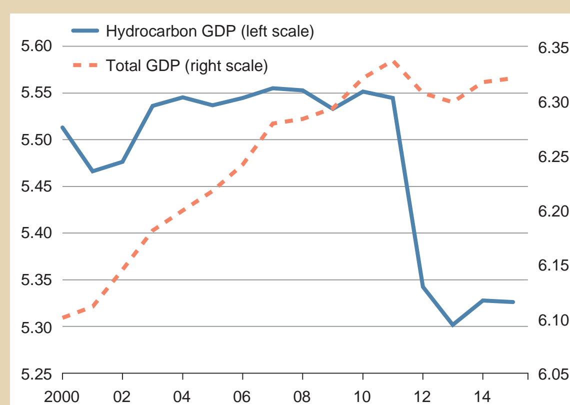
5. Economic Implications of Agreement with the Islamic Republic of Iran

The recent agreement between the P5+1 and Iran allows for the removal of most economic sanctions and for a significant improvement in Iran's economic outlook.[1] *Economic spillovers to the rest of the world are uncertain but are likely to be a net positive, for two reasons. Iran's return to the global oil market is expected to increase global supply of oil, and the removal of sanctions is likely to open new trade and investment opportunities. How large these effects will be, and how quickly they materialize, is unclear because of a number of factors: the considerable uncertainty about precisely when the sanctions will be removed and for how long, the speed with which Iran will be able to ramp up its oil production and how other oil producers will respond, and whether much-needed reforms to reignite the domestic economy will accompany the removal of the sanctions.*

The Current State of Iran's Economy

The Joint Comprehensive Plan of Action (JCPOA) between Iran and the P5+1 comes after several difficult years for the Iranian economy. Following the intensification of international trade and financial sanctions in late 2011, Iran's economy contracted by about 9 percent during 2012/13 and 2013/14 (Figure 5.1). At the same time, a large real depreciation of the domestic currency, along with supply-side disruptions, pushed 12-month inflation to a peak of 45 percent in June 2013. Employment growth stagnated across most sectors of the economy and the participation rate declined, with unemployment contained at about 10½ percent. The interim agreement reached with the P5+1 in November 2013, along with prudent domestic macroeconomic policies, provided considerable impetus to several sectors, most notably oil, transportation, and manufacturing. Real GDP grew by 3 percent in 2014/15 and 12-month inflation declined markedly, stabilizing at about 15 percent. Nonetheless, by end-2014/15, the level of economic activity was still 6 percent below the end-2011/12 level, mostly because of lower hydrocarbon production. Annual inflation remained in the double digits, while unemployment was at 10½ percent as of December 2014.

Figure 5.1
GDP Level
(In log, constant prices)



Sources: National authorities; and IMF staff calculations.

Much of the sanctions-induced contraction in the economy was reflected in a sharp drop in productivity relative to trend. In the three years prior to the intensification of sanctions, non-oil output per worker grew at an annual average rate of 5 percent, led by strong capital accumulation and total factor productivity (TFP—Table 5.1). After economic and financial sanctions tightened in late 2011, capital accumulation and TFP declined sharply. The hydrocarbon sector saw sharp contractions in production and exports (Figures 5.2 and 5.3).

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[1] The Joint Comprehensive Plan of Action (JCPOA) between the P5+1 (the five permanent members of the UN Security Council—China, France, Russia, the United Kingdom, and the United States—plus Germany).

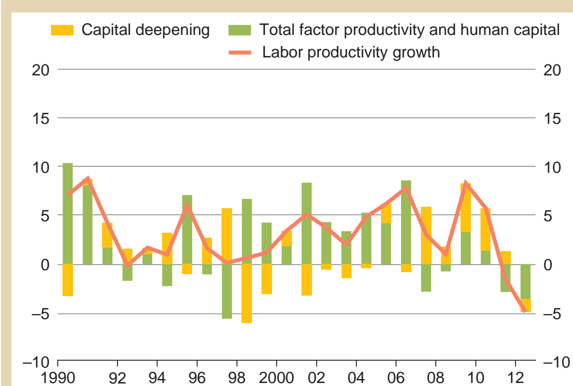
Table 5.1. Annual Value Added, Employment, and Productivity Growth

(Percent)

	2008–10 Average	2012	2013
Non-Oil Labor Productivity	5.4	–1.5	–4.9
Contribution from:			
Capital per Worker	3.5	1.3	–1.3
TFP and Human Capital per Worker	1.9	–2.9	–3.6
Non-Oil Employment Growth	0.1	0.6	3.4
Non-Oil Value Added	5.5	–1.0	–1.5
Oil Employment Growth	–5.9	–1.0	–1.0
Oil Value Added	–0.8	–46.8	–9.3

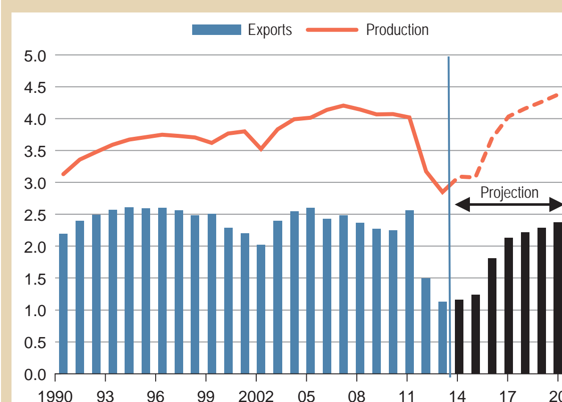
Sources: Iranian authorities; and IMF staff estimates.
Note: TFP = total factor productivity.

Figure 5.2
Non-Oil Sector: Labor Productivity and Contributing Factors
(1990–2013; percent)



Sources: National authorities; and IMF staff calculations.

Figure 5.3
Oil Sector: Production and Exports
(1990–2020; million barrels per day)



Sources: National authorities; and IMF staff calculations.

How Will the Lifting of Sanctions Affect the Iranian Economy?

Once approved and implemented, the JCPOA is expected to provide relief from sanctions in four broad areas: (1) export and transportation of hydrocarbon and hydrocarbon-related products; (2) banking and other financial services and transactions, including restored access to the international payment system (SWIFT); (3) access to foreign financial assets; and (4) the sale, supply of parts, and transfer of goods and services to the automotive and air-transportation sectors, and associated foreign investment.

The sanctions relief will bring three key benefits for Iran. First and foremost will be a positive *external demand shock*, both for oil and non-oil exports. In addition, the decline in the cost of external trade and financial transactions will act as a positive *terms-of-trade shock* (lowering the price of imports and raising the price of exports). Finally, restored access to foreign assets and higher oil exports should also result in a positive *wealth effect*. Taken together, these three shocks are likely to create a significant improvement in the outlook for the Iranian economy in the years ahead, outweighing the adverse effects from the sharp decline in global oil prices over the past year.

Assessing the likely magnitude of these effects is subject to a considerable degree of uncertainty because of the lack of comparable historical precedents and the conditional nature of sanctions

removal (“snap-back” provisions). In addition, it remains to be seen how quickly Iran will be able to ramp up its oil production, given the significant investment needs in the sector, and how other oil producers will respond.

The post-sanctions growth dividend will also depend on the domestic macroeconomic policy response and the pace and content of structural reforms following the removal of the sanctions. A key question is how quickly the Iranian economy will regain the pace of capital accumulation and productivity growth experienced before the introduction of the sanctions. Structural reforms of the business climate and labor and financial markets could play a key role in this respect. Macroeconomic policies will also need to be adjusted in the years ahead so that the authorities can achieve their goals of single-digit inflation, a competitive real exchange rate, and sustainably higher inclusive growth. In particular, additional fiscal consolidation would help contain the appreciation of the real exchange rate and support monetary policy in containing demand and achieving the desired reduction in inflation.

Estimates of the growth impact, based on analysis of the Iranian economy,[2] suggest that domestic economic activity could accelerate markedly following sanctions relief (Figure 5.4).

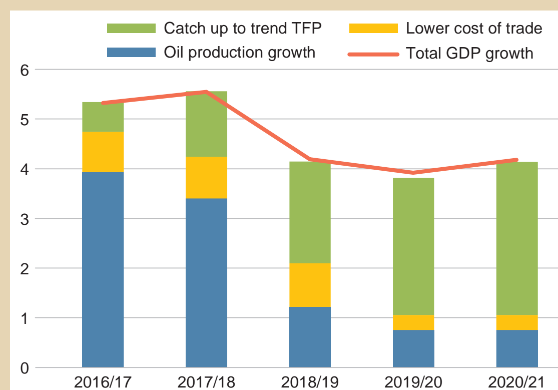
Real GDP growth could rise up to 5½ percent in 2016/17 and 2017/18, while hovering around 3½–4 percent annually in the years after. The most important driver of growth in the short term would be a recovery in oil production and exports, projected to increase by about 0.6 million barrels per day (mbpd) in 2016 and by about 1.2 mbpd over the medium term. Higher oil output would contribute about three-quarters and two-thirds of the estimated economic growth in 2016/17 and 2017/18, respectively. Lower trade and financial transaction costs would add about ¾–1 percentage point to growth.

[2] A dynamic financial computable general equilibrium calibrated to Iran is based on Shahmoradi, Haqiqi, and Zahedi (2010), Haqiqi (2011), and Haqiqi and Bahalou Horeh (2013). For more details, see Blotevogel and others (forthcoming).

Figure 5.4

Iran: Projected Real GDP Growth and Contributing Factors Post Sanctions

(Percent)



Source: Blotevogel and others (forthcoming).
Note: TFP = total factor productivity.

If sanctions are lifted, the efficiency of the non-oil economy should gradually improve, as lower transaction costs stimulate investment and productivity, particularly in manufacturing and construction. Non-oil TFP growth would gradually pick up to reach its 1990–2010 average in 2020. The pace of the recovery would depend, among several other factors, on the authorities’ ability to preserve a competitive real exchange rate and sound macroeconomic policies. Significant currency appreciation would tend to slow the pace of the recovery.

Incorporating feedback effects from global factors renders slightly lower the estimates of the economic benefits to Iran from sanctions removal. A global model,[3] which takes into account international spillovers through trade and financial channels and global oil markets, indicates that the combination of positive external demand, wealth, and terms-of-trade shocks would entail a

[3] A dynamic stochastic general equilibrium model represents the global economy and is part of the Flexible System of Global Models (FSGM) developed at the IMF (Andrle and others 2015). The sanctions removal scenario assumes: (1) an increase in Iran’s oil exports; (2) a reduction in Iran’s sovereign and corporate risk premiums; and (3) a reduction in the cost of imports and an increase in the price of exports.

cumulative 15 percent increase in real GDP during the next five years relative to a baseline scenario of sustained sanctions.

The current account would improve in line with the ramp-up in oil exports; however, higher investment and private consumption, along with a decline in the risk premium, would stimulate imports and potentially narrow the improvement in the current account. Although Iran would continue to save from one-quarter to one-third of its oil export proceeds in the National Development Fund of Iran, the real exchange rate would appreciate by about 5 percent over the medium term, weighing on non-oil exports. Inflation would remain broadly stable, as the pass-through from the appreciation is likely to be offset by increased demand pressures in the non-oil economy.

The estimates presented above need to be taken with caution. Neither of the models assumes that substantial domestic economic reforms will accompany the removal of the sanctions. As discussed earlier, if such reforms are adopted and implemented, the increase in growth following the removal of the sanctions is likely to be larger. Another caveat is that the models do not factor in the liquidity and solvency problems that have permeated the corporate and banking sectors in the past few years. These factors could impair the depth and speed of recovery, particularly for investment in the non-oil sector. Also, the authorities' goal of achieving single-digit inflation underscores a strong need for policies to further adjust in the years ahead. In particular, additional fiscal consolidation would be required to support monetary policy and to help preserve a competitive real exchange rate.

The Agreement's Effect on Global Oil Prices and Economic Activity

Iran's reentry into the global oil market, and its increased integration into the global economy, could have far-reaching economic effects, given the large size of its economy (close to 1½ percent of global GDP or 18 percent of MENA GDP), population (78 million), and oil and gas reserves (fourth and second largest in the world, respectively).

Event study analysis points to oil prices as a key channel through which effects of the Iran Agreement are likely to be transmitted to the rest of the world.

- The tightening of international sanctions during 2010–13 pushed international oil prices upward. On days when new sanctions against Iran were introduced during 2012–13, oil prices tended to rise. The cumulative impact could have been as large as $14.[4]
- Only a fraction of the sanctions-related increase in oil prices seemed to have dissipated by mid-July 2015. Oil prices declined significantly in the days leading up to the November 2013 interim agreement. But taken together, the subsequent landmarks in the negotiations—the extensions, the April 2015 framework agreement, and the final deal itself—did not see a significant impact.[5] This result suggests that oil prices could fall further as uncertainties surrounding the pace and timing of Iran's return to the oil market are resolved and oil supply in the global market expands.

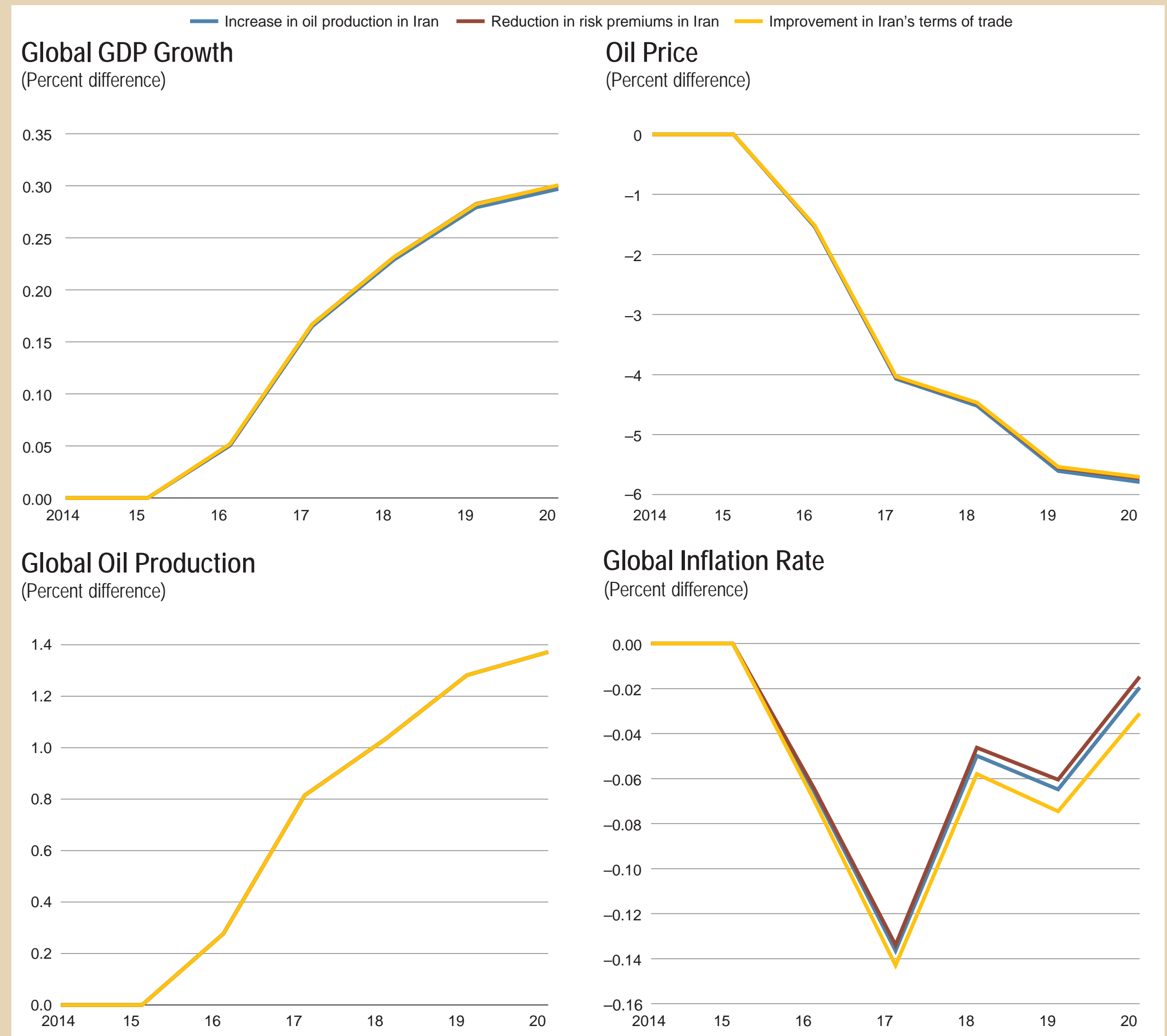
Global GDP (excluding Iran) is estimated to rise by about ¼ percent over the medium term, mainly owing to a decline in oil prices but also to an increase in non-oil trade with Iran. A gradual rise in Iran's oil production could amount to an increase of almost 1½ percent of global oil production by 2020, and is likely to affect the global economy by causing global oil prices to ease further (Figure 5.5). Declines in Iran's risk premium and trade costs are likely to have much smaller global and regional spillovers than the decline in oil prices.[6]

[4] These results are consistent with estimates by the U.S. Energy Information Administration (2015) and World Bank (2015).

[5] Other important shocks, such as those concerning Yemen, Libya, and Iraq, coincided with the dates of announcements about Iran's negotiations, which reduces robustness of estimates.

[6] In addition to oil exports, the natural gas supply from Iran to other countries in the region (for example, Oman, Pakistan, and Armenia) may also rise over time, conditional on the construction of new pipelines.

Figure 5.5
Estimated Global Impact of Sanctions Removal



Source: IMF staff estimates.

The magnitude of the oil price decline is highly uncertain. It depends on how quickly Iran is able to raise its oil production and how other oil suppliers respond. Under plausible assumptions—including the assumption that, consistent with their recent announcements, OPEC members do not compensate for an increase in Iran's oil exports by cutting their own oil production—the decline in oil prices could range from 5 percent to 10 percent over the medium term.

How Will Iran's Non-Oil Trade with the Region Be Affected?

Non-oil trade between Iran and the rest of the world is currently limited but is expected to rise, reflecting higher incomes in Iran and the rest of the world and a reduction in transaction costs. Iran's imports are projected to rise by 50 percent over the next five years, from $75 billion this year to $115 billion in 2020. There is also large potential

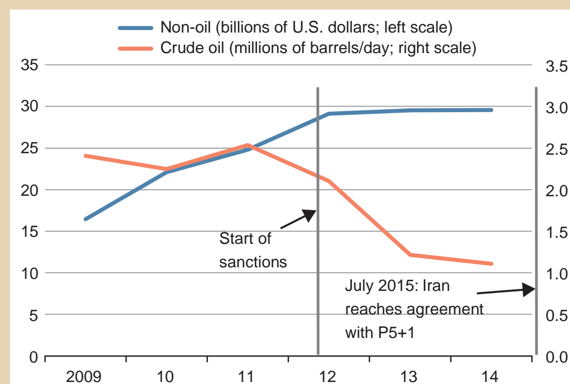
for Iran to increase its non-oil exports further (Figure 5.6). Estimates obtained from gravity models, or by comparing Iran's export patterns to those of other oil exporters, show that Iran's export levels are less than half of their potential.

Iran's trading partners stand to gain from increased trade with Iran. For the United Arab Emirates, for example, Iran is the most important export destination after India. The lifting of the sanctions could add more than 1 percentage point to the United Arab Emirates' real GDP over the period 2016–18 through higher nonhydrocarbon exports alone (IMF 2015a). Although moderating, economic growth in China and India is expected to remain strong, solidifying the position of these countries as increasingly important trading partners for Iran (Figure 5.7).

Iran has already signed a preferential trade agreement with Turkey, another country with which its trade has been growing rapidly in recent years. Europe, by contrast, has seen its trade share diminish during the sanctions period, although it could rise in a post-sanctions world. CCA countries could reap large economic benefits in the long run if they become transit points for growing trade among China, India, Iran, and other countries in the region as well as in Europe (Box 3.1). This will depend on the completion of ambitious regional initiatives. For details on the likely country-specific implications of the Iran Agreement, see Tables 5.2 and 5.3.

Figure 5.6

Iranian Exports, 2009–14

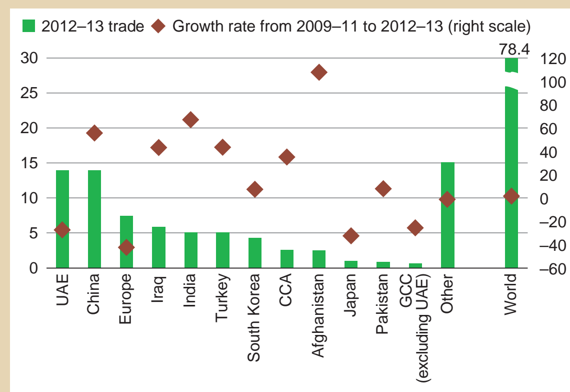


Sources: Organization of the Petroleum Exporting Countries, Statistical Yearbook; and World Trade Atlas.

Figure 5.7

Nonhydrocarbon Trade 2012–13 and Growth in Trade from 2009–11 to 2012–13

(Billions of U.S. dollars and percent)



Sources: World Trade Atlas; and IMF staff calculations.

Table 5.2. Regional Implications of Iran Sanctions Relief for MENAP and CCA Oil Exporters

	Gas	Non-Oil Trade	Finance and Investment	Oil
GCC				Expected increase in oil production will put downward pressure on oil prices, which would reduce oil-related fiscal and export revenues. Increased Iranian oil exports could see increased competition for market share (notably in Asia) with other oil exporters in the region.
Bahrain		Little trade with Iran, trade not expected to be significantly affected.		
Kuwait		Little trade with Iran.		
Oman	Pipeline construction to export gas from Iran (2014) could be accelerated as some delays were attributed to sanctions.			
Qatar	Qatar's expertise could help develop Iran's gas fields (countries share a maritime border that crosses a large, not fully exploited, gas field).	Good prospects. February 2015 ministerial meeting discussed trade ties.	Potential for Qatari FDI in Iran, given synergies in natural gas production.	
Saudi Arabia		Little trade with Iran.		
United Arab Emirates		Iran is the United Arab Emirates' second-largest export market. Large potential for more trade and tourism. End of sanctions could add 1¼ percentage points to growth over next three years solely through increased nonhydrocarbon exports.	End of sanctions would stimulate two-way investment, especially in real estate and small and medium-sized enterprises.	
Non-GCC				
Algeria		Little trade with Iran, trade is not expected to be significantly affected.	Algeria's capital account is closed, so sanctions had no impact on cross-border financial transactions.	
Iraq		Trade with Iran could be displaced as removal of sanctions could diversify the origin of Iranian imports.	Could benefit from higher Iranian FDI.	
Libya		Hardly any trade with Iran currently—not expected to be significantly affected.	Not much FDI either way—not expected to change much.	
Yemen		Trade currently low, could improve post sanctions.	Financial flows currently low—could improve post sanctions.	
CCA				
Azerbaijan	Azerbaijan's biggest gas field has significant investment from an Iranian company exempted from sanctions. Gas cooperation is likely to continue in the future.	Iranian exports to Azerbaijan have increased since the introduction of sanctions.	Azerbaijan has benefited from increased Iranian FDI. Cooperation in the banking sector could improve post sanctions.	
Kazakhstan		Bilateral trade increased during sanctions, expected to increase further with future opening of new infrastructure, such as the Kazakhstan-Turkmenistan-Iran railway. Trade is expanding through new shipping facilities.	Current flow of FDI to and from Iran is limited.	
Turkmenistan	Iran is expected to help diversify Turkmenistan's access to gas sources, including through a new gas pipeline.	Imports from Iran have increased by a factor of 10 in past decade. To continue growing at this rate, new infrastructure is needed.		
Uzbekistan		Modest post-sanctions expectations for increased trade relations and transport corridor development.		

Sources: National authorities; and IMF staff assessment.
Note: FDI = foreign direct investment.

Table 5.3. Regional Implications of Iran Sanctions Relief for MENAP and CCA Oil Importers

	Gas	Non-Oil Trade	Finance and Investment	Oil
MENAP Oil Importers				Expected increase in Iranian oil production will put downward pressure on oil prices, to the benefit of MENAP and CCA oil importers. Energy import bills would decrease and, where lower oil prices are passed on to end-users, production costs would decline and disposable income would rise. Declining oil prices would affect Russia and MENAP oil exporters negatively, which could entail negative second-round effects for CCA and MENAP oil importers, respectively.
Afghanistan		Important trade partner—lots of trade through informal channels (hence sanctions did not have a huge impact).	Weak formal financial linkages—unlikely to change much.	
Djibouti		Little trade, not expected to improve much.		
Egypt		Limited trade between the two countries.		
Jordan		Little trade, not expected to improve much.	Low investment flows—not expected to change much.	
Lebanon		Trade relations should improve with sanctions removal, especially because in 2010 Lebanon signed 17 bilateral trade agreements with Iran, some in the oil and gas sectors.	Banks could lose some transactional business from Iranian clients, given the SWIFT cut-off of Iranian banks. This is not expected to materially impact banks' profitability though.	
Mauritania		Little trade, not expected to improve much.		
Morocco		Little trade, not expected to improve much.		
Pakistan	Sanctions relief could lead to completion of gas pipeline, with benefits to Pakistan's energy market.	Little trade, has increased somewhat during sanctions—might be displaced after sanctions by lower-cost countries.	Capital flows have been very small both before and after sanctions—not expected to increase much.	
Tunisia		Little trade, not expected to improve much.	Financial links negligible.	
CCA Oil Importers				
Armenia		Bilateral trade suffered from sanctions. Trade could be revived, notably through construction of a railway between the countries.	FDI stopped since 2011, could increase post-sanctions. Energy-related cooperation (gas exports, transport) only to increase with large investments.	
Georgia		Little trade currently, but potential to increase over the medium term, especially if Iran wishes to diversify its trade routes.		
Kyrgyz Republic		Trade currently negligible. Potential railroad (Afghanistan-China-Iran-Kyrgyz Republic-Tajikistan) and preferential trade agreement to boost trade.		
Tajikistan		Exports to Iran grew during sanctions, as imports from Iran were flat. With improvements in infrastructure, Tajikistan could benefit from increased trade between Iran, South Asia, and Central Asia.		

Sources: National authorities; and IMF staff assessment.
Note: FDI = foreign direct investment.