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SAUDI ARABIA

FINANCIAL SYSTEM STABILITY ASSESSMENT

October 2017

This Financial System Stability Assessment paper on Saudi Arabia was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 17, 2017.

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FINANCIAL SYSTEM STABILITY ASSESSMENT

July 17, 2017

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Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Saudi Arabia in November-December 2016 and February 2017. The FSAP findings were discussed with the authorities during the Article IV consultation mission in May 2017. More information on the FSAP may be found at http://imf.org/external/np/fsap/fssa.aspx

- The FSAP team was led by Dimitri Demekas (IMF) and Abayomi Alawode (World Bank) and included Mustafa Saiyid (Deputy Mission Chief, IMF), Pietro Calice (Deputy Mission Chief, World Bank), Abdullah Al-Hassan, Nabil Ben-Ltaifa, Abdullah Haron, Peter Lohmus, Ken Miyajima, Dan Nyberg, Yunhui Zhao (all IMF), Michael Deasy, Arto Kovanen (IMF experts); and Gian Boeddu, Zamir Iqbal, Andres Martinez, Andrey Milyutin, Indu Raghavan, Marc Schrijver, Ghada Teima, Igor Zuccardi (all World Bank), and Paul Murgatroyd (World Bank expert). The IMF's Legal Department provided support from headquarters.

- The mission met with Saudi Arabian Monetary Authority (SAMA) Governor Alkholifey and Vice-Governor Alfuraih; Vice Finance Minister Al-Bazai and Deputy Finance Minister Al-Turki; Capital Markets Authority (CMA) Vice-Chairman Elkuwaiz; as well as senior staff at SAMA, government ministries, the CMA, commercial banks, auditors, specialized credit institutions, investment funds, and others.

- FSAPs assess the stability of the financial system as a whole and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

- This report was prepared by Dimitri Demekas and Mustafa Saiyid with contributions from IMF and World Bank FSAP team members.

CONTENTS

Glossary

ADF	Agricultural Development Fund
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
BCBS	Basel Committee on Banking Supervision
BCL	Banking Control Law
BCP	Basel Core Principles for Effective Banking Supervision
CAR	Capital Adequacy Ratio
CDD	Customer Due Diligence
CEDA	Council of Economic and Development Affairs
CMA	Capital Markets Authority
CP	Core Principle (Basel)
DPF	Deposit Protection Fund
DRL	Draft Resolution Law
DSTI	Debt Service to Income Ratio
ELA	Emergency Liquidity Assistance
EWS	Early Warning System
FATF	Financial Action Task Force
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSC	Financial Stability Committee
FSI	Financial Soundness Indicator
FSSA	Financial System Stability Assessment
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
IFSB	Islamic Financial Services Board
LCR	Liquidity Coverage Ratio
LDR	Loan-to-Deposit Ratio
LTV	Loan-to-Value
MoF	Ministry of Finance
MoU	Memorandum of Understanding
NFSC	National Financial Stability Committee
NGO	Non-Governmental Organization
NPL	Nonperforming Loan
NSFR	Net Stable Funding Ratio
NTP	National Transformation Program
PIF	Public Investment Fund
REDF	Real Estate Development Fund
REPO	Repurchase Agreement
SAIBOR	Saudi Arabian Interbank Offer Rate
SAMA	Saudi Arabian Monetary Authority
SAR	Saudi Arabian Riyal
SCI	Specialized Credit Institution
SDB	Social Development Bank
SIDF	Saudi Industrial Development Fund
SME	Small and Medium-size Enterprise
SMEA	Small and Medium-size Enterprise Authority
WEO	World Economic Outlook

EXECUTIVE SUMMARY

The FSAP took place during the aftermath of a major shock for the Saudi economy, whose repercussions were still being felt despite a decisive policy response. During 2015–16, the decline in oil prices led to a sharp fall in oil revenues. Government spending was cut and payments to some suppliers were delayed, adding to the contractionary effects on the economy. Combined with sharply increased domestic government borrowing, these developments contributed to a tightening in banking system liquidity. SAMA injected liquidity and relaxed the prudential ratio on banks' lending to deposits. These measures were effective and, by end-2016, as government arrears were being repaid, the situation in the banking system had started to normalize.

At the same time, major reforms are re-shaping the domestic financial sector landscape, creating new opportunities and challenges for financial firms.

- To align Saudi Arabia with the global regulatory reform agenda, the authorities have implemented a number of major reforms. These include the implementation of Basel III in 2013 and steps toward enhancing SAMA's risk-based supervision; the publication of Financial Stability Reports by SAMA; the introduction of deposit insurance; the formation of the National Financial Stability Committee (NFSC); and the preparation of a draft resolution law that broadly corresponds to the Financial Stability Board's (FSB) Key Attributes for Effective Bank Resolution.
- The experience of 2015–16 prompted a fundamental review of Saudi Arabia's economic structure and policy framework. The government unveiled in 2016 a bold "Vision 2030" and a more detailed five-year National Transformation Program (NTP) aimed at reducing the economy's reliance on oil, consolidating and restructuring public finances, developing the domestic capital market, and promoting the non-oil private sector, especially small and medium-sized firms.

Banks—the core of the Saudi financial system—remain liquid and resilient. Stress tests show that most banks, including all systemically important banks, would be able to continue operating and meeting regulatory capital requirements in the event of additional severe economic shocks, characterized by oil prices falling substantially below current levels. Despite the recent liquidity challenges, all banks would also be able to cope with additional adverse liquidity shocks.

Nevertheless, banks' funding strategies and SAMA's liquidity management framework will have to adjust to structural changes in liquidity conditions. The model in place for over a decade whereby banks relied almost exclusively on domestic deposits for funding and on SAMA for draining chronic excess liquidity came under pressure during 2015–16. Recognizing that liquidity conditions may be more balanced going forward, SAMA is re-assessing its liquidity management framework. Reforms should include establishing a framework that supports the pegged exchange rate and helps SAMA align market interest rates with its policy objectives; developing liquidity forecasting models; focusing money market interventions on regular, short-term liquidity operations, while moving away from non-competitive ways of allocating liquidity; limiting standing facilities to overnight maturity; and requiring collateral for all lending to commercial banks.

The authorities' ambitious agenda for improving macro- and microprudential financial sector oversight should be fully implemented and, in some cases, enhanced and further refined.

- Significant progress has been made in establishing a modern macroprudential policy framework with the NFSC as a coordinating body and SAMA having a central role in financial stability and macroprudential policy formulation, but work is still needed to close data gaps and fine-tune the macroprudential toolkit.

- SAMA has taken major steps to enhance the prudential oversight of banks, consistent with best practice. Further steps should be taken to modernize and eliminate inconsistencies in the foundational legislation governing banking supervision to align it fully with international standards; consolidate and publish all SAMA circulars; develop and publish existing bank licensing criteria; provide guidance to banks for enhancing prudential reporting of Islamic products; strengthen the supervisory approach (*inter alia* by refining the determination of risk ratings, better aligning supervisory planning with banks' risk profiles, and enhancing the documentation of the loan examination process); strengthen the oversight and classification of rescheduled and refinanced loans; and improve cross-border cooperation arrangements.

The draft resolution law is a major step toward introducing a modern resolution framework broadly in line with the FSB's Key Attributes, but there are areas for improvement. The draft law should be extended to all banks in the system; early intervention arrangements for problem banks, as well as arrangements for funding in resolution, need to be expanded and specified more explicitly; a formal Emergency Liquidity Assistance framework would be a useful complement to the new liquidity management framework; and over the medium term, the Deposit Protection Fund could play an enhanced role in bank resolution.

Interventions in key developmental areas can enhance the process of financial intermediation and contribute to the authorities' long-term economic goals. The World Bank team identified the following priorities:

- Improving access to finance for the Small and Medium-size Enterprise (SME) sector through a comprehensive growth strategy by the newly-created Small and Medium-Size Enterprise Authority (SMEA); expanded data collection; and widening the variety of financing options from both banks and non-banks.

- Strengthening the governance and performance of specialized credit institutions (SCIs) *inter alia* through tighter oversight and the adoption of international financial reporting standards (IFRS) accounting and regular reporting.

- Building on the substantial progress made so far, taking steps to develop further the domestic capital markets through a modern legal framework for debt management; streamlining the process of public issuance and listing of bonds and *Sukuk*; strengthening the collateral framework for secured transactions; improving the framework for creditor and debtor rights and dispute resolution; and ensuring coordination of the various housing finance initiatives.

Table 1. Saudi Arabia FSAP: Key Recommendations	
Recommendations and Authority Responsible for Implementation	**Time[1]**
Banking Oversight	
Update the Banking Charter and Banking Control Law to delete contradictory and redundant provisions and revoke Article 21 on the power of the Minister of Finance and National Economy, under exceptional circumstances, to exempt any bank from regulation. [Government; SAMA]	MT
Codify and publish all bank legislative circulars, and eliminate those superseded. [SAMA]	ST
Strengthen the supervisory approach by refining the determination of banks' risk and control ratings, aligning the supervisory planning with banks' risk profiles, and enhancing the documentation relating to the loan examination process. [SAMA]	ST
Develop a licensing manual for banks and publish guiding principles for bank licensing. [SAMA]	ST
Provide guidance to banks on mapping the risk profiles of Islamic products to the Basel framework. [SAMA]	ST
Adopt the draft regulation on loan classification and ensure regular, comprehensive reporting on the size of rescheduled and restructured loans. [SAMA]	ST
Require banks to establish formal policies and procedures for loan rescheduling, refinancing, and restructuring and to submit prudential returns on such loans. [SAMA]	ST
Strengthen cross-border cooperation by entering into MoUs with foreign regulators. [SAMA]	ST
Liquidity Management	
Establish a liquidity forecasting framework to guide money market operations. [SAMA]	MT
Financial Safety Nets	
Adopt and implement the Draft Resolution Law (DRL). [Government; SAMA]	ST
Establish an Emergency Liquidity Assistance (ELA) framework. [SAMA]	ST
Establish a timeframe for DPF deposit payouts and ensure a back-up funding line. [MoF; SAMA]	ST
Macroprudential Policy	
Broaden the definition of debt service to income in the regulations to include all types of debt and income, as currently under consideration by SAMA. [SAMA]	ST
Strengthen data collection and use for the household, corporate, and real estate sectors. [Government; SAMA]	MT
1 ST = Short Term (up to 2 years); MT= Medium Term (2–5 years).	

BACKGROUND

1. The FSAP took place during the aftermath of a major shock for the Saudi economy and financial system, whose repercussions were still being felt.

- A sharp drop in oil prices in late 2014 caused the current account to swing from a surplus of about 10 percent of GDP in the same year (and even higher in earlier years) into a deficit of 8 percent of GDP in 2015, and nearly halved government oil revenue. In response to a surging fiscal deficit from 3.4 percent in 2014 to almost 16 percent of GDP in 2015, the government took steps during 2015–16 to increase non-oil revenue and cut expenditures, while delaying some payments to suppliers, which dampened activity in the non-oil economy (Table 2). Further, the government launched wide-ranging medium-term fiscal consolidation reforms and, to help finance the fiscal deficit, raised a US$10 billion international syndicated loan in April 2016 and issued US$17.5 billion in international bonds—a record for an emerging market—in October 2016 and US$9 billion of Islamic bonds (*sukuk*) in April 2017.

- Despite Saudi Arabia's strong policy buffers (low starting level of public debt and SAMA net foreign assets of around US$529 billion, or 30 months of imports at end-2016), the deterioration in the fiscal position and concerns about the fiscal outlook led to sovereign downgrades by two of the three major rating agencies.

- Downside risks remain elevated. Futures markets and consensus forecasts suggest oil prices will remain near current levels, while excess capacity and downside risks to global growth create significant uncertainty. Barring a sharp increase in global oil prices, the need for ongoing fiscal consolidation and reforms will continue to have a dampening impact on domestic non-oil growth over the medium term.

- Recognizing the above challenges, the government unveiled in 2016 an ambitious "Vision 2030" plan and a more detailed five-year National Transformation Program (NTP) focused on reducing the economy's reliance on oil; rationalizing and enhancing the efficiency of public spending; increasing non-oil revenues through new taxes and fees; encouraging the non-oil private sector contribution to GDP and employment, including through SME development and growth-enhancing structural reforms; increasing home ownership; and transforming Saudi Arabia into a regional trade and finance hub. This plan also includes the sale of a small stake in Aramco, the national oil company, and the conversion of the Public Investment Fund into a sovereign wealth fund.

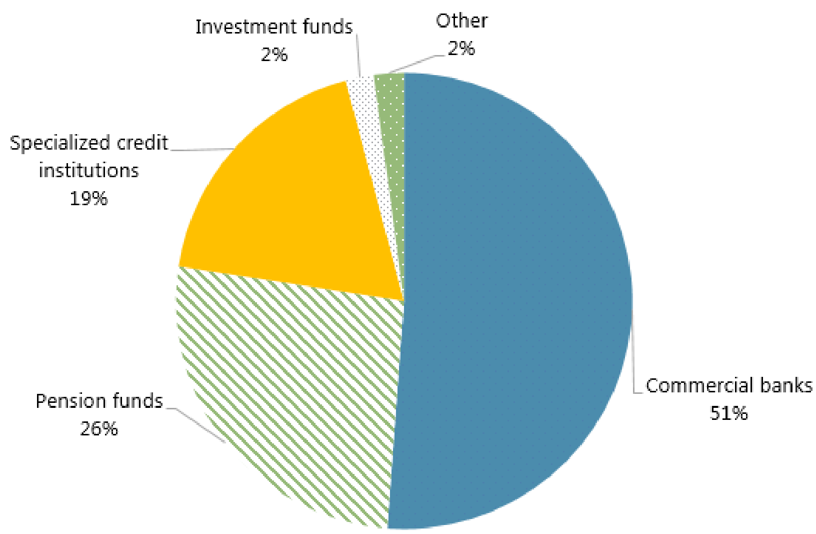
- The authorities maintain their strong commitment to the long-standing exchange rate peg to the U.S. dollar, which anchors monetary policy mainly at the short end of the yield curve by linking SAMA's key policy interest rate to U.S. interest rates. In this framework, SAMA's liquidity management aims mainly at stabilizing short-term rates, while the longer end of the yield curve moves more freely in response to the changing domestic liquidity conditions.

2. Banks are the core of the Saudi financial system.

- With assets of about US$1.2 trillion (186 percent of GDP) at end-2016, the financial sector includes 24 commercial banks (51 percent of the total); pension funds (26 percent); five specialized (not deposit-taking) credit institutions (SCIs) that provide medium and long-term developmental loans for industry, agriculture, SMEs and real estate (19 percent);[1] investment funds (2 percent); and other financial institutions, including insurance companies (2 percent) (Figure 1 and Table 3). Domestic capital markets are relatively small: the stock market capitalization is a little over 54 percent of GDP and the bond market about one percent of GDP. The 12 domestic banks—four of which are majority-owned by government agencies or pension funds—represent 97 percent of banking system assets. The remainder is made up of 12 foreign banks.

Figure 1. Saudi Arabia: Financial System Structure

(End-2016; in percent of total assets) 1/



Source: Saudi Arabian Monetary Authority.
1/ Total assets of US$1.2 trillion (about 186 percent of GDP).

- Banks follow a simple business model, mainly intermediating private sector deposits (73 percent of total liabilities) for lending to corporates (43 percent of total assets) and households (19 percent). Among the latter, mortgage loans comprise only about one-fourth of the total

[1] These are the Saudi Industrial Development Fund (SIDF), which finances industrial projects; the Public Investment Fund (PIF), which finances large-scale government and private industrial projects; the Real Estate Development Fund (REDF), which finances individuals and corporate residential and commercial real estate; the Social Development Bank (SDB), which provides interest-free loans for small and emerging businesses and professions; and the Agricultural Development Fund (ADF), which finances farmers and agricultural projects.

while the remainder is consumer and credit card loans. Direct exposure to the government is limited (6 percent of assets).

- The financial system is domestically oriented, with relatively low cross-border linkages, as suggested by IIP data and BIS banking statistics. Bank cross-border exposures in funding and lending are limited and regionally diversified, with the latter representing less than 15 percent of system assets.

3. Saudi banks were affected by the headwinds during 2015–16 but, owing to their strong buffers, the impact was limited.

- Despite the severity of the macroeconomic shock during 2015-16, NPLs increased only modestly (from 1.1 percent at end-2014 to 1.4 percent in 2016: Q4—Figure 2) reflecting the high quality of the loan portfolio, the long-standing practice of rapid bad loan writeoffs (as much as one-third of the stock of NPLs in some years)[2], and the rescheduling or restructuring of some consumer and real estate loans to customers affected by cuts in government wages and allowances in 2016, following guidance from SAMA (see below). There is no comprehensive information on the magnitude of rescheduled and restructured loans, but SAMA estimates these to be minimal.
- Bank net income fell owing to higher provisioning costs, though banks remained profitable reflecting continuing high net interest margins (NIM) and relatively stable fee income (Table 4 and Figure 2).[3]
- Reported solvency indicators and provisions buffers remained strong during 2015-16, including in comparison to other countries in the region affected by similar macroeconomic developments (Figure 3). At 2016:Q4, the total regulatory capital ratio for the system was 19.5 percent, with little variation across banks, and the (unreported) CET1 ratio was estimated at 17.5 percent (Table 4). Indeed, banks actually increased their capital buffers and provisions coverage of NPLs, the latter rising to 177 percent by end-2016.
- The most noticeable impact of the economic downturn on banks was on funding and liquidity. Beginning in late 2014, corporates, households, and government entities started drawing down their deposits with banks to cover cash flow needs and buy government securities issued to finance the fiscal deficit. During mid- to late-2016, bank deposits were falling sharply, while credit continued to expand. This led to a drop of nearly two-thirds in banks' excess liquidity with the central bank, an increase in banks' loan-to-deposit ratios, and a pickup in the interbank interest rates as reflected by the 3-month SAIBOR (Figure 4).

[2] Based on year-end filings of individual banks through end-2015. The historical average is close to 20 percent.

[3] NIMs have been high and relatively stable due to large proportions of deposits not receiving interest (for compliance with Islamic principles) and a high share of variable-rate loans, which allow increases in banks' funding costs to be swiftly passed on to customers.

4. The authorities took several steps to alleviate the immediate pressures on banks. Given the absence of a well-developed interbank market and the dearth of other funding sources, banks rely mainly on SAMA for liquidity management through repos, reverse repos, and SAMA bills.[4] In part to help ease liquidity conditions, SAMA (i) relaxed the regulatory limit on banks' loan-to-deposit ratio (LDR) from 85 to 90 percent; (ii) transferred funds and deposits of government entities, a total of SAR 32 billion (about 1½ percent of GDP), to commercial banks in June and September 2016; (iii) extended the tenor of SAMA's repo facility, from overnight to three months; and (iv) issued guidance to banks for rescheduling of consumer and mortgage loans after the government cut allowances to some civil servants. In addition, as the government began to pay arrears to suppliers in October 2016, liquidity conditions normalized and interest rates declined (Figure 5). By end-2016, bank deposits had stabilized.

5. In parallel, the authorities continued to implement significant financial sector reforms. Since the 2011 FSAP, the authorities have implemented the Basel III framework for capital and liquidity and made progress with several other recommendations (Table 5); strengthened the stress testing framework, supported by IMF technical assistance; implemented an Early Warning System; set limits on banks' large exposures; introduced a payment system law; and created a high-level Financial Stability Committee in SAMA charged with macroprudential analysis and supporting the work of the National Financial Stability Committee. In 2015, the authorities gradually started opening up the stock market to foreign investment by allowing large financial institutions to buy non-controlling shares in listed Saudi companies.

6. Islamic products and services are widespread but the authorities do not distinguish between different types of institutions in their prudential approach. Islamic products represent about half of banking system assets, with some banks offering these products exclusively and others a mix. SAMA, however, does not distinguish between different types of banks and applies the same Basel prudential standards to all.

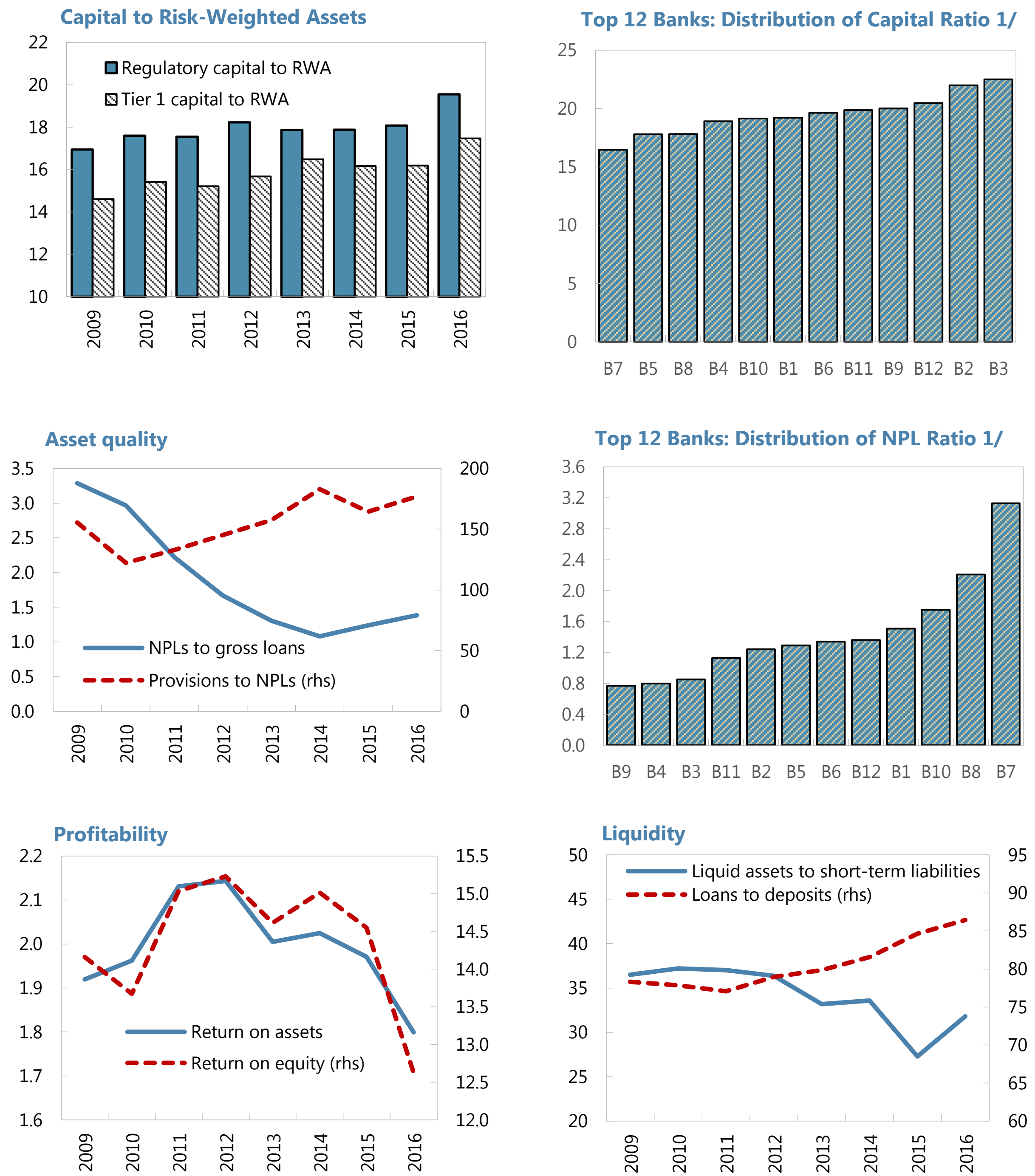
RISKS AND RESILIENCE

7. The volatility of the oil price is the key vulnerability of the Saudi economy and, by extension, its financial sector. A prolonged slowdown in global growth that would depress oil prices would put additional pressure on the public finances, weaken the balance sheets of corporates and households, and undermine banks' funding, asset quality, and profitability. Another risk factor is heightened geopolitical risks or regional security dislocations that could prompt banks' customers to withdraw deposits and cause banking system liquidity to tighten sharply, as happened during the 1990 Gulf War (see Risk Assessment Matrix, Table 7). Over the longer term, another risk for the Saudi economy relates to its capacity to implement the government reform agenda and reduce the dependence of the economy and public finances on oil, while boosting non-oil sector growth.

[4] In the past, SAMA also used changes in cash reserve ratios (CRRs) to manage system liquidity, but this tool has been employed less frequently in recent years, as CRRs, the same in riyal and foreign currencies, have remained unchanged since 2008.

Figure 2. Saudi Arabia: Financial Soundness Indicators (FSI)

(End-2016 or latest available; in percent)

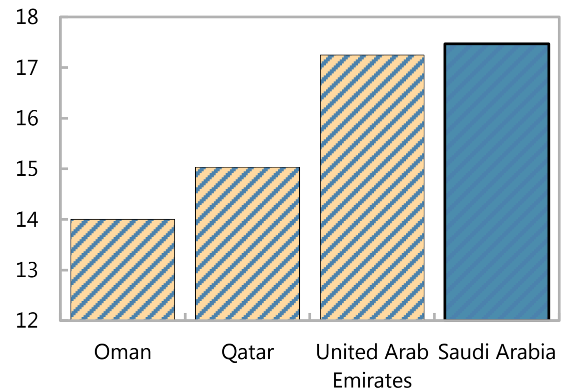


Sources: SAMA, FitchConnect, and IMF FSI database.
1/ Banks are ranked by assets (largest B1, smallest B12).

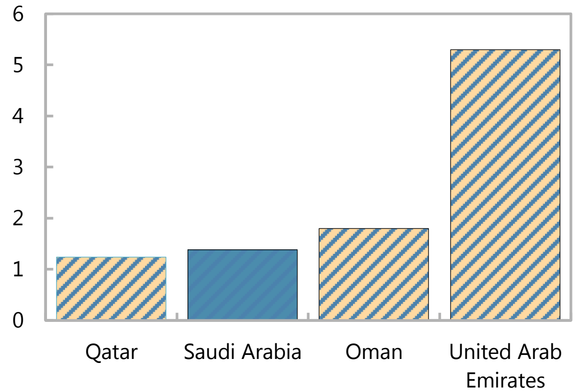
Figure 3. Saudi Arabia: FSI Cross-Country Comparison and Banks' Balance Sheet Composition

(End-2016 or latest available; in percent)

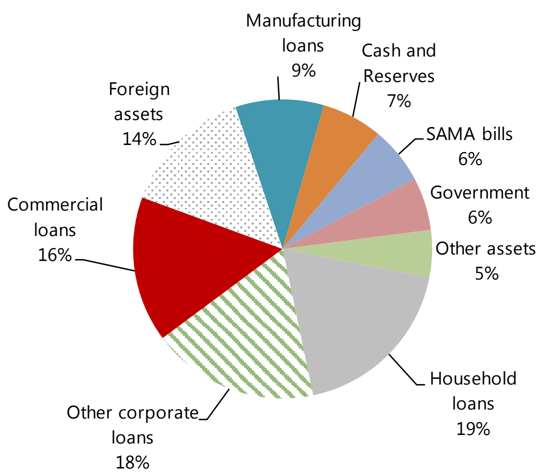
Regulatory Tier 1 Capital to Risk-Weighted Assets



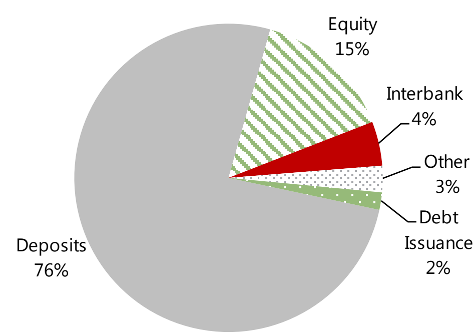
Nonperforming Loans to Gross Loans



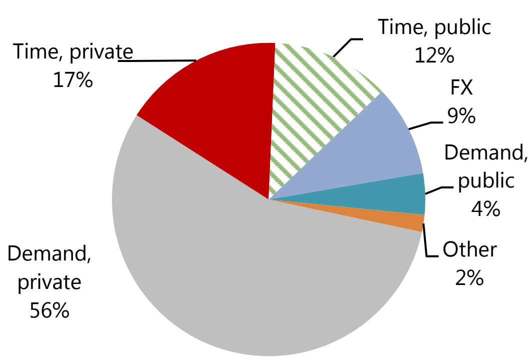
Banks' Asset Structure



Banks' Liability Structure

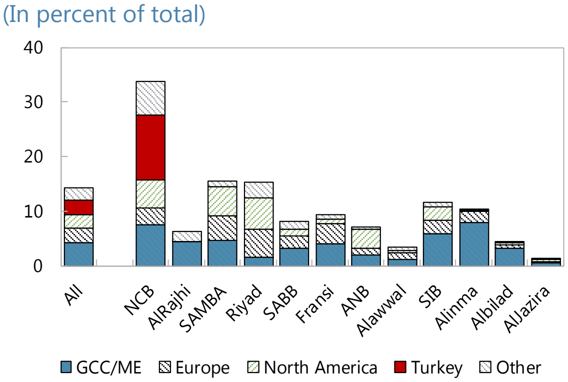


Banks' Deposit Structure



Cross-Border Exposures of Banks

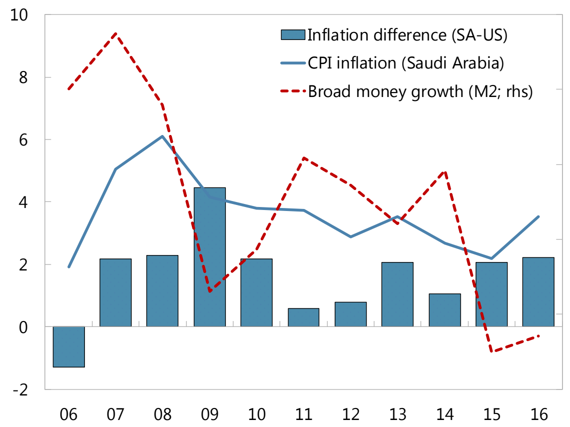
(In percent of total)



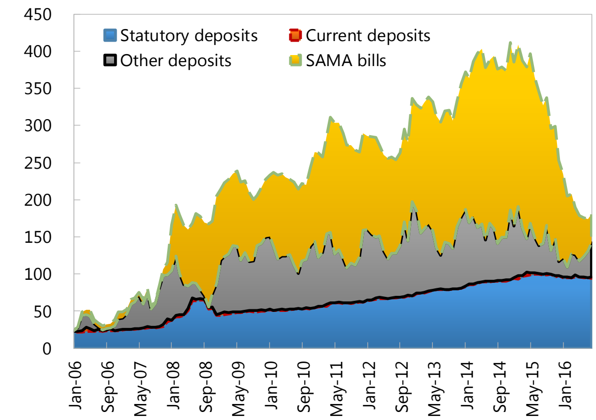
Sources: SAMA, National Central Banks, IMF FSI database, Bankscope, and staff estimates.

Figure 4. Saudi Arabia: Indicators of Macroeconomic and Financial Conditions

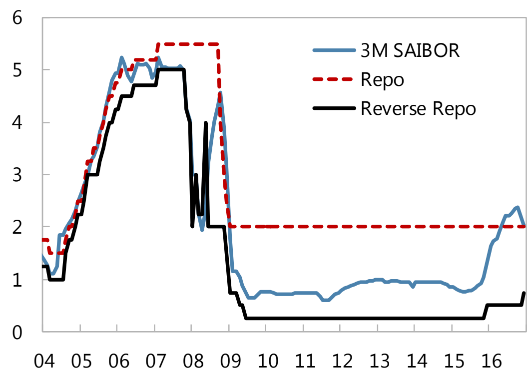
Inflation and Money Growth
(In percent, y/y)



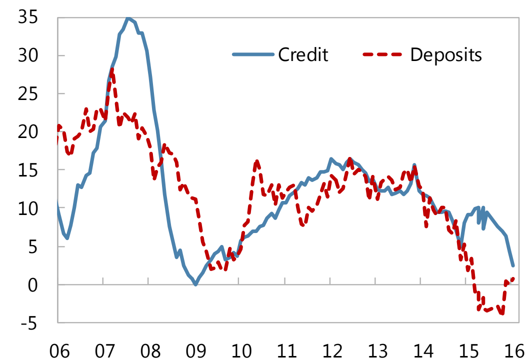
Trend in Banks' Liquidity
(In billions of SAR)



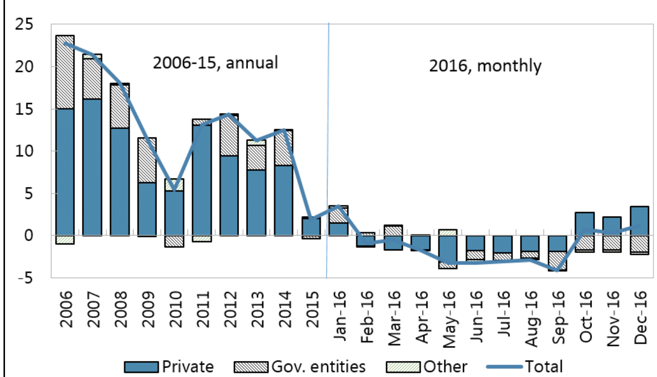
Policy and Money Market Interest Rates
(In percent)



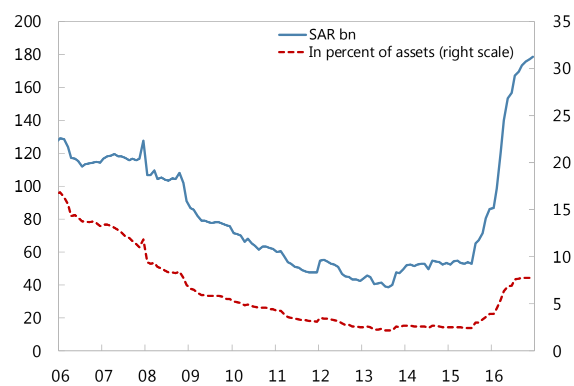
Growth of Bank Credit to Private Sector and Deposits
(In percent, y/y)



Banks' Deposit Growth-Contribution by Type
(In percent, y/y)

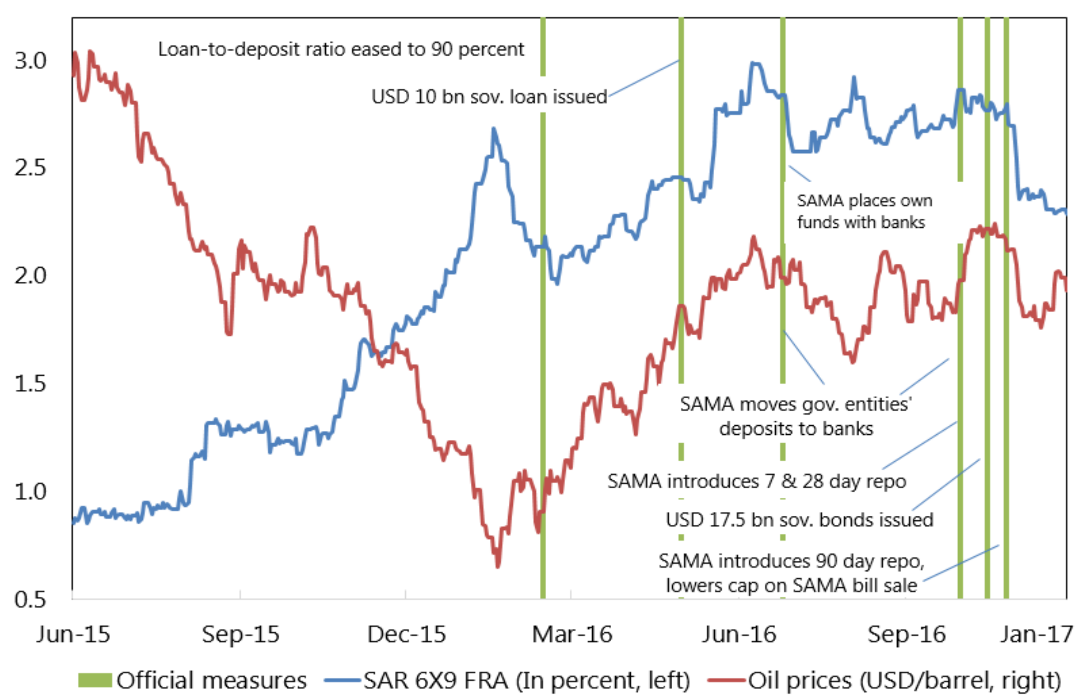


Banks' Holdings of Government Bonds



Source: SAMA

Figure 5. Saudi Arabia: Forward Short-Term Interest Rates, Oil Prices, and Key Official Measures



Source: Bloomberg.

A. Banking System Resilience

8. The potential impact of these risks on the Saudi banking system was assessed using a battery of solvency and liquidity stress tests. The tests were based on balance sheet data as of December 2016 and covered all 12 domestic banks, representing 97 percent of system assets. Given the limited cross-border exposures, the analysis did not cover cross-border spillovers.

- Solvency tests—including both macroeconomic scenario-based tests and single-factor shocks—focused mainly on credit risk over a three-year horizon. They were based on the Basel standardized approach and used fully phased-in Basel III minimum capital requirements as hurdle rates. Two macroeconomic scenarios were developed: in the baseline, oil prices and GDP growth follow the IMF's April 2017 World Economic Outlook (WEO) projections; in the adverse scenario, oil prices were assumed to fall below the WEO projections by two standard deviation forecast errors, with a significant attendant impact on GDP and banks' asset quality (for details, see Figure 6 and the Stress Testing Matrix in Appendix I).

- To make the adverse scenario more severe, it was assumed that Saudi banks would discontinue the practice of rapid bad loan writeoffs (NPLs were projected on a pre-writeoff basis). As a result, NPLs in the adverse scenario jump from 1.4 percent at end-2016 to 12 percent at end-2019 (Figure 6), an increase that dwarfs that observed in Saudi Arabia during 2015-16 and is several times higher than in other oil-producing countries (Angola, Nigeria, and Russia) under similar circumstances. This assumption is extreme: in reality, even if the pace of loan writeoffs were to decline in the event of a renewed shock, NPLs are likely to rise by much less.

- Single-factor sensitivity analyses were used to estimate the impact of credit concentration and interest rates on bank solvency. Consistent with domestic regulations and the reported data format, no distinction was drawn between "hybrid" banks offering a mix of conventional and Islamic products and banks offering exclusively the latter.

- Liquidity tests assessed the short-term impact of either macroeconomic shocks or other risks identified in the RAM on bank liquidity. One test was based on the Basel III 30-day Liquidity Coverage Ratio (LCR), which was rendered more severe by assuming higher runoff rates. The other focused on the potential maturity mismatch between banks' cash outflows and inflows under stress over a six-month horizon, in order to identify funding gaps that could emerge and / or persist beyond LCR's 30-day horizon.

9. Solvency test results suggest that the banking system is resilient to severe shocks.

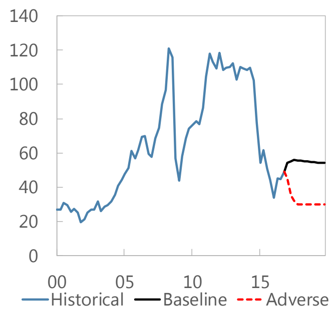
- In the baseline scenario, all banks' capital adequacy ratios (CARs) exceed minimum requirements through the projection period. In the adverse scenario, the aggregate CAR for the system declines by about 2 percentage points, but 10 banks out of 12, including all six systemically important banks, still meet minimum requirements (Figure 7). Moreover, the total capital shortfall for the two non-systemic banks that do not pass is insignificant, amounting to about 0.03 percent of 2016 GDP, and appears only in the last year (2019) of the three-year test horizon.

- The single factor sensitivity tests indicate that the banking system faces limited credit concentration risk in cross-country comparison. Although the default of each bank's three largest (non-sovereign) borrowers, assuming zero recovery, would cause the aggregate CAR for the system as a whole to decline by 7 percentage points, driving nine banks below minimum requirements and resulting in an aggregate capital shortfall of 1.8 percent of GDP, banks in Saudi Arabia are more resilient to this risk than those in other countries analyzed in recent FSAPs due to strong initial buffers. Moreover, the zero-recovery assumption—common in FSAPs, given the uncertainty about collateral valuation in stress periods—is extremely stringent: assuming recovery rates close to the historical average in Saudi Arabia would limit the decline in the aggregate CAR to 2 percentage points and eliminate the capital shortfall.

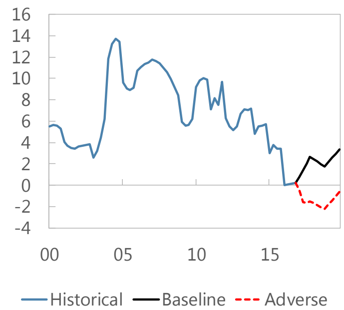
10. The banking system is also resilient to liquidity shocks. At end-2016, all banks meet the standard Basel III LCR requirement and pass the maturity-mismatch test, owing to their large holdings of liquid assets. Two banks registered cash flow surpluses and did not run down asset holdings. All banks also pass a more severe LCR liquidity test (with runoff rates 20 percent higher than those postulated in the Basel III formula) (Figure 8).

Figure 6. Saudi Arabia: Baseline and Adverse Solvency Stress Test Scenarios

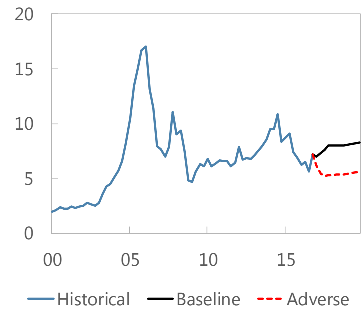
Oil prices, Brent
($ per barrel)



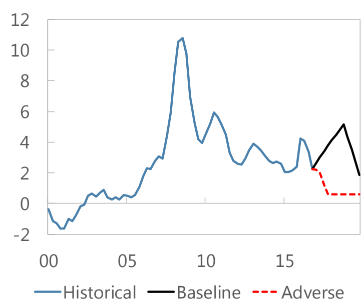
Non-oil private sector real GDP growth
(In percent)



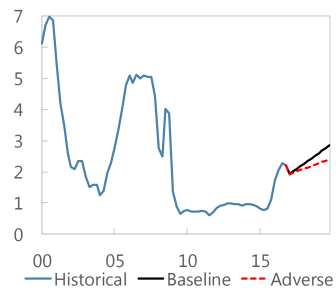
Equity price index
(SAR, '000)



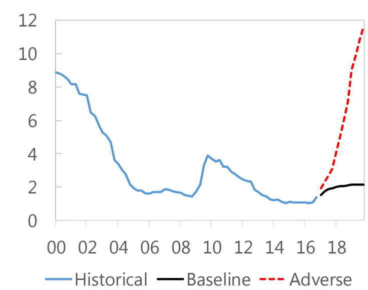
Inflation
(In percent, yoy)



3M SIBOR
(In percent)



Historical and Projected Aggregate NPL Ratios
(In percent)

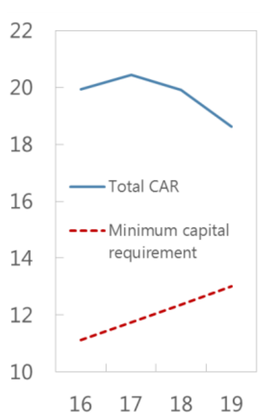


Sources: Haver and IMF staff estimates.

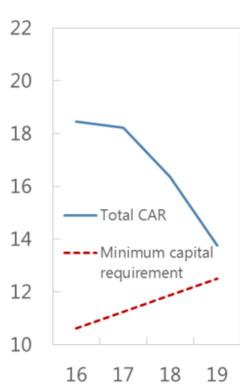
Figure 7. Saudi Arabia: Adverse Stress Test Scenario Results

Total CAR and minimum capital requirements
(In percent)

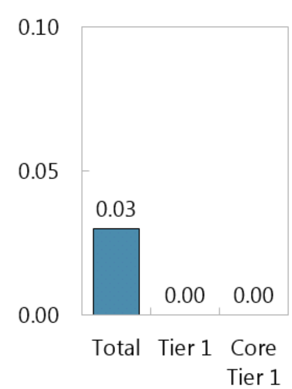
DSIBs



Non-DSIBs

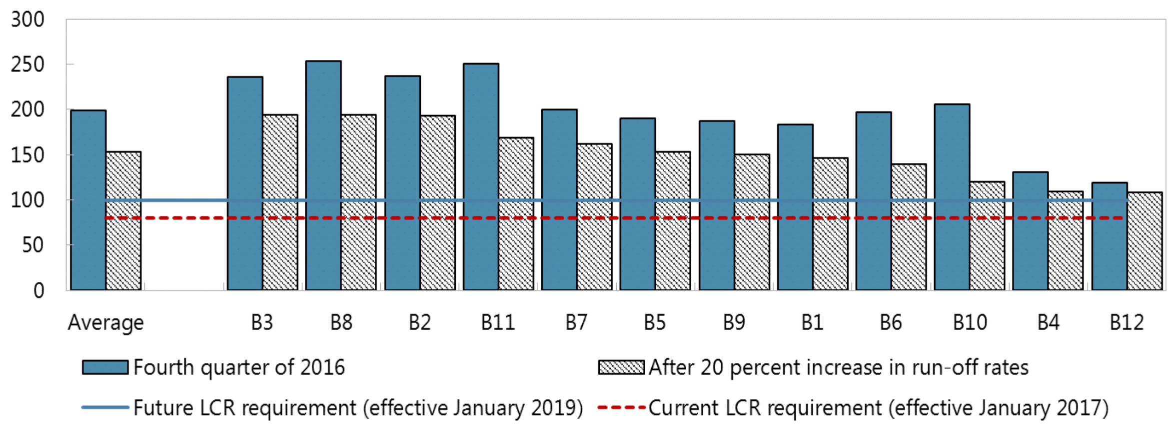


Capital shortfalls in 2019
(Percent of GDP)



Source: IMF staff calculations.

Figure 8. Saudi Arabia: Liquidity Coverage Ratio with Standard and Augmented Runoff Rates [1]
(Results for individual banks; in percent)



Source: IMF staff calculations.
1/ Augmented runoff rates, 20 percent higher than in the standard Basel III formula, are capped at 100 percent.

B. Systemic Liquidity

11. Notwithstanding individual banks' resilience to severe liquidity shocks as shown by the stress tests, the efficient functioning of the money market is a key component of systemic resilience. It allows liquidity to be allocated efficiently to parts of the financial system best able to channel it to the real economy; conveys information about market conditions to participants and policy-makers; provides the basis for a market-sensitive yield curve; and enables the effective transmission of monetary policy. When any of these functions is hindered, not only is the efficiency of financial intermediation reduced but excessive volatility has the potential to undermine stability. Although liquidity developments in Saudi Arabia during 2015–16 did not reach this stage, they underscored the need to improve the liquidity management framework.

12. The experience of 2015–16 revealed weaknesses in both the functioning of the Saudi liquidity market and in banks' funding strategies. Because of the long history of surplus liquidity in the banking system, SAMA's liquidity management has been mostly geared towards absorbing liquidity, while market-based instruments for injecting or reallocating liquidity in the system are not fully developed. Banks, likewise, have not developed an effective interbank market (interbank liabilities are less than 4 percent of banks' total liabilities) and interbank rates do not fully reflect actual liquidity conditions. As Saudi banks rely predominantly on domestic deposits to fund lending (foreign deposits and wholesale funding are limited and the domestic capital and secondary markets are not fully developed), they faced challenges in managing the sudden shifts in deposits that emerged in 2015–16. This led to higher volatility in interbank market liquidity.

13. Given that more balanced liquidity conditions are likely to be the norm in the future, SAMA is in the process of enhancing its liquidity management framework. Drawing on the recent experience, SAMA had already started re-evaluating its approach and the FSAP provided an opportunity to discuss the key elements of an enhanced framework. A key objective of the new framework would be to limit interest rate volatility: this would also support the exchange rate peg, as improved stability of money market interest rates would reduce deviations from U.S. dollar LIBOR and consequently pressures in the forward currency market. Two key priorities in this regard are:

- *A toolkit for market-based interventions focused on a regular, fixed maturity.* The main liquidity management operations should be weekly and conducted at a fixed maturity, aimed at improving stability of money market interest rates around the intervention range. Short-term fine-tuning and medium-term structural liquidity management operations could be conducted as needed. Once the new framework is in place, standing facilities should be limited to overnight maturities. SAMA should phase out the use of non-competitive means to allocate liquidity (such as deposit placements) and allocate financial resources only through open tender against collateral.

- *A liquidity forecasting framework*. A formal liquidity forecasting framework would play a critical role in supporting SAMA's liquidity management operations.[5] In the interim, as forecasting capacity is developed, SAMA could continue the current practice of monitoring a range of indicators to guide its liquidity operations.

FINANCIAL STABILITY POLICY FRAMEWORK

14. A wave of reforms is transforming and modernizing the overall financial stability policy framework, including both the institutional architecture for macroprudential policy and microprudential oversight. In line with the global financial reform agenda, the Saudi authorities have taken major steps to align the financial stability policy framework and financial safety nets—discussed in the following section—with international best practice. The goal of "Vision 2030" to transform Saudi Arabia into a regional finance hub is an additional spur to reform. A full evaluation of the new framework was not feasible, given that the track record for most of these reforms is relatively short and implementation is still ongoing in some areas. Instead, discussions during the FSAP focused on areas where these reforms could be enhanced and further refined.

A. Macroprudential Policy

15. Macroprudential policy can play an important role in safeguarding financial stability. It can complement monetary policy, which in Saudi Arabia is constrained by the exchange rate anchor. SAMA had historically applied a variety of measures to counteract systemic risk without a formal framework: these included limits on debt service-to-income (DSTI) and loan-to-value (LTV) ratios for borrowers and requirements on loan-to-deposit ratios (LDR), counterparty exposure, capital buffers, dynamic provisions, and counter-cyclical reserves for banks (Table 8). The last FSAP in 2011, as well

[5] SAMA has already started development of a liquidity forecasting framework with IMF technical assistance.

as the 2015 FSB peer review, highlighted the need for a more formalized and transparent approach for both institutional and operational frameworks.

16. Since the last FSAP, the authorities have made significant progress in this area. Key achievements include: (i) making financial stability an explicit objective and a mandate for SAMA in a SAMA strategy document; (ii) the formation of the NFSC comprised of SAMA, CMA and the Ministry of Finance (MoF) to coordinate macroprudential policy decisions;[6] (iii) the creation of a Financial Stability Committee (FSC) within SAMA and a supporting Financial Stability Division (FSD) for monitoring systemic risk; (iv) the development of an Early Warning System (EWS); (v) the publication of an annual Financial Stability Report (FSR) by SAMA; and (vi) initiation of regular stress-testing of banks' solvency and liquidity.

17. Nevertheless, there is scope for strengthening the policy framework further. Specifically, the authorities should:

- *Strengthen collection and utilization of data on the corporate, household, and real estate sectors.* Enhanced collection of statistics—such as the real estate price indices launched in January 2017—and analysis of household and corporate balance sheets and earnings would help identify debt service vulnerabilities in certain income groups, sectors, or industries and aid in the calibration of measures. The existing EWS could usefully monitor such data once it becomes available.

- *Continue to review the definitions of some existing measures.* Debt service-to-income limits for individual borrowers should include total debt service for credit obtained from different financial institutions and for different types of loans (consumer, mortgage etc.), which would be in line to the debt burden ratio currently under consideration by SAMA.

B. Banking Supervision

18. The FSAP focused on the prudential oversight of banks, given their dominant size in the Saudi financial system. It undertook a focused assessment, using the 2012 version of the Basel Core Principles for Effective Banking Supervision (BCP) as a reference point. Areas of particular emphasis were selected on the basis of findings of the previous BCP assessment during the 2011 FSAP and the recent Regulatory Consistency Assessment Program (RCAP) carried out by the Basel Committee on Banking Supervision. These included the responsibilities and independence of SAMA; bank licensing; supervisory approach; corrective action; credit risk; consolidated supervision; home/host relationships; corporate governance; risk management; capital; and disclosure.

19. The assessment considered the unique risk management challenges of banks offering Islamic products. Saudi Arabia has a mixed system, in which Islamic banks (offering exclusively Islamic products on both sides of the balance sheet) operate alongside "hybrid" banks offering both

[6] A broader high-level body, the Council of Economic and Development Affairs (CEDA), with representation from several Ministries, can provide the locus of coordination among a wider set of policy-makers, if needed.

Islamic and conventional products. SAMA supervises all banks under the Basel framework, using the same reporting requirements and standards. This approach has served Saudi Arabia well so far, and the FSAP consequently based its assessment of banking supervision on the Basel framework—as did the Basel Committee's RCAP and the FSB peer review. Nevertheless, given the unique risk profile of Islamic products, SAMA is working with international partners toward establishing a more refined analytical framework, including stress testing tools, for Islamic products, and should consider applying the Core Principles for Islamic Finance Regulation, recently established by the Islamic Financial Services Board (IFSB), once these are ready for implementation.[7]

20. The legal framework for banking supervision is adequate, but the two fundamental laws are outdated. The Saudi supervisory regime is founded on two laws: the 1957 Charter of the Saudi Arabian Monetary Agency ("Charter") and the 1966 Banking Control Law (BCL). The Charter establishes the objectives and governance structure of SAMA, including the regulation of commercial banks, while the BCL provides most of the legal underpinnings for supervision. This framework has worked well in practice, but it is outdated, contradictory in parts, and certain provisions appear to limit the *de jure* independence of SAMA. For instance:

- Article 3 (d) of the Charter requires banks to submit monthly statements to SAMA but specifies that such statements "should not disclose the private accounts of bank customers." This requirement is contrary to Article 17 of the BCL that specifies that SAMA may request any bank to supply it with any information that it deems necessary. In practice, SAMA implements Article 17 of the BCL and obtains all necessary information.

- Some provisions of the BCL have been made redundant by subsequent legislation, notably those that require SAMA to obtain permission from the Minister of Finance and National Economy to undertake a broad range of supervisory functions, many of them routine.[8]

- The BCL provides that, in exceptional circumstances and with the prior approval of the Council of Ministers, the Minister of Finance and National Economy may exempt any bank from the need to comply with regulation for a limited period—a provision that has never been invoked.

- There is no specific provision granting legal protection to the supervisor or its staff for actions taken in the conduct of their duties, nor is there any provision to reimburse staff of the Authority for any costs incurred in defending any such actions.

These provisions have not, in practice, been an obstacle for SAMA in the discharge of its functions, nor have they compromised its operational independence. Furthermore, no legal action has ever been taken against the supervisor, and this possibility was considered extremely remote by the

[7] See "Ensuring Financial Stability in Countries with Islamic Banking", IMF, February 2017.

[8] Ministerial approval is still required for licensing a bank.

authorities.[9] Nevertheless, these provisions are not fully consistent with the BCP—as also pointed out at the last BCP assessment in 2011—and the legal framework would benefit from an update.

21. Rules and regulations (Circulars) issued by SAMA should be consolidated and made publicly available. Over the years, SAMA has issued over 1,500 Circulars. While all recent Circulars appear to be available on SAMA's website, some of the older ones are not. Also, when older Circulars are superseded by later versions, the original may not be deleted from the website or notated as superseded, thereby causing potential confusion.

22. SAMA is preparing a more comprehensive set of bank licensing criteria. At present, SAMA is using a number of general criteria for evaluating requests for a bank license—including that the proposed bank "add value" to the financial sector—that are not public. SAMA has started developing a more detailed set of licensing criteria and processes. When this is completed, SAMA should make, at a minimum, the guiding principles publicly available to enhance the transparency of the licensing process. In this context, SAMA should reconsider the weight given to the "value added" criterion in relation to the other criteria they use: while the entry of too many banks could eventually lead to over-banking, a more balanced approach to licensing, giving due attention to all aspects of the proposal—including "value added"—might be more appropriate. In this context, SAMA should also establish a formal procedure for identifying the ultimate beneficial owners of banks.

23. SAMA is working to strengthen the monitoring and classification of rescheduled, refinanced, and restructured loans. SAMA has prepared a draft regulation that does not allow banks to base loan classifications on the value of collateral or upgrade, as an "exception", a substandard or doubtful loan, as is currently the case, which should be implemented as soon as possible. It is also preparing a new regulation that would require banks to submit prudential returns on such loans, thus closing a substantial data gap. Lastly, in line with international best practice, SAMA should require banks to classify loans that are restructured because of financial difficulties of the borrower as substandard or doubtful.[10]

24. SAMA has made substantial progress in enhancing risk-based supervision, but there are some areas where further improvement is possible.

- SAMA should refine the determination of its internal risk ratings of supervised institutions by considering not just quantitative but also qualitative elements, and use its risk indicator in the early warning system.

- The link between on-site inspections, risk profile, and supervisory planning should be strengthened. The risk profile—currently updated annually—should be updated after every on-site inspection (or at least quarterly) to reflect high-risk findings and be linked to the supervisory

[9] Moreover, SAMA's Legal Department considers that, in the application of general legal principles in Saudi Arabia, public employees cannot be held responsible for their activities while discharging their duties in good faith.

[10] See "Prudential treatment of problem assets - definitions of non-performing exposures and forbearance", BIS, April 2017 (https://www.bis.org/bcbs/publ/d403.htm)

planning. These goals are already incorporated in SAMA's plans for further enhancing risk-based supervision.

- The documentation relating to loan examination should be enhanced to establish an audit trail.

25. SAMA should issue guidance to banks on mapping the risk profile of Islamic products to the Basel framework. This will facilitate the determination of prudential reporting for Islamic products. In addition, it would help integrate the identification and assessment of specific risks of Islamic products in the on- and off-site supervisory processes.

26. SAMA should enhance cooperation with foreign regulators. At present, it participates in only a few relevant supervisory colleges and does not have a memorandum of understanding (MoU) with any foreign regulator. SAMA should consider establishing greater contact with the home supervisors of foreign banks that carry significant ownership stakes in locally incorporated banks, particularly in the case of one such bank that is systemically important in Saudi Arabia, including through entering into MoUs if necessary. It should also plan to carry out on-site inspections of the material foreign operations of all locally incorporated banks.

27. Saudi Arabia has a good AML/CFT framework and should focus on ensuring its effectiveness. The legal framework is broadly aligned with the Financial Action Task Force (FATF) standard. Significant progress has been made in addressing deficiencies identified in Saudi Arabia's 2010 mutual evaluation report, including with respect to (i) the criminalization of terrorist financing; (ii) customer due diligence (CDD) requirements, and (iii) AML/CFT supervisory guidance and tools. Saudi Arabia is scheduled to be assessed against the FATF standard in 2017, which will be a factor in determining whether it can become a full FATF member. Regardless of the outcome, the authorities should ensure that the AML/CFT system is effective. They should continue efforts to refine the legal framework to meet the revised FATF standard; complete the national risk assessment; further improve their data collection, particularly regarding money laundering convictions or assets confiscated; and ensure that financial institutions effectively implement CDD requirements, particularly with respect to politically exposed persons and the identification of beneficial owners. Ongoing efforts to promote financial inclusion, for example permitting simplified CDD for individuals with lower income, will help mitigate risks associated with informal financial systems.

FINANCIAL SAFETY NETS

28. The authorities have taken several steps to strengthen financial safety nets since the last FSAP. These include (i) a draft resolution law (DRL) for systemic banks, which is going through legislative approval; (ii) a commercial bank-funded Deposit Protection Fund (DPF), which covers up to SAR 200,000 in deposits per individual household; and, (iii) the establishment of the NFSC, which could potentially provide a useful platform for cooperation between SAMA and other government agencies in banking crisis prevention and management.

29. A number of key reforms in this area were still in train or only very recently implemented at the time of the FSAP. Given the absence of an adequate track record, the FSAP was not able to assess implementation. Instead, it focused on reviewing the current state of reforms and the unfinished agenda, and providing recommendations to ensure these reforms are aligned with best international practice.

30. The emerging resolution framework appears broadly consistent with international standards but could be strengthened in some areas.

- *SAMA is the de facto resolution authority for banks and has very broad early intervention powers.* However, the current framework for resolution—based on the Banking Control Law—has not been fully tested, as the last bank failure in Saudi Arabia took place over 30 years ago. Banks perceive SAMA as a supportive institution, with a strong commitment and track record in assisting them in times of financial stress with both conventional and unconventional means.

- *The resolution framework in the DRL is generally consistent with the FSB's Key Attributes for Effective Bank Resolution (KA).* It provides SAMA with wide powers and discretion to implement resolution techniques for systemic banks, including the ability to (i) establish a bridge bank; (ii) conduct a purchase-and-assumption transaction; (iv) bail-in existing debt; (iii) transfer a bank's problem assets to an asset manager; and (iv) sell other assets.

- *However, the DRL should be strengthened in a number of areas*. Most importantly, it should apply to the entire banking sector, not just systemic banks. In addition, to be fully KA-compliant, it should *inter alia* (i) spell out a creditor hierarchy, in order to allow a clear allocation of losses in resolution; (ii) clarify the role of the temporary administrator; (iii) specify triggers and mechanisms for each stage of bank distress from early intervention to resolution to liquidation; and (iv) cover gone concern (insolvency) tools to allow banks to use a specific rather than the general insolvency law under consideration.

31. The recently-established deposit insurance scheme is a key component of the financial safety nets, but its funding should be strengthened and, in the future, it could be given a more active role.

- The Deposit Protection Fund (DPF) became operational in January 2016 with full banking sector membership and operates on a simple pay-box model. It covers household and corporate deposits up to SAR 200,000 (about USD 50,000) per depositor per bank, which is currently about 97 percent of the number of deposits. Deposits in foreign currency and those held in branches of foreign banks are covered but not those of branches of Saudi banks abroad. The DPF is funded by quarterly contributions from member banks, calculated so as to build it up gradually to SAMA's target size of three percent of the total amount of insured deposits over the next ten years. It can also obtain loans and grants but has no explicit back-up financing arrangements.

- *The authorities should strengthen the funding of the DPF, and consider giving it a more active role in bank resolution*. When fully built up, the DPF would cover deposits of the six smallest banks.

To complement this funding source, especially during the relatively long build-up period, the authorities should establish an explicit backup credit line from the government or SAMA (with a government guarantee) and consider charging banks premia in accordance with their risk profile. In the future, once the DPF is well established, the authorities should also consider giving it a more active role in resolution. Using deposit insurance funds to facilitate deposit transfers from a failing bank could lower the costs of resolution, compared with simply paying out deposits.

32. There is a need for a high-level inter-agency coordinating body with a responsibility to assess broader financial sector risks and a mandate for system-wide contingency planning. The NFSC would be a natural platform for systemic crisis preparedness and management work and for coordinating interventions and information-sharing in the event of a crisis; but establishing a separate, high-level crisis preparedness and management committee could be also considered. This body would provide an appropriate setting to discuss specific crisis management policies, including the provision of fiscal resources and government guarantees for solvency support of systemic banks.

33. Although the Saudi banking system is domestically-oriented, it would be advisable to strengthen cross-border coordination arrangements in resolution. While SAMA does not have any formal agreements with foreign resolution authorities as yet, it is making efforts to monitor and regulate branches of foreign banks, holding them to the same regulatory requirements as domestic banks, since their deposits are covered by the DPF. In addition, the DRL provides SAMA with formal resolution powers over foreign branches. Nonetheless, it would be advisable for SAMA to enter into MoUs with foreign resolution authorities and, where necessary, supervisors and other relevant authorities, in order to establish a clear understanding of respective rights and obligations. In the medium term, SAMA should also consider preparing a guidance note for handling potential failures of foreign banks.

34. There are merits in establishing a formal ELA facility. Currently, there is no formal ELA framework in Saudi Arabia. Banks expect SAMA to provide liquidity whenever there are significant liquidity pressures in the system or in individual banks, and SAMA has always been able to do so. In the context of the revamp of the liquidity management framework, SAMA should consider formalizing these arrangements. Access to an ELA lending facility should only be provided temporarily to solvent banks on a collateralized basis and at a penalty rate when they are unable to obtain liquidity from the interbank market or have exhausted all high-quality collateral needed for access to SAMA's standard liquidity windows. The authorities should consider creating a collateral registry that would define a broad range of assets to be used for ELA.

DEVELOPMENTAL ISSUES

35. **Consistent with "Vision 2030" and the NTP, SME finance is a key developmental focus for the authorities.** SMEs are estimated to account for about 90 percent of registered businesses in Saudi Arabia and provide 25 percent of total employment, but account for only about two percent of bank lending. SMEs face challenges in obtaining access to financing due to limited data on their financial condition, as well as a shortage of collateral. SMEs are highly dependent on banks for financing and need a variety of additional services, including cash management, payments, insurance and often management expertise. Banks expect SAMA to provide uncollateralized liquidity.

36. **While the authorities have taken several steps to foster SME development and expand financing options, there is scope for further work in this area.** The authorities have already created a Small and Medium Enterprise Authority (SMEA) to help coordinate a variety of government support initiatives; a "fund of funds", with initial capital of SAR 4 billion to provide start up and equity financing for new firms; and Kafalah, a government scheme, that has issued credit guarantees of SAR 26.5 billion on banks' loans to SMEs. The SMEA should now develop a comprehensive strategy for SMEs, which should aim to strengthen data collection on the sector, increase banks' product and service offerings, and expand non-bank and capital markets financing options.

37. **Government-owned specialized credit institutions (SCIs) would benefit from improvements in governance and transparency.** The financial condition and performance of SCIs are not very transparent, and three of the five SCIs (REDF, ADF, and SDB) reportedly face significant cost pressures. The authorities should tighten oversight over the SCIs, adopt IFRS accounting, ensure regular reporting on results achieved, and build capacity.

38. **A key impediment to effective credit intermediation from banks and non-banks relates to the legal framework governing the rights of creditors and debtors.** While the authorities can point to several recent achievements, including passage of laws relating to the liquidation of companies, judicial enforcement, arbitration, and ongoing work on establishing a specialized commercial court, there is a need to update the framework for creditors and debtors' rights. The authorities should create a unified legal framework for secured transactions, including a centralized registry for collateral consisting of fixed (real estate) and movable assets, and establish mechanisms for expedited out-of-court insolvency procedures.

39. **Credit demand could also be supported by further strengthening consumer protection in the provision of financial services.** A Consumer Protection Department (CPD) was recently established within SAMA to focus on resolution of financial consumer complaints, development of regulation on market conduct and financial inclusion. Looking ahead, the authorities should take steps to strengthen disclosure of information to potential consumers; apply a general prohibition against unfair contractual terms in consumer agreements; ensure that supervision of compliance with consumer protection laws is transferred to the CPD from SAMA's control departments for

banking and finance companies; and finalize a national financial literacy strategy that was initiated by the government in 2013.

40. There is scope for strengthening the framework for management of public and private debt. The authorities should adopt a national debt management law to strengthen the operational mandate and institutional framework of the government's debt management office; define a government debt management strategy to provide clarity to the market and reduce medium-term costs of issuance; strengthen cash and liability management operations; streamline the process for domestic issuance of corporate debt; develop a collateral framework for secured interbank transactions, including a standard repo contract and related accounting regulation; and seek to develop a diversified investor base.

Table 2. Saudi Arabia: Selected Economic Indicators, 2013-2018

				Prel.	Proj.	
	2013	2014	2015	2016	2017	2018
	(Percent change; unless otherwise indicated)					
National income and prices						
Crude oil production (million of barrels per day) 1/	9.6	9.7	10.2	10.5	10.0	10.1
Average oil export price (U.S. dollars per barrel) 2/	105.4	95.7	50.4	41.5	50.3	50.4
Nominal GDP (SAR billions)	2,800	2,836	2,454	2,424	2,596	2,713
Nominal GDP (US$ billions)	747	756	654	646	692	723
Nominal non-oil GDP (SAR billions)	1,488	1,615	1,768	1,797	1,859	1,966
Real GDP	2.7	3.7	4.1	1.7	0.1	1.1
Oil	-1.6	2.1	5.3	3.8	-1.9	0.9
Non-oil	6.4	4.9	3.2	0.2	1.7	1.3
Consumer price index (avg)	3.5	2.7	2.2	3.5	1.7	5.0
External sector						
Exports f.o.b.	-3.2	-8.9	-40.6	-10.4	14.2	0.7
Oil	-4.6	-11.6	-46.2	-11.0	16.4	0.5
Non-oil	6.0	7.2	-13.0	-8.8	7.7	1.2
Imports f.o.b.	8.1	3.3	0.5	-22.2	3.0	2.1
Current account balance (percent of GDP)	18.1	9.8	-8.7	-3.9	0.2	0.5
Terms of trade	-0.5	-8.3	-44.4	-11.8	15.2	-1.4
Money and credit						
Net foreign assets	10.2	1.8	-12.7	-15.2	-10.3	-6.5
Credit to government (net)	5.6	-7.6	-29.3	-41.1	-28.0	-23.3
Credit to private sector	12.5	11.8	9.2	2.4	1.4	1.3
Credit to state enterprises	11.5	3.8	-15.3	26.3	0.0	0.0
Money and quasi-money (M3)	10.9	11.9	2.5	0.8	1.7	1.6
3-month Interbank rate (percent p.a.) 3/	0.95	0.94	0.87	2.04	1.75	…
	(Percent of GDP)					
Central government finances						
Revenue	41.3	36.8	25.0	21.4	25.0	27.9
Of which: oil	37.0	32.2	18.2	12.7	17.5	16.7
Expenditure	35.5	40.2	40.7	38.6	34.3	34.5
Net lending (+)/borrowing (-)	5.8	-3.4	-15.8	-17.2	-9.3	-6.6
Excluding oil revenue	-31.2	-35.6	-34.0	-29.9	-26.8	-23.3
Non-oil primary balance/non-oil GDP	-59.4	-63.6	-49.8	-44.7	-39.6	-34.0
Government deposits at SAMA	53.0	48.6	41.7	30.1	23.3	20.0
Memorandum items:						
SAMA's total net foreign assets (US$ billions)	716.7	724.3	608.9	528.6	472.6	442.0
In months of imports of goods and services 3/	33.2	35.1	37.5	31.7	28.2	26.1
Real effective exchange rate (2010=100, end of period) 4/	102.7	112.3	121.8	127.6	123.3	…
Average exchange rate Saudi riyal/U.S. dollar 4/	3.75	3.75	3.75	3.75	3.75	…

Sources: Saudi Arabian authorities; and IMF staff estimates and projections.

1/ Includes production from the Neutral Zone.

2/ Includes refined products.

3/ Next 12 months.

4/ For 2017, data is latest available.

Table 3. Saudi Arabia: Structure of Financial System

	Number	Total assets			
		billions of riyals	billions of US dollars	percent of total	percent of GDP
2010					
Commercial banks	21	1,411	376	62	71
Domestic	12	1,379	368	60	70
Foreign	9	32	9	1	2
Pension funds	2	368	98	16	19
Specialized credit institutions	5	381	101	17	19
Investment funds 1/	243	95	25	4	5
Insurance companies	35	29	8	1	1
Finance companies	0	0	0	0	0
Total	306	2284	609	100	116
2016					
Commercial banks	24	2,280	608	51	95
Domestic	12	2,214	590	50	92
Foreign	12	66	18	1	3
Pension funds	2	1,169	312	26	49
Specialized credit institutions	5	822	219	18	34
Investment funds 1/	275	88	23	2	4
Insurance companies	34	57	15	1	2
Finance companies	34	39	10	1	2
Total	374	4454	1188	100	186

Sources: SAMA; and IMF, World Economic Outlook database.

1/ Investment funds may be managing some assets of other institutions.

Table 4. Saudi Arabia: Financial Soundness Indicators (FSI)
(In percent)

	2011	2012	2013	2014	2015	2016
Capital Adequacy						
Regulatory capital to risk-weighted assets	17.6	18.2	17.9	17.9	18.1	19.5
Regulatory tier 1 capital to risk-weighted assets	15.2	15.7	16.5	16.2	16.2	17.5
Asset quality						
Non-performing loans to total gross loans	2.2	1.7	1.3	1.1	1.2	1.4
Total provisions to gross NPLs	132.8	145.1	157.4	182.9	164.4	177.0
Total provisions to gross loans	3.1	2.9	2.2	2.1	2.1	2.5
Sectoral composition of loans						
Property and construction	8.1	7.5	6.8	6.7	7.8	7.5
Manufacturing	13.0	12.6	12.5	12.7	12.7	12.6
Profitability						
Net income (yoy percent change)	...	11.2	4.4	12.5	5.3	-6.2
Return on assets (ROA)	2.1	2.1	2.0	2.0	2.0	1.8
Return on equity (ROE)	15.0	15.2	14.6	15.0	14.5	12.6
Non-interest expenses to gross income	46.9	47.0	47.7	45.5	37.1	38.0
Lending rate spread to deposit rate	4.0	3.8	3.7	3.5	3.4	3.5
Liquidity						
Liquid assets to short term liabilities	37.0	36.4	33.2	33.6	27.3	31.8
Loans to deposits	77.8	79.3	80.1	79.7	85.5	86.9
LCR	...	...	...	...	193.0	199.3
NSFR	...	...	...	...	123.0	125.0
Foreign exchange exposure						
Foreign currency loans (percent of total)	12.4	11.7	10.6	9.9	8.9	8.2
Foreign currency liabilities (percent of total)	20.0	18.1	17.2	14.6	15.1	12.2
Net open foreign exchange position to capital	8.0	1.9	6.4	3.7	4.0	2.6
Other						
Large exposures to capital	140.4	118.2	97.1	88.5	99.8	48.2
Stock market						
Market capitalization (percent of total GDP)	50.5	50.8	62.6	64.0	65.1	70.3
Overall price index (yoy percent change)	-3.1	6.0	25.5	-2.4	-17.1	4.3
Bank price index (yoy percent change)	-12.8	0.6	22.0	2.5	-14.9	-26.4

Sources: Bloomberg; Financial Soundness Indicators (FSI) database; and Haver.

Table 5. Saudi Arabia: Status of Key Recommendations of the 2011 FSAP	
Recommendation	**Progress**
Banks and Securities Regulation	
Update BCL and remove need for ministerial approval for certain SAMA decisions.	**Not implemented.** The authorities consider that the existing legal framework provides an adequate basis for effective supervision.
Restrict each single large exposure of a bank to less than 50 percent of its capital.	**Implemented**
Strengthen the Capital Market Authority (CMA)'s regulatory transparency by fully disclosing all enforcement actions, interpretation, and funding rules.	**In Progress**
Systemic Stability	
Introduce a formal liquidity forecasting framework.	**In Progress**
Enhance data on cross-border financial activities of banks and corporates.	**Partially implemented**
Maintain a stable stock of government securities and regular issues to help anchor a robust yield curve.	**Implemented**
Introduce a payment system law.	**Implemented**
Conduct stress tests with a wide range of shocks, including for liquidity, on a regular basis and incorporate lessons into supervision.	**Implemented**
Establish a formal EWS for the banking sector.	**Implemented**
Develop a formal and transparent macroprudential policy framework, drawing on work in international fora.	**Partially implemented**
Strengthen the legal framework for bank resolution.	**In Progress**

Table 6. Saudi Arabia: Financial Sector Policy Advice in Recent Article IV Missions

Date	Policy Recommendations
2012	• Strengthen macroprudential policies and enhance liquidity management instruments to help contain financial sector systemic risk and inflationary pressures. • Prioritize work on appropriate regulatory norms for the housing market to ensure coverage all entities and products by regulation and supervision. • Adopt a comprehensive CFT Law while pursuing AML implementation efforts. • Make further progress in implementing the 2011 FSAP Update recommendations.
2013	• Tighten macroprudential policies in the context of strong non-oil sector growth. • Develop a reliable house price index to monitor developments in the housing market. • Adopt a formal, clear, and transparent macro-prudential framework.
2014	• Exercise vigilance regarding rising equity prices and consider specific measures, such as an increase in the required reserve ratio, to limit lending (for equity investment. • Introduce a formal liquidity forecasting framework to help SAMA manage liquidity proactively and strengthen the transmission of monetary policy signals. • Introduce a transparent, formal macroprudential framework to signal SAMA's assessment of risks, define coordination across regulators, and link macroprudential policies to overall macroeconomic and financial developments. • Publish SAMA's EWS analysis, including the housing price index (under development). • Develop domestic debt capital markets and enable development of a yield curve.
2015	• Establish a macroprudential policy board with SAMA, the Capital Market Authority (CMA) and the Ministry Finance to strengthen policy coordination and implementation within and across institutions. • Broaden the coverage of macroprudential policies to nonbanks and foreign branches of banks to contain potential leakages. • Enhance SAMA's use of countercyclical macroprudential policies to help reduce the buildup of systemic risks in the financial sector. Consider countercyclical caps on certain sectoral exposures.
2016	• Strengthen liquidity forecasting and liquidity management operations at SAMA given the tightening of liquidity conditions. • Operationalize the NFSC to formalize ongoing coordination of macroprudential policies between SAMA, the CMA, and the MOF. • Use countercyclical macroprudential policies to manage systemic risks.

Table 7. Saudi Arabia: Risk Assessment Matrix

Nature/Source of Main Threats	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years (high, medium, or low)	Expected Impact on Financial Stability if Threat is Realized (high, medium, or low)
1. Persistently low energy prices.	**Low/Medium** • Continuation of excess supply of oil in global markets and weak demand. • The impact of slower global growth would be transmitted through a prolonged period of low energy prices.	**Medium/High** • Sustained fiscal consolidation leading to a reduction in household income and government subsidies, increasing NPLs to banks. • Liquidity conditions tighten further, reducing bank funding and credit availability, and lifting the cost of capital. • Profit margins of companies could get squeezed, weakening debt-servicing ability, and increasing NPLs to banks.
2. Tighter and more volatile global or regional financial conditions from a sharp rise in risk premia with flight to safety.	**Medium** • Confidence shock leading to increased market volatility, potentially withdrawal of banks' deposits by customers and reversion of capital inflows. • Sharp declines in asset prices.	**Medium/Low** • Interbank credit lines are reduced or curtailed. • Tighter liquidity conditions. • Liquidity squeeze for banks. • Mitigating factors include conservative collateral valuation (equities and real estate) and relatively low LTVs.
3. Sustained dollar strength	**High** • Stronger riyal given the peg • Tighter liquidity • Higher capital market volatility	**Low** • Minimal impact on growth or current account given the structure of the domestic economy. • Banks largely unaffected as net open foreign currency positions are in dollars and capital and provisions buffers are strong.

Table 8. Saudi Arabia: Banking Sector Macroprudential Tools

Tool	Availability	Additional Information
Broad-based credit risk		
Countercyclical and conservation capital buffer	√	0 percent in 2016. Range is 0-2.5 percent based on credit-to-GDP gap under BCBS methodology.
Leverage ratio	√	Deposits/ (capital + reserves) <15 times
Dynamic/general provisioning requirement	√	General: 1 percent of total loans Specific: Minimum of 100 percent of NPLs
Limit on growth of overall credit	×	
Credit risk from the household sector		
Sectoral capital requirement	×	
Limit on LTV ratio	√	70 percent for residential real estate loans (85 percent for first-time home buyers since December 2016)
Limit on DSTI ratio	√	Monthly repayments ≤ 33 percent of salary for employed persons, and 25 percent for retirees
Credit risk from the corporate sector		
Sectoral capital requirement	×	
Limit on growth of certain credit	×	
Limit on debt-service coverage ratio	×	
Counterparty Exposure	√	No more than 21 percent of a bank's eligible capital (for single counterparty or connected group) as of January 2017. To be reduced by 2 percentage points each year from 23 percent in January 2016 to 15 percent by January 2019.
Liquidity risk		
LCR	√	100 percent
NSFR	√	100 percent
LTD	√	90 percent
Reserve requirement	√	7 percent for demand deposits 4 percent for time and saving deposits

Sources: SAMA; and FSB (2015).

Appendix I. Top-Down Stress Test Matrix (STeM) for the Banking Sector: Solvency and Liquidity Risks

Domain		Assumptions
		SOLVENCY RISK
1. Institutional Perimeter	Institutions included	• All 12 domestic banks.
	Market share	• 97 percent of banking sector assets.
	Data and baseline date	• Supervisory data. • Public data. • December 2016
2. Channels of Risk Propagation	Methodology	• IMF balance sheet stress test framework (customized for the Saudi Arabia FSAP).
	Satellite Models for Macro-Financial linkages	• IMF's econometric models for credit losses and expert judgement. IMF balance sheet template for projections of other variables.
	Stress test horizon	• 3 years (12 quarters).
3. Tail shocks	Macroeconomic variables	• Oil prices, nonoil private sector GDP growth, and equity prices.
	Scenario analysis	• Macroeconomic scenarios characterized by oil prices. • Two scenarios: baseline and downside scenarios. • Baseline: Oil prices and GDP growth from WEO baseline. Equity prices based on expert judgement. • Downside: Two standard deviation shock to oil prices consistent with WEO forecast errors was mapped to other variables guided by VAR-based historical relationship.
	Sensitivity analysis	• Single-factor shocks: credit concentration risk and interest rate risk.
4. Risks and Buffers	Risks/factors assessed (How each element is derived, assumptions).	• Credit losses on the loan book. • Losses on bonds and other debt instruments (interest risk). • Funding costs. • Market risk.

	Behavioral adjustments	• Quasi-static allocation balance sheet assumptions embedded in IMF balance sheet template • No management actions considered. • Other net income items, dividends, and taxes based on macroeconomic scenarios and pre-determined rules.
5. Regulatory and Market-Based Standards and Parameters	Calibration of risk parameters	• Changes in loan quality and provisions based on satellite models. • Estimation of expected gains/losses on government and corporate bond holdings derived in IMF balance sheet template.
	Regulatory, accounting market-based standards.	• Minimum capital requirements based on (implicit) regulatory minimum for total, Tier 1, Core Tier 1 CARs. • Basel II/standardized approach.
6. Reporting Format for Results	Output presentation	• System-wide CAR, capital shortfall. • Pass or fail (number of banks); recapitalization needs as percentage of GDP. • Impact of different result drivers, including profit components, losses due to realization of different risk factors.
Domain		Assumptions
	LIQUIDITY RISK	
1. Institutional Perimeter	Institutions included	• All 12 domestic banks
	Market share	• 97 percent of banking sector assets.
	Data and baseline data	• Supervisory data. • Public data.
2. Channels of Risk Propagation	Methodology	• Basel III LCR-type analyses. • Maturity mismatch analyses by maturity buckets.
3. Risk and Buffers	Risks	• Funding liquidity risk • Market liquidity risk
	Buffers	• Counterbalancing capacity.
4. Tail shocks	Size of the shock	• LCR analyses: Runoff rates were raised by 20 percent. Other parameter values follow Basel III guidelines. • Maturity mismatch analyses calibrated based on historical events and expert judgement.
5. Regulatory and Market-Based Standards and Parameters	Regulatory standards	• LCR proxy assessed against 80 percent (effective in January 2017) and 100 percent (effective in January 2019).
6. Reporting Format for Results	Output presentation	• Pass rate and liquidity shortfall (if applicable).