, however, Libya will need to address a wide spectrum of issues, including capacity-building and improving the quality of education, rebuilding infrastructure, developing its financial market, reducing hydrocarbon dependence, and putting in place an efficient social safety net. The country will also need to establish a governance framework to improve transparency and accountability to better manage its resource wealth and help promote private sector—led economic development.

Prepared by Serhan Cevik, Ralph Chami, Joshua Charap, Ricardo Fenochietto, and Susan George. For a detailed assessment, see IMF (2012b).



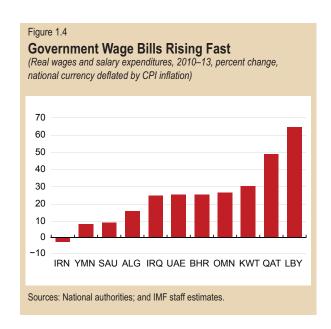
global demand conditions. As oil production is restored in Libya and expands in Iraq, Saudi Arabia continues to have the capacity to maintain balance in global oil markets.

While crude oil export volumes in 2012 are expected to be at about the same level as in 2007, natural gas exports have risen substantially, most notably in Qatar (Figure 1.3). On aggregate for MENAP hydrocarbon exporters, natural gas export volumes comprise about one-fifth of hydrocarbon exports, but exceed crude oil export volumes in Algeria, Qatar, and Yemen. Despite a decline in gas prices in some markets, MENAP hydrocarbon exporters have benefited from selling gas at long-term contracted values indexed to the price of crude oil (Annex 1.1).

### Wage Increases Weaken Public Finances

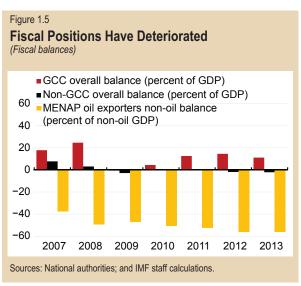
In the context of booming oil prices and social unrest, MENAP oil exporters have taken numerous measures that increase public-sector wage and social expenditures (IMF, 2011c, 2011d). These measures have contributed to dramatic accelerations in wage bills, many of which will only take full effect from 2012 onward (Figure 1.4).

In the majority of countries, wages have increased as a share of GDP since 2010. In non-GCC MENAP oil exporters, the share of wages in total government expenditure in 2011 was 10 percent higher than in 2010. At the same time, the share of capital



spending has been declining. Buoyant government spending has resulted in the deterioration of nonoil fiscal balances and some overall fiscal balances, despite the high oil price (Figure 1.5).

In the GCC, the expansionary fiscal stance has been appropriate, given the need to support non-oil growth, the absence of signs of overheating, and, in many cases, the buildup of fiscal buffers and international reserves. However, given the sustained rise in non-oil primary deficits, analysis indicates that many GCC countries are spending at levels inconsistent with intergenerational equity, although this finding depends on uncertain factors, such as the future trajectory of oil prices and the returns on public investment (Box 1.2).



#### What Is the 'Right' Surplus for the GCC?

GCC external surpluses have increased in recent years, renewing questions about the optimal policy response to these surpluses. While recent GCC external balances as a share of global GDP have been lower in recent years than those observed during the mid-1970s and early 1980s, they are, nonetheless, still sizable—amounting to about 0.4 percent of global GDP in 2011. In addition, in 2011, GCC external balances were higher than those of other large exporters, such as China, Germany, and Japan (Figure 1).

For the GCC, unlike other large exporters, fiscal and external surpluses are, to a large extent, "twin surpluses" that result from the exploitation of a nonrenewable natural resource. In addition, real effective exchange rates have been shown to have little influence on the current account balances of resource exporters.<sup>1</sup> Evaluating the size of GCC external surpluses therefore

Figure 1

Current Account Balances, 1969–2011
(Percent of world GDP)

China Germany
Japan GCC

0.6

0.3

1969 1973 1977 1981 1985 1989 1993 1997 2001 2005 2009

Sources: IMF (2012d); and IMF staff estimates.

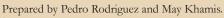
requires an assessment of the appropriateness of fiscal positions from a medium- to long-term perspective.

The Permanent Income Hypothesis (PIH) approach provides three key insights for GCC countries. First, they should run fiscal surpluses until the nonrenewable resource is exhausted (or the rate of exploitation declines) to finance future government expenditure. Second, fiscal surpluses should increase if the rate of depletion of the resource is brought forward in time (that is, to maintain stability in global oil markets), as GCC countries would just be transforming under-the-ground wealth into financial wealth. Third, transitory increases in the price of the resource should result in higher fiscal surpluses, as governments save part of the windfall for future generations. Fiscal surpluses would then translate into current account surpluses given the "twin surpluses" feature.

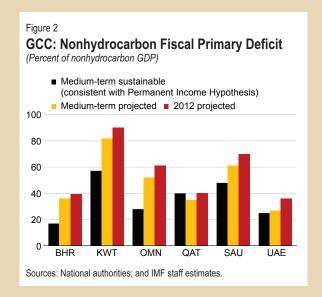
Whether fiscal surpluses in the GCC are too low or too high compared to PIH benchmarks is an empirical question that depends on a series of economic parameters of which knowledge is imperfect: the expected rate of return on financial assets, future population growth, the future trajectory of the price of the nonrenewable resource, and the size of hydrocarbon reserves. In addition, information is needed on the future return of government expenditures (that is, whether they will generate future non-oil tax revenues) and the extent to which the government prefers to

accumulate precautionary savings; these two issues are discussed further below. Therefore the PIH benchmarks are indicative, and sensitivity tests should be conducted to assess their robustness.

Analysis based on a set of assumptions on the above-mentioned parameters suggests that fiscal surpluses are actually too low (for example, government expenditures are currently too high) for five of the six GCC countries when compared with the PIH benchmarks. As summarized in IMF (2011b), and discussed in more detail in recent IMF Article IV staff reports for the individual GCC countries, the PIH benchmarks suggest that, except in Qatar, there is a need, to varying degrees, for fiscal consolidation over the medium term (Figure 2).



<sup>&</sup>lt;sup>1</sup> See Arezki and Hasanov (2009).



#### Box 1.2 (concluded)

Some factors not captured in the PIH benchmarks could have some bearing on the results. For instance, the volatility of the price of the nonrenewable resource could call for even higher fiscal surpluses, as countries may want to have some additional "precautionary savings" to be prepared for a potential decline in the price of the resource.<sup>2</sup> Also, if public domestic spending or investment, which has increased substantially in the GCC, generates future returns by diversifying the economy and increasing taxes, then future fiscal deficits could be lower than implied by the PIH. This issue would be more important in economies that are capital-scarce and/or rely more on domestic taxation, which is not the case in the GCC.

The PIH benchmarks are medium- to long-term benchmarks, and GCC countries have—to varying degrees—room to move toward them gradually. Decisions on short-term fiscal surpluses will also depend on other factors, such as developments in economic activity and employment. Given these considerations, IMF surveillance has supported the countercyclical responses of the GCC countries to the global financial crisis. Nevertheless, the PIH suggests that current fiscal and external surpluses are not excessive once they are analyzed from a longer-term perspective, and that a prudent response in the medium term may be warranted.

Non-GCC oil exporters are projected to post an overall deficit of almost 2 percent of GDP in 2012, which means that they are not converting their underground wealth into financial wealth. With the notable exception of Libya, which has the means to repair its war-damaged economy, these countries need to build buffers and save for the future.

## A Sustained Large Drop in Oil Prices Is a Key Risk

The path of fiscal balances and GDP growth is subject to a number of external factors. Markets are assigning an upside tail-risk to oil prices on the basis of geopolitical uncertainty and potential resultant disruptions to global oil supplies. In contrast, the possibility of a more severe slowdown in the global economy could adversely affect MENAP oil exporters to varying degrees, mostly through its effect on energy prices (IMF, 2012d). A shock to the euro area remains the key concern. Analysis indicates that, for every 1 percent drop in euro area GDP, the shock would reduce MENAP oil exporters' GDP by an estimated ½ percent during the first year (Annex 1.2; Box 1.3).

The most important implication of a further decline in global economic activity would be a likely sustained large drop in hydrocarbon prices. In general, short-lived fluctuations in the oil price

are less of an issue for MENAP gas exporters, due to the long-term nature of their contracts (Annex 1.1). Lower hydrocarbon prices received by oil or gas exporters would be reflected mainly in their fiscal and current account balances, given that many countries have the reserves to maintain countercyclical spending to support economic activity.

For the GCC, the impact of a sustained decline in the oil price on its fiscal balance would be large. In Figure 1.6, the line represents the fiscal balance under the actual and IMF forecast oil price. The shaded area represents the impact of high- and lowprice scenarios on the fiscal balance, allowing for a domestic policy response, but assuming no change in hydrocarbon production. The impact of a drop in the oil price would be larger than the impact of an increase of equal magnitude, and there is a one-in-six probability of turning a healthy fiscal surplus into a fiscal deficit as early as 2013. In the event of large but short-lived oil price fluctuations, all GCC countries, except Bahrain, would be able to maintain a countercyclical stance. However, a sustained drop in the oil price would require more deliberate fiscal adjustment.

For non-GCC oil exporters, a US\$10 per barrel drop in the average 2012 oil price would reduce the fiscal balance by almost 6 percentage points of GDP in the absence of a domestic policy response.

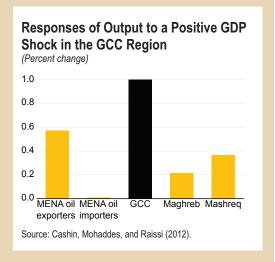
<sup>&</sup>lt;sup>2</sup> See Bems and Carvalho Filho (2009).

#### Outward Spillovers from a GDP Shock in the GCC Region

Outward spillovers from a GDP shock in the GCC countries—the MENA region's largest economies—are important for this group's neighboring economies. A Global Vector Autoregression (GVAR) model is used to examine the sensitivity of other MENA countries to economic developments in the GCC region. This approach uses a dynamic multi-country framework for the analysis of the international transmission of shocks and is based on the model of Cashin and others (2012), and Cashin, Mohaddes, and Raissi (2012).

The results show that output shocks in the GCC matter, particularly for the immediate MENA region, but also have global implications. A one percent increase in the GDP of the GCC region generates significant output gains in MENA oil exporters and the Mashreq countries (Egypt, Jordan, Syria), corresponding to about 0.55 and 0.40 percent after one year, respectively. The shock also has a moderate effect on the Maghreb countries (Algeria, Libya, Mauritania, Morocco, Tunisia), with the average effect being 0.20 percent (see figure).

Output spillovers from the GCC to the MENA region are transmitted via trade, remittances, foreign direct investment, and commodity price channels. As an example, the macroeconomic situation in Jordan is closely tied to those of other countries in the Middle East. Remittances from Jordanians working in the region are an important source of national income (equivalent to 15–20 percent of GDP); the



Persian Gulf region is the primary destination for Jordanian exports, and, in turn, supplies most of Jordan's energy; furthermore, the country receives substantial grants and foreign direct investment from other states in the region.

The output of the GCC affects, and is affected by, the global economy. Specifically, the oil market provides an important channel of impact. For example, Saudi Arabia, a GCC country, is currently the largest oil exporter in the world and is at present the only producer with significant spare capacity that can be used to stabilize global energy markets. While the level of oil supply from the GCC has significant macroeconomic effects on developed and emerging economies, including those in MENA, raising the prospects for global growth also has important effects on the demand for oil and, hence, on the economic performance of the GCC. Given a near-vertical global oil supply curve, any increase in output in the GCC region is mainly induced by rising oil prices. This increase coincides with higher outputs in advanced economies and emerging Asia, reflecting a demand-driven oil price spike, and higher GDP levels in other commodity producers.<sup>2</sup>

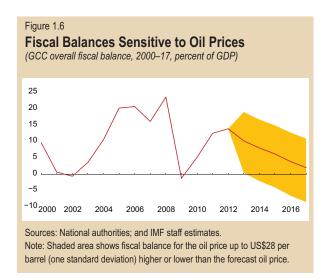
However, these countries' reserves are generally not as large as those of the GCC, so an immediate policy response would most likely be needed.

In general, the response to a sustained drop in the price of oil should be to curtail current expenditures, while protecting the poor, before reviewing capital expenditure plans. Actions could include the following: Yemen could rationalize nonessential expenditures, but international economic assistance is crucial; Algeria could contain current expenditures; and Iran is already

Prepared by Paul Cashin, Kamiar Mohaddes, and Mehdi Raissi.

<sup>&</sup>lt;sup>1</sup> See Annex 1.3; and Cashin and others (2012), Cashin, Mohaddes, and Raissi (2012), and Mohaddes and Raissi (2011), for additional details.

<sup>&</sup>lt;sup>2</sup> See IMF (2012c).



Fiscal Vulnerability Rising (U.S. dollars per barrel)1 Change in WEO oil price, 2008–12: US\$9 160 140 Bahrain 120 Iraq 100 Oman breakeven United Arab 80 **Emirates** Saudi Arabia Qatar 60 40 Kuwait Fiscal 20 0 -10 20 30 40 50 70 60 Change in fiscal breakeven price, 2008-12 Sources: National authorities; and IMF staff calculations. <sup>1</sup>Yemen fiscal breakeven, 2012: US\$237 per barrel.

consolidating spending in response to lower oil export volumes. While past windfall savings provide some buffers, Iran would need to make further spending reductions if prices also fell, but should safeguard capital expenditure. The tendency to underexecute spending could act as a natural buffer in Iraq, but care should be taken that underexecution does not fall disproportionately on capital spending.

## **Expenditure Restraint Would Increase Resilience**

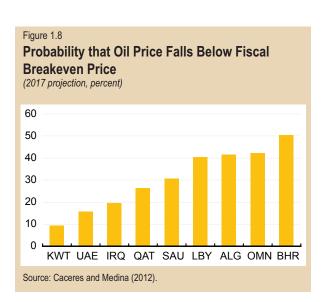
Consistent with their projected fiscal deficit, many non-GCC oil exporters are expected to face a 2012 fiscal breakeven price (the oil price at which the fiscal balance is zero) that is higher than the actual oil price. Most countries have allowed their fiscal breakeven price to rise faster than the actual oil price in recent years, which has rendered them increasingly vulnerable to a decline in the oil price (Figure 1.7). Spending pressures are expected to drive fiscal breakeven prices even higher over the medium term, which would further increase vulnerability.

Nonetheless, the path of future oil prices is highly uncertain, especially over the medium term. Simulations of future oil price volatility indicate that most MENAP oil exporters have a greater than 20 percent chance of the actual oil price being below the forecast fiscal breakeven price in 2017 (Figure 1.8). If, in addition, the expected downward

trajectory in oil prices (implied by futures markets) is taken into account, the medium-term vulnerability is more acute.

Therefore, even if no adverse shock is realized immediately, the need to reduce vulnerability to a potential shock strengthens the case for a preemptive move toward fiscal sustainability and, in some countries, the building of necessary buffers. This calls for sequencing of capital projects with a low rate of return in some countries, and renewed attention to inefficient and hard-to-reverse expenditures.

While progress has been made in the GCC, more can be done by all MENAP oil exporters to develop and adopt medium-term budgeting and fiscal



frameworks, including the possible introduction of a fiscal rule. A medium-term horizon helps prevent volatile annual revenues from translating into expenditure fluctuations that can destabilize the economy and reduce the quality of government spending. It also helps improve budget execution, facilitates resistance to wage pressures, promotes the saving of oil proceeds for future generations, and provides resources for responding to shocks.

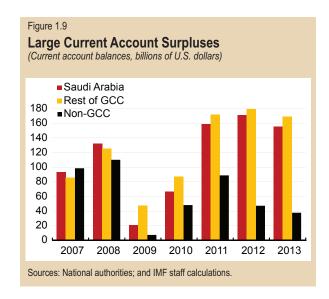
### **Current Account Surpluses Sensitive to Oil Price**

MENAP oil exporters' combined current account surplus is expected to reach a near-record high of about US\$400 billion in 2012 (Figure 1.9). This surplus is projected to be partially offset by net financial outflows of about US\$160 billion to sovereign wealth funds and other destinations. The resultant balance of payments surplus is partly reflected in gross reserves, which are expected to increase by about US\$210 billion between 2011 and 2012. However, these numbers are highly sensitive to changes in the oil price—at 2012 hydrocarbon export volumes and assuming no domestic policy response, a 10 percent drop in the oil price would reduce MENAP oil exporters' surplus by almost US\$150 billion.

### **Inflation Developments Mixed**

Large balance of payments surpluses generated by commodity-price booms can present liquidity management problems, which—together with wage increases also often observed in commodity-price booms—can engender demand-driven inflation. However, as the experience of MENAP oil exporters shows, inflation outcomes are still heavily driven by country-specific policies.

In the GCC, monetary aggregates have generally expanded at a slower pace than reserve accumulation. Broad money growth and privatesector credit growth have increased, but are still below historical growth rates (Figure 1.10). The performance of the real estate sector has varied across the GCC, but is expected to remain muted, and the overall global inflationary environment has generally been benign, despite recent increases in some food and other commodity prices. Less procyclical fiscal policy has contributed to GDP growth rates that are lower than during previous oil price booms (Figure 1.11). Therefore, GCC inflation is expected to remain below 4 percent in 2012 and 2013 (and below the rates observed during previous booms).



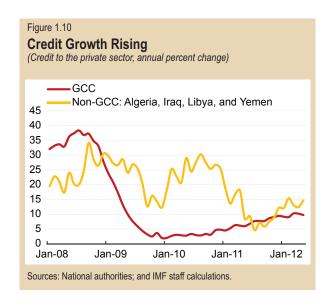
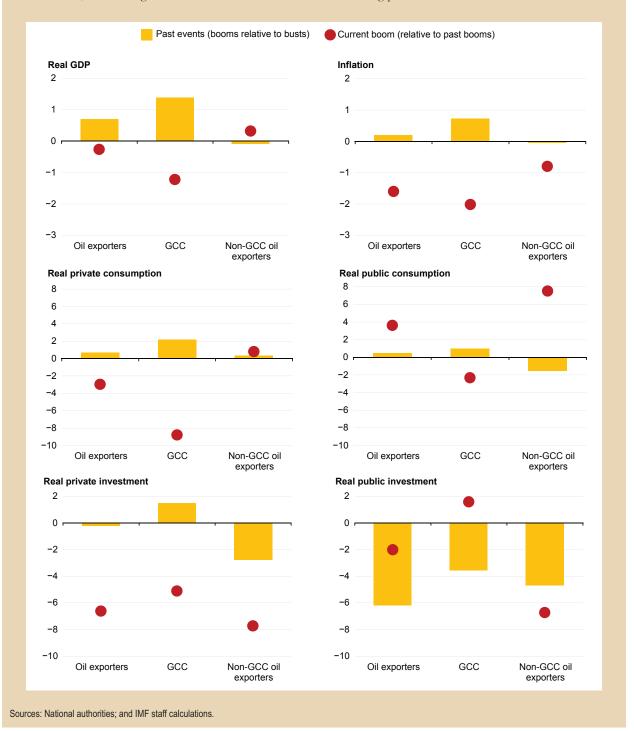


Figure 1.11

#### **Event Study of Oil Prices, 1970–2012**

(Median differences in average annual percent change)

This event study compares (i) average annual percent changes in the variable of interest during past oil booms with changes during past oil slumps; and (ii) changes during the current boom with changes during past booms. The study uses World Economic Outlook data for MENA countries for the period 1970 to 2012 (October), and demarcates oil price booms and slumps using the Bry-Boschan cycle-dating approach. As an example of interpretation, GCC real GDP growth typically accelerates by about 1.5 percentage points during booms vis-a-vis slumps, yet during the current boom, real GDP growth has fallen short of that achieved during past booms.



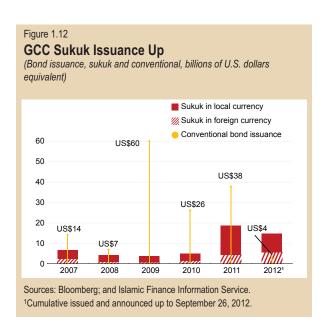
Outside the GCC, inflation rates are generally higher. In Algeria, inflation is projected at about 8½ percent for 2012 on account of higher gross reserves and back payments of civil-service wage increases that have led to excess liquidity. In Yemen, central bank financing of fiscal imbalances has often contributed to monetary growth and inflation. The depreciation of Iran's currency in the parallel market and sanctions-related increases in the cost of doing business are expected to raise the country's inflation rate in 2012. Iraq experienced rapid government-driven monetary growth in 2011, which is expected to continue, but the level of credit extension to the economy is still low and inflation there remains the lowest among the non-GCC oil exporters. In Libya, inflation is forecast to fall from its previous highs (Box 1.1).

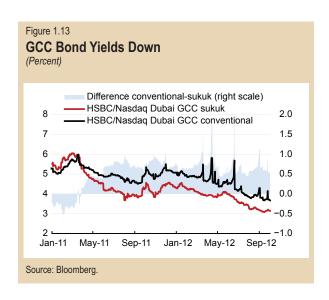
As a result, the accommodative monetary conditions in the GCC—which are largely the result of low interest rates in the United States, pegged exchange rates, and the absence of alternative monetary instruments—remain broadly appropriate. Should there be any signs of overheating in the future, fiscal tightening would be the most effective policy measure, supported by macroprudential policies. For the non-GCC oil exporters where it would otherwise persist, high inflation could be reduced by both monetary and fiscal policies. For example, Algeria's recent increase in reserve requirements could be complemented with various measures, such as higher interest rates and lower wage-bill growth.

#### **Renewed Bond Issuance**

Although credit expansion is to be welcomed in most cases, it should be accompanied by continued monitoring of financial system soundness and supervision of individual institutions, with a role for macroprudential tools to rein in excessive leverage in specific sectors. Regular issuance of government debt to establish a yield curve would help diversify financing channels and facilitate bank liquidity management. Further progress in building regulatory and transactional infrastructure would help develop local debt markets for corporate issuers.

Such policy initiatives would leverage a favorable market environment (Box 1.4). Lower availability of term finance from international banks has coincided with elevated demand for Shariah-compliant securities among regional investors, resulting in increased issuance of sukuk by the GCC (Figure 1.12). GCC yields have been falling over the course of 2012 and yields on sukuk have been lower than those on conventional bonds since the beginning of 2011 (Figure 1.13). Finally, many MENAP oil exporters' stock market indices have risen since the beginning of 2012 (Figure 1.14).

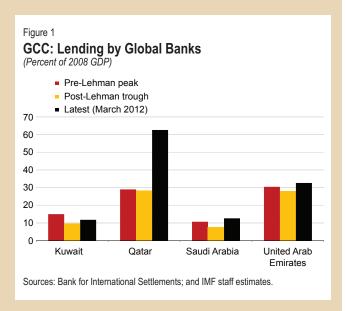


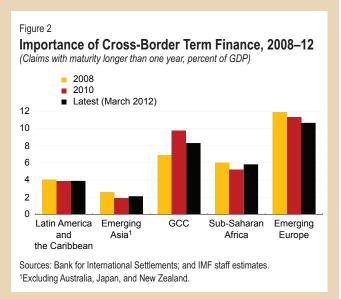


#### Financial Spillovers to MENAP Oil Exporters

Cross-border lending to the GCC has increased since the 2008 collapse of Lehman Brothers, except to Kuwait (Figure 1). The United Arab Emirates remains the top destination for foreign capital in the region, as Dubai's accelerated diversification into commercial and leisure real estate exceeded the capacity of the Emirates' banks. Since 2008, global banks have actually increased lending to the United Arab Emirates, notwithstanding already high exposures. However, recent lending has favored Abu Dhabi borrowers, many implicitly backed by the sovereign balance sheet, over Dubai. A disruption in global debt markets could attract renewed scrutiny to Dubai given the interplay of sovereign, banking, and corporate risks. Foreign banks have cut back on lending to Kuwait's investment companies, which borrowed to expand into foreign investments.

Some signs of deleveraging by global banks may be found in longer-term finance to the GCC. The importance of lending with maturities above one year has declined since 2010, in contrast to other regions (Figure 2). The reluctance of international banks to finance new projects in the GCC is noteworthy, despite massive investments in infrastructure and energy-intensive industries. This has prompted GCC borrowers to turn to bond markets, either global or local (Chapter 1). The resurgence of sukuk issuance since 2011 shows that the switch to market-based finance is possible in a region long dominated by bank finance. The sharp pickup in bond finance suggests that European bank deleveraging has had only a muted impact on GCC projects.

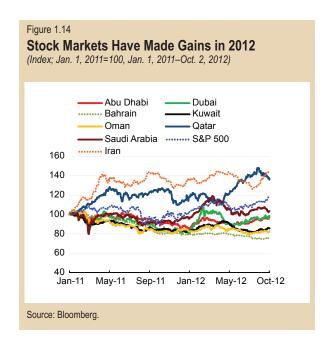


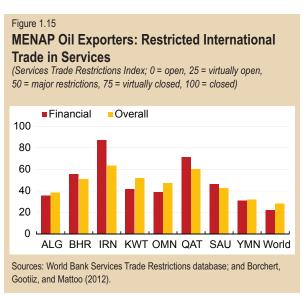


Prepared by Gabriel Sensenbrenner and Jaime Espinosa Bowen.

### **Reforms for More Inclusive Growth**

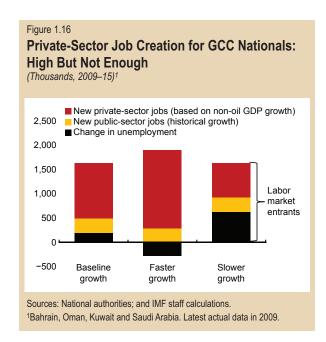
In addition to gradual fiscal consolidation, a number of structural and complementary reforms would boost inclusive growth. The non-GCC oil exporters should take steps to improve the general business environment, but all MENAP oil exporters need to reduce restrictions on international trade in services (Figure 1.15). Such restrictions reduce the pace and inclusiveness of growth by inhibiting competition





and access to basic services. For example, barriers to financial services trade are typically associated with reduced provision of credit.

Hand in hand with product market reforms, labor market reforms and measures to equip nationals with the skills required by private-sector employers would promote employment. Structural reforms will need to play an increasingly prominent role in employment creation; although high non-oil GDP growth rates have generated numerous jobs for nationals and expatriate workers in the past, job creation may be insufficient in the future.



For example, in the case of the GCC, past and forecast non-oil GDP growth rates are expected to generate more than 1 million private-sector jobs for GCC nationals between 2009 and 2015, amounting to two-thirds of the expected increase in the labor force of GCC nationals. To avoid an increase in unemployment, and assuming that this would be achieved by the public sector absorbing labor, public-sector employment would need to grow by 5 percent per year, which is above historical norms ("baseline growth" in Figure 1.16).

In addition, it would take growth rates in excess of forecast to absorb all nationals into the private sector. For example, annual non-oil GDP growth of an extra 2 percentage points would still require public-sector hiring to reduce unemployment ("faster growth" in Figure 1.16).

Moreover, a combination of external shocks—leading to annual non-oil GDP growth that is 2 percent lower than forecast—would place additional pressures on governments to accelerate public-sector hiring unsustainably or face a large rise in unemployment ("slower growth" in Figure 1.16).

As a short-term measure to reduce unemployment while reforms take hold, an appropriately targeted wage subsidy scheme could be effective in boosting employment—at a fraction of the cost of paying a full public-sector wage (IMF, 2012a).

More than half of all young people in MENAP oil-exporting countries would currently rather work in the public sector than in the private sector, which leads them to seek qualifications geared to public-sector hiring at the expense of skills pertinent to the private sector. Therefore, containing expectations of future government employment would affect the education decisions of youth. Together with enhanced education and training systems and improved job placement

services, this would help increase private-sector employment.

Measures aimed at increasing the proportion of nationals in the labor force have historically had limited success, but the lessons have been incorporated into more recent schemes, such as the Saudi *Nitaqat* and complementary initiatives, which aim to increase employment of nationals without raising the cost of doing business, especially for small firms. Recent attention to the integration of women in the labor market by Saudi Arabia and other countries is welcome.

### Annex 1.1. The Natural Gas Market: Where Is It Heading?

Middle East gas production is expected to grow rapidly enough to satisfy incremental demand, but not to make major additional contributions to export earnings. As a result of geographical gas price differences and some indexation of gas prices to crude oil prices, Middle East gas exporters have benefitted from high oil prices and generally not been adversely affected by declining gas prices and the decoupling from crude oil prices observed in some parts of the world. To the extent that indexation is via long-term contracts, MENAP-country gas prices would not be affected by short-term volatility in oil prices. Finally, a worldwide spread of the U.S. shale gas revolution could have an impact on gas prices, but the nascent nature of such exploration and the limited prospects for regional gas price convergence make this risk small in the medium term.

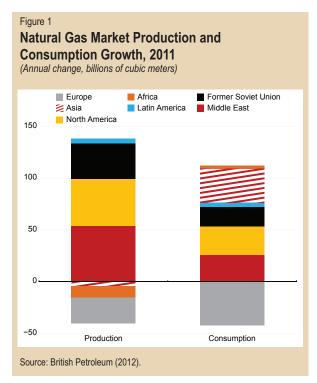
### Natural Gas Supply Is Meeting Demand

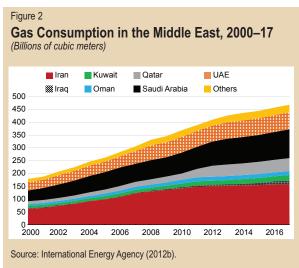
The combination of surplus supply in 2009 and rapid production growth in 2010 were sufficient to account for incremental demand in 2010. In 2011, supply rose by 3 percent and demand grew by 2½ percent (Figure 1). Liquefied natural gas (LNG) trade has transformed the natural gas market since 2009; it now constitutes one-third of all gas trade. The medium-term outlook for the global gas market points toward increased demand, which is expected to grow by about 17 percent during 2012–17 (IEA, 2012b).

The Middle East<sup>1</sup> is a large consumer and producer of natural gas. Although the region holds about 41 percent of proven gas reserves, most of the gas produced in the region is also consumed there. Demand for gas in the region is expected to grow by 3 percent per year on average during 2011–17 (Figure 2). Middle East gas production growth is slowing, and the increase in production would go toward meeting incremental domestic demand—especially in Algeria, Egypt, Qatar, and Saudi Arabia—and not toward generating additional export earnings.

Prepared by Ananthakrishnan Prasad and Ghada Fayad.

<sup>1</sup> According to the International Energy Agency classification, the Middle East comprises Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, and Yemen.





### The Increasing Importance of Shale Gas

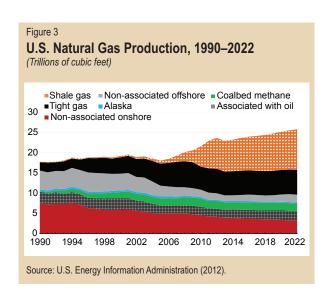
Over the longer term, the share of gas in the global energy mix could reach 25 percent in 2035, overtaking coal to become the second-largest primary energy source after oil (IEA, 2012a), if conditions allow for continued expansion of supply from unconventional sources. Unconventional gas represented 16 percent of global gas production in 2011, of which only one-third was shale gas. However, while other unconventional gas sources have been produced for two to four decades, vigorous exploration efforts for shale gas over the past decade have increased its output by a factor of 11, thus placing shale gas in the spotlight.

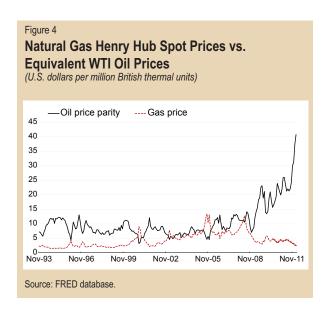
Increased application of advanced techniques (including "fracking") has expanded U.S. shale production (Figure 3), which is projected to triple to 13.6 trillion cubic feet per year in 2035 amidst environmental concerns. Despite its large shale reserves and ramping up of production, the United States is not expected to become a net exporter of natural gas until about 2022 (U.S. Energy Information Administration, 2012). Prospects for profitable exploration in other parts of the world are still nascent, and are projected to be somewhat limited over the next five years. Consequently, material contributions to global supply are only a long-term possibility (IMF, 2012d). In the Middle East, shale gas prospects appear to be best in Algeria and Libya.

## Benefits of Indexation to Oil, Regional Segmentation

The decoupling of U.S. oil and gas prices that began in 2009 has intensified since 2011 (Figure 4). Since 2009, the gap has significantly increased, with the oil price parity reaching a 20-year high of 40 in February 2012.

However, divergence is limited by indexation. About one-third of global retail gas consumption is



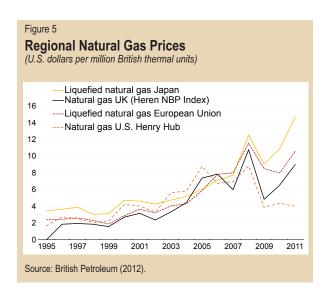


priced on a spot basis, one-fifth is indexed to crude oil, 40 percent is subject to direct price regulation, and the remainder is sold domestically at subsidized prices (IEA, 2009). Wholesale contracts on Asian and European markets, which are important for many gas exporters in the Middle East, tend to be indexed to oil prices. As a result, many MENAP gas exporters have benefitted from high crude oil prices. Furthermore, the long-term nature of some of these contracts insulates gas prices from short-term oil price volatility, though very large or sustained declines in crude prices could trigger declines in gas prices.

However, significant expected changes in demand and supply patterns for both fuels are likely to make rigid contractual links between the prices of two diverging fuels unsustainable in future. Specifically, LNG markets are undergoing major structural supply and demand changes that are increasing the volume of globally traded LNG and influencing the gas share in global energy markets. Changes in international markets include booming Asian Pacific and sluggish European demand; shifts in the future of nuclear energy in many important countries; substitution out of coal-based energy to the more efficient and less (capital) costly gas-based energy; and developments in renewable energy and nonconventional gas production.

Unlike the global oil market, the global natural gas market remains largely segmented. Gas trade has been limited geographically within three main weakly related regional gas markets: Europe, North America, and Japan and South Korea. This segmentation has been the effect of a lack of pipeline infrastructure and little availability of LNG transport capacity.

Regional gas price differences that have emerged since the 2008 peak in gas prices are widening (Figure 5). Global contraction of demand, combined with the shale gas boom in the United States, had depressed global gas prices and resulted in strong convergence between spot prices (U.K. and U.S.) and an equally strong convergence



between oil-linked prices (Japan and Europe) in 2009. However, the spot price convergence was short-lived. Since early 2010, U.K. spot prices came closer to European (oil-linked) prices, creating a large gap between U.S. spot prices and those in other markets. North American gas prices have continued on a declining trend, with Henry Hub U.S. prices reaching their lowest in a decade during the first half of 2012 (IEA, 2012b). Despite several developments, transition to a fully integrated global gas market like that for oil seems distant. Therefore, recent supply developments in the United States, or prospective developments in other regions, need not influence prices received by exporters from the Middle East.

# Annex 1.2. Inward Spillovers to MENA Countries from a GDP Shock in G3 Countries

This annex analyzes inward spillovers from macroeconomic shocks in systemic economies (China, the euro area, and the United States) to the MENA region. A Global Vector Autoregression (GVAR) model is used to evaluate the nature and strength of economic linkages between globally systemic countries and the MENA region. Spillovers are transmitted across economies via trade, finance, remittances, foreign aid, foreign direct investment, and commodity price channels. The results show that MENA countries are becoming more sensitive to developments in China, in line with the direction of evolving trade patterns and the emergence of China in the global economy, while shocks originating in the euro area and the United States are still very important.

A GVAR model is used to determine the size and speed of the transmission of different output shocks to the Maghreb, Mashreq, and GCC regions. This approach uses a dynamic multi-country framework for the analysis of the international transmission of shocks, and is based on the model of Cashin and others (2012) and Cashin, Mohaddes, and Raissi (2012). The framework comprises 38 region-specific models (among which are a euro area region comprising eight of the 11 countries that joined the euro in 1999, and the GCC region). Together, these countries account for more than 90 percent of world economic output. These individual models are solved in a global setting where core macroeconomic variables of each economy are related to corresponding foreign variables (constructed exclusively to match the international trade pattern of the country under consideration). The model includes both real and financial variables: real GDP, inflation, the real equity price, the real effective exchange rate, shortand long-term interest rates, oil production, and the price of oil. While the model does not explicitly include all the transmission variables discussed above (remittances, foreign aid, and foreign direct investment), to the extent that developments in these variables are linked to movements in other variables that are included in the model, they can be considered to be covered in reduced form. All data

Prepared by Paul Cashin, Kamiar Mohaddes, and Mehdi Raissi.

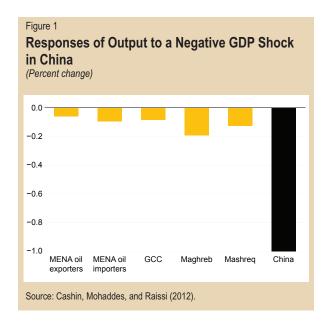
are quarterly in frequency, for the period 1979Q2 to 2011Q2.

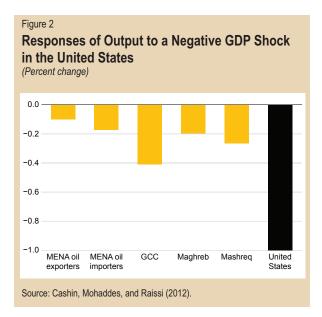
Output shocks emanating from globally systemic countries have important effects on the countries of the MENA region. The impact of negative U.S., euro area, and Chinese real output shocks on the MENA region are examined using the GVAR model, yielding the results set forth below. Despite the relatively low degree of integration of MENA into the global economy, MENA countries' narrow financial exposures to the rest of the world, and the limited impact on the MENA countries of the global financial crisis, shocks to China, the euro area, and the United States are found to have significant impacts on the MENA region.

#### **Shock to Chinese GDP**

A one percent negative GDP shock in China affects the economies of oil exporters in the sample mainly through its impact on global demand for oil and on associated prices. The slowdown in China translates into lower overall economic growth for oil exporters in the region (Figure 1). Countries with large commodity export exposures to China are most vulnerable to a slowdown there, while those with more diversified economies suffer less.

The effects on the GDP of the GCC, Mashreq, and Maghreb countries are generally large (about 0.10, 0.15, and 0.20 percent after one year, respectively). MENA oil importers also suffer a decline in economic output, of about 0.12 percent after one





year. This finding is somewhat to be expected, given the emergence of China as a key driver of the global economy over recent decades. This result may also explain the smaller-than-expected impact of the global financial crisis on MENA countries, as these economies were increasingly linked to the fast-growing Chinese economy.

#### Shock to U.S. GDP

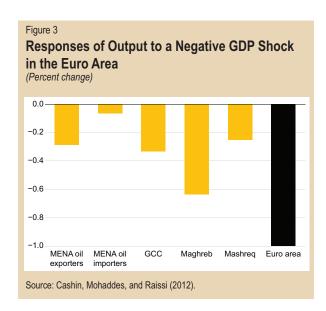
As a result of the dominance of the United States in the global economy, any slowdown there can cause negative spillovers to other economies, as the recent global economic crisis has shown. Furthermore, the continuing dominance of U.S. debt and equity markets, backed by the stillstrong global role of the U.S. dollar, also plays an important role. The results of the GVAR model show that countries with substantial trade exposure to the U.S. economy have a relatively large sensitivity to U.S. economic developments (Figure 2). However, even countries that do not trade as much with the United States are influenced by its dominance through other partners' trade. Overall, the influence of the United States on other economies remains larger than direct trade ties would suggest, owing to third-market effects

together with increased financial integration that tends to foster the international transmission of business cycles.

Lower demand for commodities is another channel through which a negative U.S. shock affects countries. In particular, about one-quarter of world oil demand emanates from the United States, so it is not surprising that, in response to the U.S. shock, both oil prices and production levels decline. The oil channel conveys a negative impact on MENA countries. For the GCC, responsible for about one-third of world oil exports, this effect is particularly large—real output declines as much as 0.40 percent after four quarters—but the effect is also large for both Maghreb (0.20 percent) and Mashreq (0.30 percent) countries.

### **Shock to Euro Area GDP**

The adverse impact on output of a one-percent negative GDP shock in the euro area are most significant for Maghreb countries, reflecting their geographical proximity to the euro area, and the strength of their trade linkages with Europe (Figure 3). Maghreb countries rely heavily on Europe as a market for exports (nearly 60 percent



of Maghreb exports are destined for Europe), as well as tourism, workers' remittances, and foreign direct investment.

Growth spillovers vary greatly from country to country. For the Maghreb countries, the highest dependencies are observed for Algeria and Tunisia (with annual output elasticities of more than one-half). In the case of Mashreq countries, the impact on Egypt and Jordan is more moderate due to their larger regional ties with the GCC. As for the region's oil exporters, a negative GDP shock in the euro area affects their economies mainly through its impact on oil prices and production, lowering their overall growth.

**MENAP Oil Exporters: Selected Economic Indicators** 

	Average	Average					Projections	
	2000–06	2007	2008	2009	2010	2011	2012 201	
Real GDP Growth	5.8	5.3	4.0	1.7	5.3	3.9	6.6	3.8
(Annual change; percent)		0.0		***	0.0	0.0	0.0	0.0
Algeria	4.1	3.0	2.4	2.4	3.3	2.4	2.6	3.4
Bahrain	6.1	8.4	6.3	3.2	4.7	2.1	2.0	2.8
Iran, I.R. of	6.0	6.4	0.6	3.9	5.9	2.0	-0.9	0.8
Iraq		1.5	9.5	2.9	3.0	8.9	10.2	14.7
Kuwait	7.7	6.5	4.2	-7.8	2.5	8.2	6.3	1.9
Libya	5.3	6.4	2.4	-1.4	3.7	-59.7	121.9	16.7
Oman	3.7	6.7	13.1	3.9	5.0	5.4	5.0	3.9
Qatar	11.2	18.0	17.7	12.0	16.7	14.1	6.3	4.9
Saudi Arabia	3.9	2.0	4.2	0.1	5.1	7.1	6.0	4.2
United Arab Emirates	8.2	6.5	5.3	-4.8	1.3	5.2	4.0	2.6
Yemen	4.3	3.3	3.6	3.9	7.7	-10.5	-1.9	4.1
Consumer Price Inflation	6.7	11.5	15.0	5.7	6.6	10.4	11.5	9.7
(Year average; percent)								
Algeria	2.3	3.6	4.9	5.7	3.9	4.5	8.4	5.0
Bahrain	0.9	3.3	3.5	2.8	2.0	-0.4	0.6	2.0
Iran, I.R. of	13.3	18.4	25.4	10.8	12.4	21.5	25.2	21.8
Iraq		30.8	2.7	-2.2	2.4	5.6	6.0	5.5
Kuwait	1.9	5.5	10.6	4.0	4.0	4.7	4.3	4.1
Libya		6.2	10.4	2.4	2.5	15.9	10.0	0.9
Oman	0.5	5.9	12.6	3.5	3.3	4.0	3.2	3.0
Qatar	4.7	13.8	15.0	-4.9	-2.4	1.9	2.0	3.0
Saudi Arabia	0.3	4.1	9.9	5.1	5.4	5.0	4.9	4.6
United Arab Emirates	4.4	11.1	12.3	1.6	0.9	0.9	0.7	1.6
Yemen	11.5	7.9	19.0	3.7	11.2	19.5	15.0	12.7
General Gov. Overall Fiscal Balance	7.4	12.4	13.3	-1.8	2.5	5.9	6.1	4.4
(Percent of GDP)								
Algeria	7.6	4.4	7.6	-6.4	-2.3	-0.2	-3.9	-1.3
Bahrain <sup>1</sup>	1.6	1.9	4.9	-6.6	-7.0	-2.4	-3.9	-3.6
Iran, I.R. of <sup>1</sup>	2.7	7.4	0.7	1.0	1.6	-0.2	-2.9	-3.9
Iraq		11.9	-1.3	-20.5	-8.8	7.6	-1.9	3.1
Kuwait <sup>1</sup>	28.2	39.0	19.8	26.8	25.2	29.1	30.2	26.4
Libya	13.2	24.0	25.1	-3.0	16.7	-27.7	19.4	7.7
Oman <sup>1</sup>	9.1	11.1	13.7	-2.1	4.0	8.1	7.1	5.8
Qatar	8.7	10.9	9.8	13.4	2.6	12.3	9.6	8.5
Saudi Arabia	10.5	16.3	34.4	-4.7	3.4	14.0	16.6	11.2
United Arab Emirates <sup>2</sup>	7.3	16.0	16.8	-12.8	-2.2	3.1	7.5	7.5
Yemen	0.2	<del>-</del> 7.2	<del>-4</del> .5	-10.2	-4.0	-4.3	<b>-</b> 5.7	-6.0
Current Account Balance	13.4	18.6	19.7	4.8	11.0	18.7	16.4	14.2
(Percent of GDP)								
Algeria	15.5	22.8	20.1	0.3	7.5	10.0	6.2	6.1
Bahrain	6.3	15.7	10.2	2.9	3.6	12.6	9.9	10.5
Iran, I.R. of	5.5	10.6	6.5	2.6	6.0	12.5	3.4	1.3
Iraq	•••	11.5	18.8	-13.4	-3.0	8.3	0.3	6.1
Kuwait	28.8	36.8	40.9	26.7	31.9	44.0	44.1	39.2
Libya	23.8	43.8	42.3	14.7	19.8	1.3	21.8	10.3
Oman	10.3	5.9	8.3	-1.2	8.6	16.7	14.0	10.0
Qatar	25.0	25.4	28.7	10.2	26.7	30.2	29.6	26.8
Saudi Arabia	15.6	24.3	27.8	5.6	14.6	26.5	26.1	22.7
United Arab Emirates	9.8	6.9	7.9	3.5	3.2	9.7	9.3	10.1
Yemen	4.7	-7.0	-4.6	-10.2	-4.4	-3.0	-2.7	-4.0

Sources: National authorities; and IMF staff estimates and projections.

<sup>&</sup>lt;sup>1</sup>Central government.

<sup>&</sup>lt;sup>2</sup>Consolidated accounts of the federal government and the emirates Abu Dhabi, Dubai, and Sharjah.