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SAUDI ARABIA

FINANCIAL SECTOR ASSESSMENT PROGRAM

FINANCIAL SYSTEM STABILITY ASSESSMENT

September 2024

This paper on Saudi Arabia was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in July 2024.

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FINANCIAL SYSTEM STABILITY ASSESSMENT

July 17, 2024

KEY ISSUES

Context: The FSAP took place against the backdrop of a robust economy driven by an ambitious state-led transformation agenda to accelerate Saudi Arabia's economic diversification (Vision 2030). The Kingdom's sovereign wealth fund plays a key role in implementing and funding the economic transformation. The government's initiative to promote homeownership and new economic sectors generated a surge in construction and credit. Managed by the National Development Fund, twelve state-owned development funds are undergoing major reforms, increasing their linkages with banks. At over 75 percent of total assets, the share of Islamic products in Saudi banks is one of the largest in the world.

Findings: At present, financial sector risks from the rapid economic transformation appear contained. Banks are well-capitalized, profitable and appear resilient to severe macroeconomic shocks. Banks' capacity to manage liquidity stress scenarios is generally good, although funding concentration is sizable. The authorities have made commendable efforts to mitigate risks from the rapidly growing credit and real estate market, but significant data gaps create challenges for systemic risk monitoring.

Policies: The time is right to strengthen systemic risk monitoring and the legal, institutional, and operational frameworks in support of financial stability going forward. SAMA should establish a monitoring framework for the financial system's exposures to large construction and infrastructure projects and should continue to improve data collection and interconnectedness analysis consistent with the G20 data gaps initiative. There is room for enhancing the Saudi Central Bank's (SAMA) supervisory powers, and strengthening its operational independence, accountability framework, transparency, and legal protection. A bank-specific liquidation framework should be established, and the new resolution law for systemic financial institutions amended to explicitly cover all banks and empower SAMA to order banks to remove barriers to resolvability. Financial system resilience would benefit from the tightening of macroprudential tools.

Approved By
May Khamis (MCM) and Zeine Zeidane (MCD)
Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) missions that visited Saudi Arabia during November–December 2023, January–February 2024, and February–March 2024. The FSAP findings were discussed with the authorities during the Article IV consultation mission in May 2024.

- The team was led by Jihad Alwazir (Mission Chief, IMF), Harish Natarajan (Mission Chief World Bank, WB), Edda Rós Karlsdóttir (Deputy Mission Chief, IMF) and Andrej Popovic (Deputy Mission Chief, WB). The mission included Anna Belianska, Zhuohui Chen, Stephane Couderc, Paavo Miettinen, Danilo Palermo, Yuan Monica Gao Rollinson, Mariano Spector, Arz Murr (all IMF), Toby Fiennes (IMF External Expert), Damodaran Krishnamurti, Uzma Khalil, Francois Lesage, Rachel Chi Kiu Mok, Marco Nicoli, Andrius Skarnulis, Kiyotaka Tanaka, Simon Walley (all WB), Noritaka Akamatsu, Michael Fuchs, and Prasanna Seshan (World Bank external experts). Zoltan Jakab (MCM) contributed to the modelling of the scenarios for systemic risk analysis, and Abdullah Haron (MCM) to the assessment of banking supervision and regulation. Julie Vaselopulos, Evelyn Schimpf, and Magally Bernal provided administrative support to the IMF team.

- The mission met H.E. Mohammed Al-Jadaan, Minister of Finance; H.E. Ayman Al-Sayari, Governor of SAMA; H.E. Mohammed bin Abdullah El-Kuwaiz, Chairman of the Capital Markets Authority (CMA); and H.E. Stephen Groff, Governor of the National Development Fund (NDF). The mission also met with senior officials at the Ministry of Finance (MoF), SAMA, CMA, NDF and its affiliated funds, Public Investment Fund (PIF), Saudi Business Center (SBC), Saudi Pension Fund (GOSI), Saudi Exchange (Tadawul Group), Ministry of Municipal and Rural Affairs (MOMRAH), Ministry of Justice (MoJ), Ministry of Energy, Ministry of Investment, Ministry of Environment, Water and Agriculture, National Housing Company (NHC), Insurance Authority (IA), General Authority of Statistics (GASTAT), National Debt Management Center (NDMC), banks and other financial institutions, industry associations, and other public and private sector organizations.

- 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 Jihad Alwazir and Edda Rós Karlsdóttir with contributions from IMF and World Bank FSAP team members.

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Glossary

Agg	Aggregate
AML/CFT	Anti-Money Laundering/Countering the Financing of Terrorism
ARA	Assessing Reserve Adequacy
BCBS	Basel Committee on Banking Supervision
BCL	Banking Control Law
BCP	Basel Core Principles
BIS	Bank for International Settlements
CCyB	Counter Cyclical Capital Buffer
CET1	Common Equity Tier 1
CiC	Currency in Circulation
CMA	Capital Market Authority
CPIFR	Core Principles for Islamic Financial Regulations
DGI 2	Data Gap Initiative, Second Phase
DSIB	Domestic Systemically Important Bank
DSTI	Debt Service-to-Income
EBIT	Earnings Before Interest and Taxes
ELA	Emergency Liquidity Assistance
FMI	Financial Market Infrastructure
FOMC	Federal Open Market Committee
FSI	Financial Soundness Indicators
FSR	Financial Stability Report
G20	Group of Twenty (intergovernmental forum)
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GOSI	Organization for Social Insurance
Gov	Government
ICR	Interest Coverage Ratio
IFSB	Islamic Financial Services Board
IRRBB	Interest Rate Risk in the Banking Book
KSA	Kingdom of Saudi Arabia
LCR	Liquidity Coverage Ratio
LIBOR	London Interbank Offered Rate
LTV	Loan to Value
MBS	Mortgage-Backed Securities
MoF	Ministry of Finance
MOMRAH	Ministry of Municipal and Rural Affairs
MORT	Mortgage
MoU	Memorandum of Understanding
MSCI	Morgan Stanley Capital International
NBFI	Nonbank Financial Institution
NDF	National Development Fund

NFA	Net Foreign Assets
NFC	Nonfinancial Company
NFCI	Net Fee and Commission Income
NFSC	National Financial Stability Committee
NII	Net Interest Income
NIS	National Investment Strategy
NLL	Net Loan Loss
NPL	Nonperforming Loans
NSFR	Net Stable Funding Ratio
NTI	Net Trading Income
OMO	Open Market Operations
PD	Probability of Default/Default Rates
PIF	Public Investment Fund
PSIA	Profit-Sharing Investment Accounts
REDF	Real Estate Development Fund
REGA	Real Estate General Authority
RICS	The Royal Institute of Chartered Surveyors
SAIBOR	Saudi Arabia Interbank Offered Rate
SAMA	Saudi Central Bank
SBC	Saudi Business Center
SC	Sharī`ah Compliant
SCBL	Saudi Central Bank Law
SGF	Sharī`ah Governance Framework
SIFI	Systemically Important Financial Institutions
SRC	Saudi Refinancing Company
UAE	United Arab Emirates
WEO	World Economic Outlook

EXECUTIVE SUMMARY

The Saudi financial sector regulatory architecture is well structured with coordination arrangements in place to support financial stability. The financial system has experienced rapid credit growth with soaring real estate activity supported by government incentives and driven by state-led transformation under Vision 2030. The banking sector benefits from the Saudi Central Bank's (SAMA) prudent oversight, the Capital Market Authority (CMA) is leading initiatives aimed at furthering capital market development; and the Ministry of Finance (MOF), SAMA, and the CMA collaborate on the National Financial Stability Committee (NFSC) and coordinate the transformation agenda, along with other stakeholders, through the Financial Sector Development Program. Ongoing reforms championed by the National Development Fund (NDF), not currently subject to independent prudential supervision, are expected to improve efficiency and effectiveness of development funds.

At present, financial sector risks from the rapid economic transformation appear contained, and the time is right to improve institutional, legal, and operational frameworks in support of financial stability going forward. Continued implementation of the ambitious National Investment Strategy (NIS) under Vision 2030 and further rapid credit growth could lead to the build-up of macrofinancial risks and vulnerabilities. Coupled with the risks associated with Saudi Arabia's exposure to global spillovers, commodity price volatility, and geopolitical uncertainties, these risks warrant continued vigilance. Improved systemic risk monitoring facilitates timely detection and understanding of emerging risks, which—together with strong institutions and legal, and operational frameworks—support effective policymaking for risk mitigation.

Banks are well-capitalized, profitable and appear resilient to severe macroeconomic shocks. Solvency stress tests and sensitivity analysis indicate resilience to a severe adverse economic scenario, and to additional shocks to real estate prices and sectoral loan portfolio default rates. Increased cost of funding–e.g., due to continued shift from nonremunerated to remunerated deposits—on top of the adverse scenario—would lead three non-systemic banks to fall below the hurdle rate (by only 0.15 percent of GDP on aggregate). Banks generally have enough counterbalancing capacity to manage liquidity shocks, but significant funding concentration requires attention. SAMA is updating its stress testing approach and should complement it with improved data collection and monitoring of large funding and credit exposures, including exposures to large construction and infrastructure (mega/giga) projects. To help assess default rates during Saudi Arabia's rapid economic transformation, SAMA should also consider incorporating micro data for households and nonfinancial corporates (NFCs) into its credit risk modelling.

Systemic risk monitoring needs strengthening, and data gaps should be closed. To assess transmission channels from potential shocks and spot emerging vulnerabilities, SAMA should conduct regular interconnectedness analysis and assess distributional information on households and NFCs. Data gaps identified by the G20 Data Gaps Initiative (DGI) need to be addressed to support meaningful analysis. As several government-affiliated agencies already collect and process useful data, this work could be facilitated with improved arrangements for information exchange. Ongoing work to overhaul the official real estate price index methodology should also be expedited,

including to support the construction and publication of affordability indicators, which are useful tools for gauging potential overheating in the real estate markets.

Saudi Arabia has a comprehensive suite of macroprudential tools at its disposal, and their tightening would benefit financial system resilience. Considering banks' current strong capital and profitability, this is an opportune time for SAMA to establish a releasable capital buffer by changing its Countercyclical Capital Buffers (CCyB) framework from "0-neutral" to "positive-neutral." This would provide the authorities with a tool to release capital when faced with a crisis that would otherwise stifle banks' ability to continue financing the real economy. Prudential lending standards should also be revised to safeguard household resilience, especially if credit growth picks up again.

Much progress has been achieved in strengthening Saudi Arabia's banking regulatory and supervisory framework in recent years, but further work is needed—including to enhance SAMA's independence. Recent updates include the Saudi Central Bank Law (SCBL), the Anti-Money Laundering Law (AMLL), and regulations on Basel III capital and liquidity calculations, and addressing financial fraud and cyber risks. A new draft Banking Control Law (BCL) presents an opportunity to further align the framework with international standards. There is room for enhancing SAMA's powers, strengthening its operational independence, accountability framework, transparency, and legal protection. Supervision policy and procedures should be established or revised to make comprehensive the process of licensing and other applications from banks seeking SAMA's approval. SAMA's powers should be extended to initiate corrective and sanctioning actions at an early stage, based on supervisory judgement. SAMA's well-established risk-based approach would benefit from a review of its scope, including to ensure adequate supervision of banking groups on a solo and consolidated basis, and a move to more qualitative onsite assessments.

**The FSAP found SAMA's regulation and supervision of Sharī`ah governance to be consistent with the Core Principles for Islamic Financial Regulations (CPIFR).** Sharī`ah Compliance—the most critical factor in sustaining the trust of Islamic banking customers—is ensured by a governance framework based on a decentralized Sharī`ah Committee model. SAMA has recently updated its regulatory framework for Islamic banking and should continue efforts to ensure their effective implementation.

The authorities have made significant advancements on systemic liquidity management. Stronger fiscal discipline has weakened the link between excess liquidity and oil prices; improved regulatory framework for capital markets has broadened banks' funding options; Basel III LCR/NSFR regulations are implemented; and SAMA's liquidity management instruments and forecasting framework have been improved. Further enhancement should focus on liquidity forecasting and the collateral framework for open market operations (OMO). SAMA should adopt and publish an emergency liquidity assistance (ELA) regulation outlining all requirements and parameters of ELA and prepare internal ELA procedures covering collateral policies and internal organization.

Good progress has been made in developing the legal framework for bank resolution and further reforms should be pursued to ensure its effective implementation. While the 2020 Law on Systemically Important Financial Institutions (SIFIL) introduces a resolution framework with most

elements of an effective resolution regime, its effectiveness will depend on establishing a bank-specific liquidation framework, providing forward-looking resolution triggers, and empowering SAMA to order banks to remove barriers to resolvability. The law should also be amended to explicitly cover all banks and provide sound legal basis for the Deposit Protection Fund (DPF).

SAMA's Anti Money Laundering and Counter Financing of Terrorism (AML/CFT) supervision is risk sensitive. Maintaining efforts to develop the assessment of ML/TF risks, conducting thematic inspections on key due diligence measures, and levying sanctions for non-compliance can increase the effectiveness of AML/CFT supervision.

The World Bank's developmental FSAP module included six workstreams: (i) the Role of the State**,** (ii) Micro, Small and Medium Size Enterprise (MSME) Finance; (iii) Long Term Finance; (iv) Housing Finance; (v) Payment Systems; and (vi) Climate and Environmental Risk and Opportunities (CERO).

Table 1. Saudi Arabia: FSAP Key Recommendations

Recommendations	Agency	Timing[1]
Systemic Risk Analysis and Monitoring[2]		
1. Continue efforts to close G-20 DGI-2 data gaps, including on sectoral accounts; International Investment Position; and international banking statistics (DGI-2 recommendations 8–10).	SAMA, CMA, MoF, GASTAT	ST
2. Strengthen data collection and reinforce data sharing among agencies for the household and corporate sector; consider incorporating a structural "micro-to-macro approach" into the stress testing framework, particularly for credit risk modeling.	SAMA, CMA, MoF, GASTAT	ST
3. Establish a monitoring framework for the financial system's exposures to large construction and infrastructure (e.g., mega/giga) projects.	SAMA, Gov	I – ST
4. Incorporate contagion/interconnectedness analysis and micro data into the stress testing and risk monitoring frameworks; publish key results in the FSR.	SAMA	ST
5. Improve the scope and quality of publicly available data for real estate market, and real estate prices, and publish affordability indicators (e.g., price to income, price to rent ratios).	SAMA, CMA, MoF, GASTAT	ST
6. Regularly collect and monitor household debt statistics (e.g., DSTI, debt-to-disposable income, debt to GDP) and monitor household characteristics and debt distribution.	SAMA, GASTAT	ST
Macroprudential Policy[3]		
7. Consider establishing independent prudential supervision for NDF funds.	Gov	ST
8. Implement a releasable capital buffer in the form of a positive neutral CCyB.	SAMA	ST
9. Re-evaluate the DSTI and LTV limits.	SAMA	ST
Financial Supervision and Regulation—BCP Assessment		
10. Amend the BCL and SCBL reflecting FSAP advice (e.g., SAMA independence and accountability; legal protection for SAMA staff, former staff, and agents'; SAMA's powers to conduct effective banking supervision).	MoF, SAMA	ST
11. Revise prudential regulations, and supervisory approach, techniques, tools, and reporting to address observed gaps, and to effectively conduct regulation and supervision at the levels of the solo bank, the consolidated bank, and each bank within groups.	SAMA	ST
12. Establish or revise supervision policy, manuals, and procedures to make comprehensive the process of licensing and other applications from banks seeking SAMA approval, and to ensure that supervisors engage bilaterally and more actively with banks' board members, external auditors, and other relevant domestic and foreign regulators, supervisors, and resolution authorities.	SAMA	ST
Financial Regulation and Supervision—CPIFR Assessment		
13. Ensure effective implementation of recently issued regulations from the perspectives of both SAMA and Islamic banks.	SAMA	ST

Table 1. Saudi Arabia: FSAP Key Recommendations (Concluded)

Recommendations	Agency	Timing[1]
14. Implement guidance for managing liquidity risk separately for Islamic Windows.	SAMA	ST
15. Enhance Pillar 3 disclosures by implementing IFSB-22 for Islamic banking and Islamic Windows.	SAMA	MT
Financial Safety Nets and Crisis Management		
16. Amend the Law on SIFIs reflecting FSAP advice (e.g., scope, triggers, resolvability); establish a bank-specific liquidation framework and a legal framework for deposit insurance.	SAMA, Gov	ST
17. Finalize and enact implementing regulations, reflecting FSAP advice (including to allow for ex-post designation of SIFIs).	SAMA, MoF	I
18. Ensure adequate resources and independence of SAMA's resolution function.	SAMA	I
Systemic Liquidity Management and Emergency Liquidity Assistance		
19. Continue to strengthen liquidity management and forecasting framework.	SAMA	ST
20. Enhance the collateral framework by introducing maturity-based haircuts (I); gradually transitioning to market valuation (ST); considering making high-quality private debt securities eligible for OMO in crisis times (MT).	SAMA	I-MT
21. Adopt, and publish an ELA regulation outlining all requirements and parameters of ELA and prepare internal ELA procedures.	SAMA	I
22. Operationalize the ELA framework through regular ELA simulations and collateral mobilization testing and pre-positioning and adopt an MoU between SAMA and MoF on the use of government guarantees.	SAMA	ST
Financial Integrity		
23. Conduct thematic inspections of key AML/CFT requirements and levy sanctions in case of non-compliance.	SAMA	MT
Role of State, Long-Term, Green and MSME Finance, Payments, and Digital Financial Services		
24. NDF to expand its performance monitoring framework; ringfence funds performing quasi-government functions.	NDF and Fund Boards	ST
25. Develop a market for qualified professional investors and allow unrestricted trading of private-placement bonds in the market.	CMA	I
26. Review the current MSME definitions; and regularly collect and publish MSME financing data using standard definitions with relevant breakdowns (e.g., firm size, funding source, women-owned enterprises).	Gov, SAMA, and CMA	ST
27. Update and publish the Oversight Framework document for Payments and Digital Financial Services.	SAMA	ST
28. Conduct a climate risk assessment to inform evidence-based supervisory approach; publish the results to raise awareness.	SAMA	ST

[1] I-Immediate" is within one year; "ST-near-term" is 1–3 years; "MT-medium-term" is 3–5 years.
[2] Recommendations from workstreams on systemic risk analysis, macroprudential policies, role of state, and housing finance.
[3] Recommendations from workstreams on macroprudential policies and role of state.

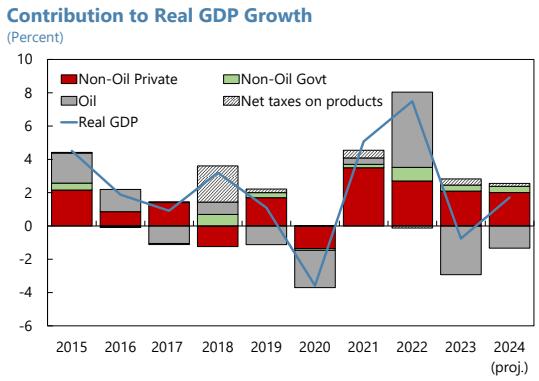
BACKGROUND

A. Macrofinancial Context

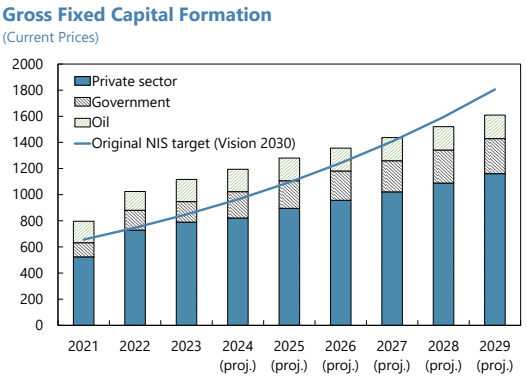
1. The FSAP took place against a robust Saudi economy undergoing a rapid state-led transformation towards non-oil growth (Table 5; Figure 1). The economy recovered strongly from the COVID-19 pandemic-induced recession, supported by high commodity prices, and accelerated implementation of the authorities' NIS under its ambitious Vision 2030 reform agenda. Accordingly, unemployment is at a record low, the output gap is closed, while inflation is contained. External buffers are assessed adequate for credibly maintaining the currency peg with the U.S. dollar and SAMA has raised its policy rate in line with the U.S. monetary tightening cycle. The Public Investment Fund (PIF)—the Kingdom's sovereign wealth fund—plays a key role in implementing and funding Vision 2030. PIF's assets under management amounted to US$750 billion (70 percent of GDP) at end-2023, of which 79 percent invested domestically. In the national statistics, PIF's investments are classified as private.

Figure 1. Saudi Arabia: Macrofinancial Development

Real GDP fluctuates with the government's oil production decisions, while non-oil growth remains robust.[1]



Investment has surpassed NIS' original targets, but staff's baseline assumes slower growth going forward.



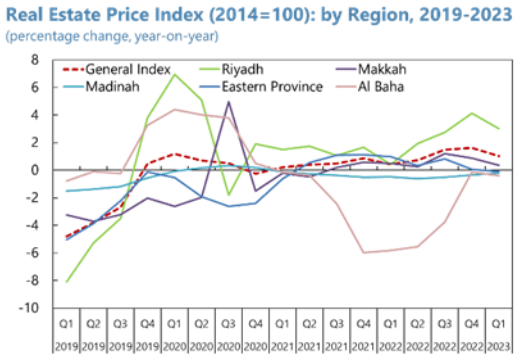
Sources: GASTAT, SAMA, Fitch, S&P, Moody's, IMF staff calculations.
[1] IMF's July 2024 WEO. The FSAP baseline follows the IMF's January 2024 WEO. PIF's investments are classified as private.

2. The real estate market is rapidly growing and there are signs of sizable price increases. The government's initiative to expand home ownership from 47 to 70 percent during 2016–2030 generated a surge in construction and mortgage issuance, which continued despite interest rate hikes. Incentives include tax breaks, credit subsidies, and guarantees to first-time buyers. At end-2023, homeownership was already above 60 percent, with over 70 percent of outstanding mortgages subsidized. A significant number of large-scale real estate and infrastructure projects ("giga-projects") are also ongoing. While the official real estate price indices show no apparent signs of over-heating, official data does not accurately represent conjunctural price developments due to outdated stratification, misclassification, and significant time-lags in the entry of transaction data

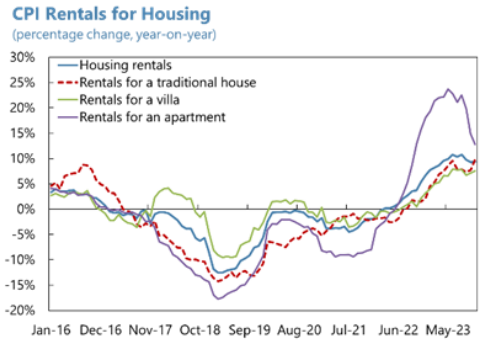
(Figure 2; Appendix I). Data collected by mortgage providers (not corrected for size nor quality) shows a significant increase in the average price of residential real estate transactions and survey data indicates a significant increase in commercial real estate prices.

Figure 2. Saudi Arabia: Real Estate Price Development

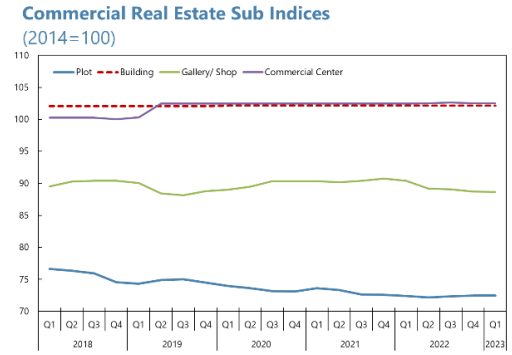
Official indices show moderate price increases, with significant regional heterogeneity.



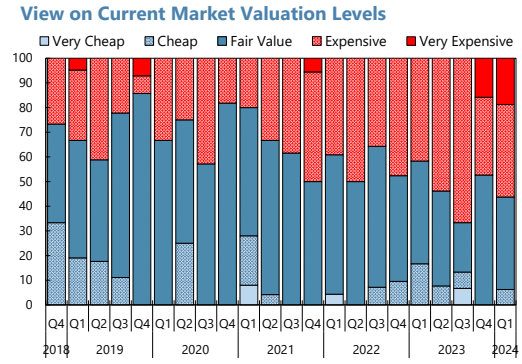
Cost of rentals is increasing.



While the official commercial real esate price indices appear stable or decreasing…



…survey data shows significant increase in the share of survey participants considering CRE to be expensive.



Sources: GASTAT, The Royal Institute of Chartered Surveyors (RICS), and IMF staff calculations.

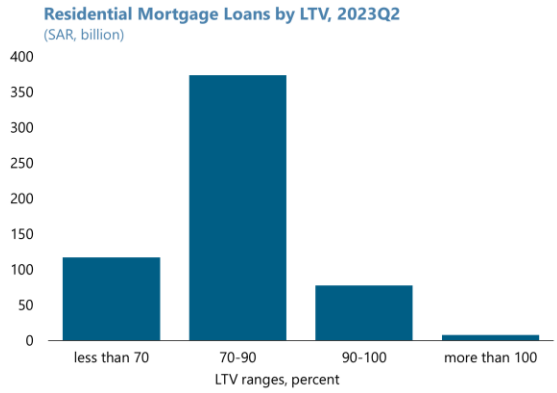
3. Household average debt service-to-income (DSTI) ratios are relatively high but are slowly trending downwards (Figure 3). Balance sheet and income data is scarce for households, but information from banks shows average DSTI at around 40 percent. Around 15 percent of mortgages have loan-to-value (LTV) above the 90 percent limit set by SAMA in November 2018.

4. NFCs are resilient on average but there are stark differences between firms (Figure 4). On average, publicly listed companies display high interest coverage ratio (ICR) and net debt-to-equity ratio below 100 percent, indicating resilience to shocks to interest rates and/or profitability. Average leverage is also moderate, with the consumer discretionary and energy sectors as outliers. An extended sample of NFCs (beyond listed)—analyzed in cooperation with the Saudi Business Center (SBC)—also indicates high average ICR and low net debt. At end-2022, around 20 percent of

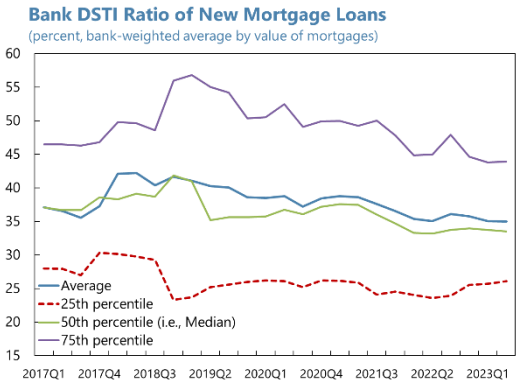
the listed NFCs and 30 percent of the NFCs in the extended sample displayed ICR below 1, demonstrating pockets of potential vulnerabilities. In each sample, debt-at-risk (i.e., the share of total debt owed by firms with ICR below 1) was 10 percent.

Figure 3. Saudi Arabia: Household Mortgage Debt from Banks

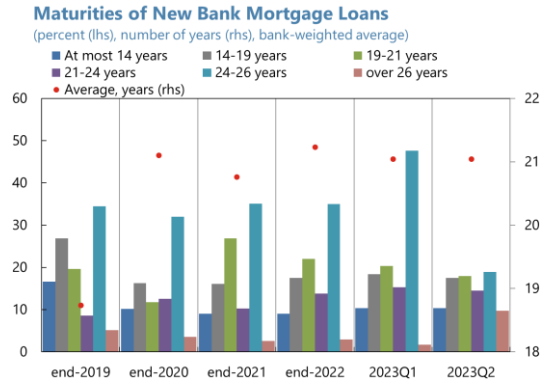
Around 65 percent of bank mortgages lie in the LTV range of 70-90 percent…



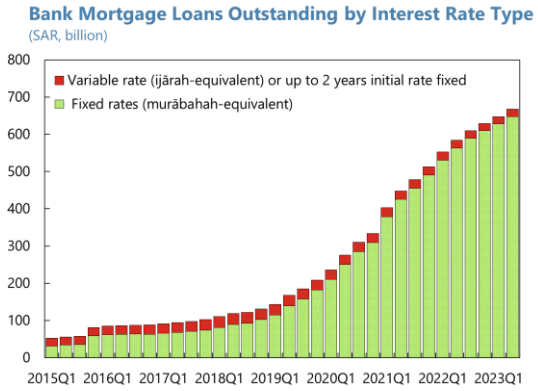
…and the DSTI at origination has been relatively stable at around 40 percent on average.



Over 95 percent of new bank mortgages have maturities of 25 years or shorter…



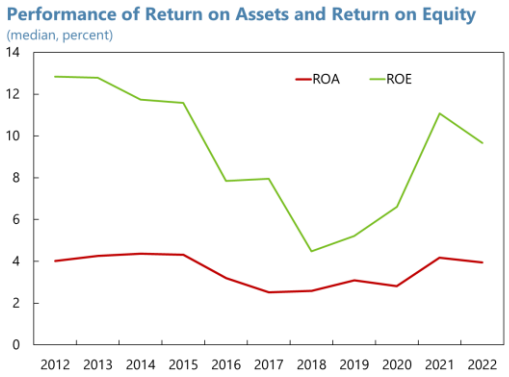
…and 97 percent of mortgages are at fixed rates.



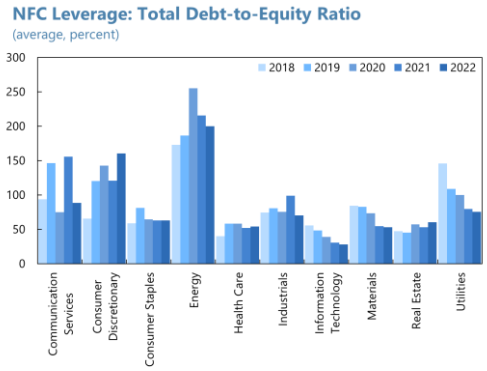
Sources: SAMA and IMF staff calculations.
Note: Loans with LTV above 90 percent include loans issued under the Dhamanat guarantee program, loans that were provided before the establishment of the LTV limit, and loans which LTVs are updated through the life of the loan. When calculating DSTI, subsidies may be added to income.

Figure 4. Saudi Arabia: Performance and Debt Service Capacity of NFCs

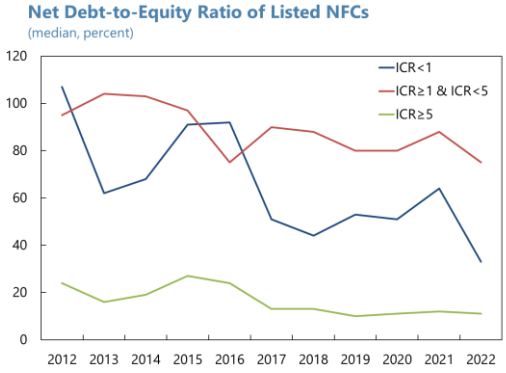
The profitability of Saudi's listed NFCs improved since 2018[1]…



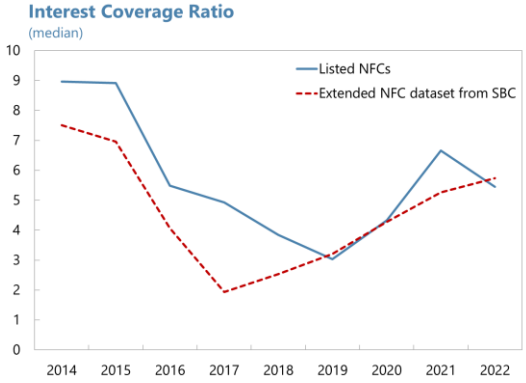
…and their financial leverage remains on average moderate, yet high in the energy and consumer sectors.



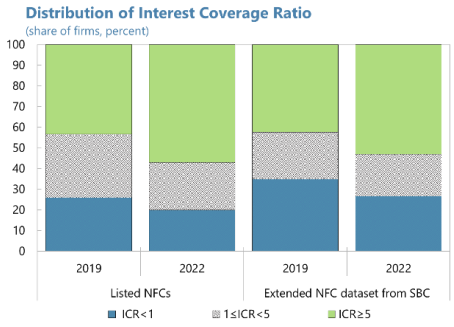
A median net debt to equity ratio below 100 percent, indictates that listed NFCs are resilient to shocks to interest rates and/or profitability.



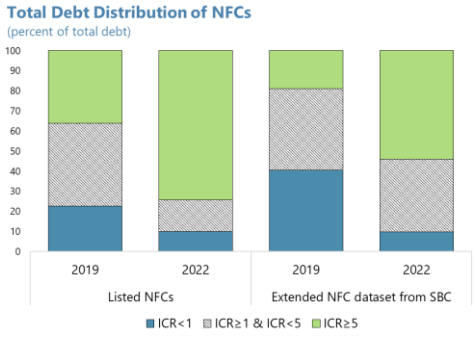
An extended dataset of limited liability and closed stock companies shows increased ICR on the back of higher earnings.[2]



Around 20 percent of listed NFCs and 30 percent of NFCs in the extended dataset have ICR< 1. Both datasets show improvement in ICRs from pre- to post-COVID-19.



Debt-at-risk represents 10 percent of total debt, both for listed and extended number of NFCs.



Sources: S&P Capital IQ, SBC, and IMF staff calculations.

Note: [1] The sample of listed companies covers 260 NFCs, with total revenues and assets amounting to 237 percent and 341 percent of non-oil GDP respectively in 2022. The extended sample comprises audited financial statements of 4,000 NFCs on average per year and thus does not represent all Saudi firms. In 2022, this sample contained 3,823 NFCs with total assets of 209 percent of non-oil GDP (Aramco not included). The analysis was conducted in cooperation with SBC.

[2] ICR is defined as the ratio of earnings before interest and taxes (EBIT) to interest expense. Extreme values (-100< and >100) are excluded for listed NFCs.

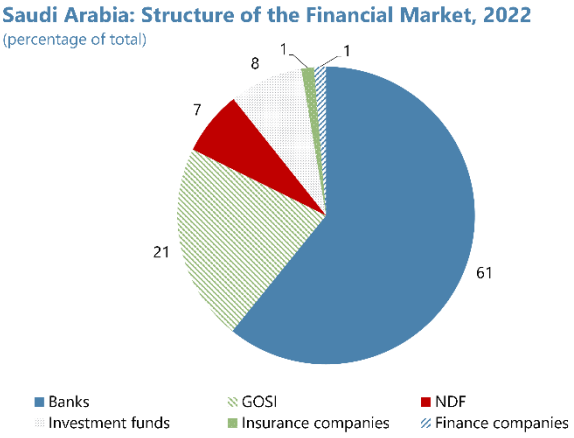
B. Financial Sector Structure

5. The Saudi financial system is moderate in size (143 percent of GDP in 2022), dominated by commercial banks (87 percent of GDP) and state-owned financial institutions (Table 6, Figures 5 and 6). There were 27 commercial banks, of which are 11 locally incorporated and account for 98 percent of banks assets, and 16 are branches of foreign banks. The local banks are all part of banking groups and have some government ownership.[1] Three local banks (16 percent of banking sector assets) are controlled by banks incorporated in foreign jurisdictions. The banking sector is highly concentrated, with the two largest banks accounting for almost half of system's assets and the five largest for 74 percent and classified as domestic systemically important (DSIBs). The state-owned pension fund (Organization for Social Insurance, GOSI) holds assets amounting to 31 percent of GDP, while the assets of 12 state-owned development funds—operating under the umbrella of the NDF—amount to 10 percent of GDP. Investment fund assets are 12 percent of GDP, while insurance and finance companies are small. Finance companies account for 4 percent of total real estate lending and typically sell their mortgage exposures to the PIF-owned and SAMA supervised Saudi Refinancing Company (SRC). There is a nascent but rapidly growing fintech sector. PIF is not included in the above figures.

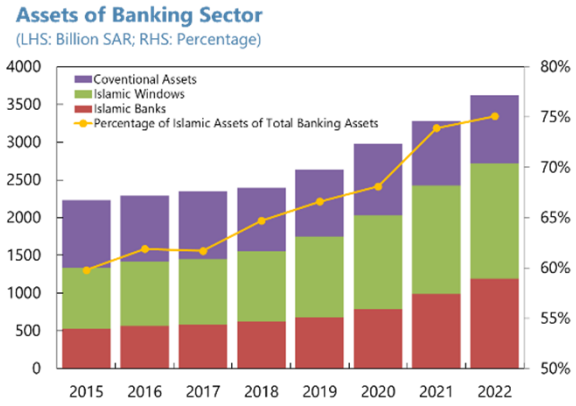
6. The share of Islamic products in Saudi banks is one of the largest in the world. Over 75 percent of banks' total assets, are Sharī`ah compliant (SC), amounting to 64 percent of GDP at end-2022.

Figure 5. Saudi Arabia: Structure of the Financial System

Commercial banks and state-owned financial institutions dominate the financial system…[1]



At over 75 percent of banks' total assets, the share of Islamic products is one of the largest in the world.

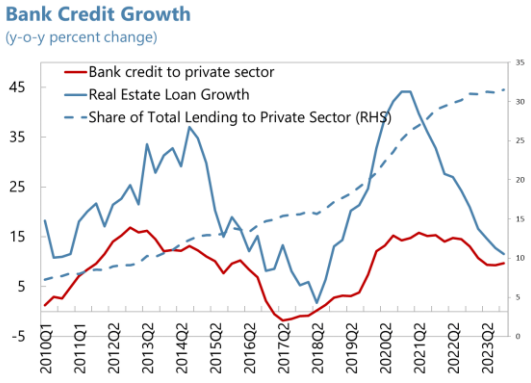


Sources: SAMA, CMA, GOSI, and NDF.[1]PIF's total assets amounted to US$776 billion (70 percent of GDP) and are excluded from the figure.

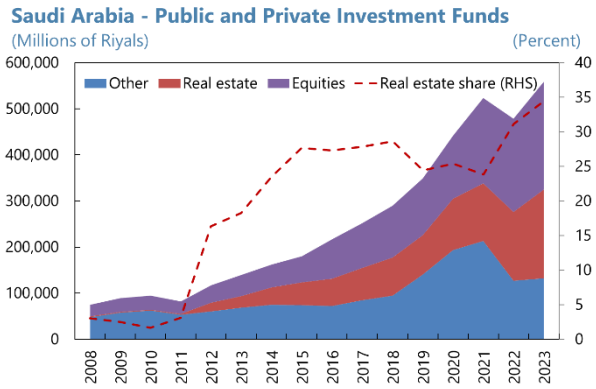
[1] The government (including through PIF and GOSI) owns 4–41 percent in 10 local banks, and 97.23 percent in one non-DSIB.

Figure 6. Saudi Arabia: Banks and Investment Funds' Funding of the Real Economy

PIF, development funds and commercial banks are financing the economic transformation…



…together with capital markets participants such as the investment funds and the state pension fund.



Sources: SAMA and CMA.

7. Vision 2030 includes comprehensive strategies and targets for financial sector development. Launched in 2018, the Financial Sector Development Program aims to enable financial institutions to support private sector growth (including with support from the NDF and PIF), ensure the development of an advanced capital market (for alternative funding sources), and promote and enable financial planning (retirement savings, etc.), while maintaining financial stability. A fintech strategy was introduced in mid-2022, which aims to make the Kingdom a global fintech leader, supported by SAMA's Regulatory Sandbox and the CMA's Fintech Lab.

8. Development finance is undergoing major reforms, increasing linkages with banks and non-bank financial institutions (NBFIs).

- *The NDF* was established in 2017 as a statutory, non-corporatized holding entity overseen by a board of directors. The funds are governed by their respective line ministries, while the NDF is mandated to oversee and advance their performance and empower them to meet the development priorities and economic targets under Vision 2030. Legacy funds have launched new strategies, some of which involve a shift from direct lending to wholesale financing, providing co-funding and/or subsidies to commercial banks and finance companies' borrowers (e.g., the Real Estate Development Fund, REDF; Table 2). Several new funds have been established to support priority sectors. The NDF and its funds are not subject to independent prudential supervision, notwithstanding their relevance for the financial sector and exposure to credit risk. They have not published financial accounts since 2020 and pose contingent liabilities for the sovereign. Currently, the funds are exclusively funded by the fiscal budget and own funds—reducing their risk to financial stability. However, the NDF aims to transform into a full-fledged development financial institution and seek market funding.

- *The PIF* invests in local commercial entities (e.g., banks, the SRC, and developers), as well as in the government's mega/giga projects (e.g., NEOM) which are also supported by the financial sector. The SRC was established in 2017 to provide liquidity support to the mortgage market (portfolio acquisitions or direct short-term financing). In 2022, the SRC had refinanced 3.5 percent of total mortgages but aims to refinance 20 percent by 2026–27.

Table 2. Saudi Arabia: Development Funds Under NDF's Umbrella

	Development Funds		Year of establishment
Legacy funds			
1	Real Estate Development fund	REDF	1974
2	Saudi Fund for Development	SDF	1974
3	Saudi Industrial Development Fund	SIDF	1974
4	Social Development Bank	SDB	1972
5	Agricultural Development Bank	ADF	1965
6	Human Resources Development fund	HRDF	2000
New funds			
7	Saudi Export and Import Bank	EXIM	2020
8	Small and Medium Enterprise Bank	SME	2021
9	Tourism Development Fund	TDF	2021
10	Fund of Events Related to the Sectors of Culture, Entertainment, Sports and Tourism	EIF	2021
11	Cultural Development Fund	CDF	2021
12	National Infrastructure Fund	NIF	2021

Source: NDF.

9. Capital market development helps diversify long-term funding options. The Saudi equity market became the seventh largest in the world following the initial public offering of Saudi Aramco (the majority state-owned oil company) in 2019, and increased weights in MSCI emerging market index attracted more foreign investors. Debt raising include a sovereign issuance, sukuk and green bond issuance by the PIF and sukuk issuance by the SRC. Currently, only four series of corporate debt are publicly traded. Together with the CMA and SRC, SAMA is in process of developing a framework for local Mortgage-Backed Securities (MBS). Outstanding mortgages currently stand at 15 percent of GDP (25 percent of non-oil GDP), a size that could support the development of an MBS market.

SYSTEMIC RISKS ASSESSMENT

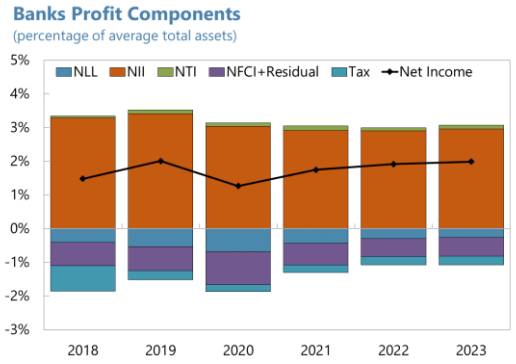
A. Key Risks Assessment, Methods, and Scenarios

10. The banking system is well-capitalized (19.5 percent of risk-weighted assets at 2023Q3), shows moderating but still rapid credit growth, low nonperforming loans (NPLs),

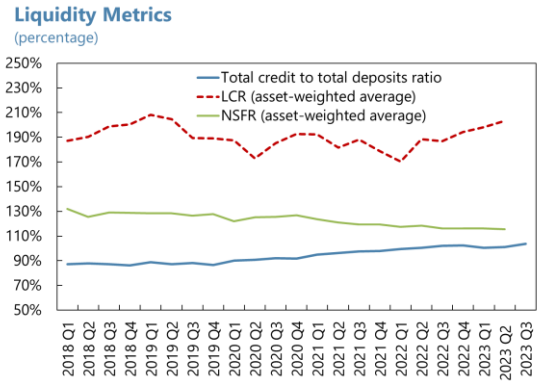
and strong profitability (Table 7). Financial Soundness Indicators also compare favorably with GCC peers (Figure 12). The single largest asset segment is corporate credit (40 percent of total credit by end-2023), while retail real estate loans have more than tripled between 2019 and 2023, albeit starting from a low base (Figures 6 and 13). Strong credit growth helps keep NPLs low at 1.5 percent. COVID-19-related regulatory measures introduced in 2020 (loan deferral and guaranteed lending programs) were fully terminated in early 2023. A large base of non-remunerated deposits contributes to banks' profitability (Figures 7 and 14). In the context of higher interest rates, there has been a recent shift from non-remunerated to remunerated deposits—a trend that may continue due to improved financial literacy, and easier access via online banking.

Figure 7. Saudi Arabia: Banks' Profitability and Liquidity Metrics (2018–2023)

A recent shift to remunerated deposits is yet to affect banks profitability.



Banks' liquidity levels are high, but some metrics display a negative trend.



Sources: Fitch, Haver, SAMA, and staff calculations.

11. Banks' liquidity levels are high, but some metrics display a negative trend. With a fast-growing mortgage portfolio, increased average maturity of bank credit, and overall credit growth outpacing deposits, the Net Stable Funding Ratio (NSFR) shows a downward trend (but still above the 100 percent regulatory minimum in all banks), while the unweighted credit-to-deposit ratio is trending upwards. Deposits from government entities have increased as a share of total deposits, reflecting greater dependence on government funding and the need to diversify funding sources to support future credit growth. The illiquidity of secondary sovereign bond markets poses a liquidity risk that is not well-captured by regulatory LCR and NSFR.

12. The risks of Saudi banks are well captured by conventional stress testing modeling approaches. Most SC assets have debt-like features, as opposed to equity-characteristics. Murābahah/Commodity Murābahah contracts account for 89 percent of SC assets (Table 3). Their repayment structure mimics conventional fixed-rate loans, and any market risk is cancelled out with simultaneous purchase and resale of the underlying commodity. Ijārah/Ijārah Muntahia Bittamlīk contracts account for 9 percent of SC assets and mimic the repayment structure of variable-rate mortgages or other conventional types of leasing (e.g., car leasing). Profit-sharing investment accounts (PSIAs) comprise less than 5 percent of banking sector's sources of funding.

Table 3. Saudi Arabia: Saudi Arabia: Banks' Sharī`ah Compliant Assets and Funding by Type

Lending to customers by type of *Sharī`ah*-compliant contract, 2023Q1[1]

	(million SAR)	*(percentage)*
Total lending to customers	2,031,969	100
Murābahah	1,076,202	53
Commodity Murābahah/ Tawwaruq	732,649	36
Ijārah / Ijārah Muntahia Bittamlīk	187,375	9
Others	32,096	2

Sources of funding by type, 2023Q1[1]

	(million SAR)	*(percentage)*
Total funding/liabilities	2,160,328	100
Profit-sharing investment accounts (PSIA)	152,667	7
Other remunerative funding *(Murābahah,* Commodity *Murābahah* etc.*)*	452,709	21
Nonrenumerative funding (current account, *Wadī`ah*)	1,288,188	60
Sukūk issued	49,745	2
Interbank funding/liabilities	116,779	5
All other liabilities	100,239	5

Source: IFSB.
[1] Includes both Islamic banks and Islamic windows.

13. Several factors help mitigate credit risk in the rapidly growing real estate loan portfolio. Most mortgages are at fixed rates (reducing borrower vulnerabilities to interest rate fluctuations) and with full recourse (reducing incentives for strategic defaults). Around 80 percent of retail borrowers are government employees (income likely stable in downturns), and reportedly most mortgages are salary assigned (i.e., direct salary deduction).

14. The authorities have made commendable efforts to mitigate risks from the rapidly growing real estate market, and these efforts should be complemented with improved data compilation. SAMA's regulation on Responsible Lending Principles for Individual Customers of May 2018 sets maximum limits for borrower's debt-service-to-income (DSTI); a foreclosure law provides for full-recourse provision and prescribes judges the power to hand ownership of property to the mortgage provider should a borrower default; and a credit bureau and IT platforms source data on home buyers, developers, and rental market. To reduce the risk of overheating in the real estate market, the MOMRAH, NHC and PIF collect information about housing demand with the aim of matching demand with supply of new housing. However, a significant number of large-scale real estate and infrastructure projects are ongoing, and new projects continue to be announced. The magnitude and complexity involved in the projects has the potential to lead to competing resources and delays (e.g., due to calibration of project design) that could strap some developers' and subcontractors' resources. Given the financial sector's importance in financing these activities, it is important for the NFSC—which is responsible for monitoring financial stability—to have access to

timely and good-quality data. Given that the key players are all part of or affiliated with the Saudi government, the authorities should explore ways to ensure regular exchange of information that will inform SAMA's analysis of emerging vulnerabilities and systemic risks. The authorities are further urged to expedite the process of addressing remaining data gaps vis-a-vis the G-20 DGI's second phase (DGI-2) on *Vulnerabilities, Interconnections, and Spillovers*.[2]

15. The FSAP deployed various analytical tools to gauge the banking sector's susceptibility to shocks. The solvency stress test is centered around the IMF January 2024 World Economic Outlook (WEO) baseline. The adverse scenario covers global and domestic risk (Appendix II) and was derived from IMF's Global Macro-financial Model (Figures 8 and 15; Appendix III). The adverse scenario features a global recession which leads to a sharp drop in oil prices. Due to the contraction in fiscal oil revenues, there is a slowdown in the implementation of the NIS and Saudi non-oil GDP contracts sharply. The global recession and lower energy prices induce lower inflation and policy rates. Amid increased financial volatility, a higher risk premium leads to a significant drop in equity and real estate prices.[3] The risk of higher interest rates was considered with an "add-on" scenario, which coincides with the adverse scenario in all variables except for the policy rate which sharply increases in 2024. To gauge liquidity risks, the FSAP conducted a cash flow analysis and assessed banks' liquidity coverage ratio (LCR) and NSFR under more severe scenarios than the regulatory tests. Stress tests were complemented with sensitivity analysis, including on concentration risk. Publicly listed NFCs were also analyzed, considering adverse development in earnings, and borrowing costs.

16. The systemic risk analysis faced several data challenges, especially for credit and contagion risk. Time-series for NPL ratios, and for default rates in particular, were highly volatile—especially at the bank-portfolio level—and do not cover any large recessions. Furthermore, micro data for households and NFCs was unavailable. The team dealt with these challenges by conducting sensitivity exercises with portfolio-specific default rates on top of the adverse scenario. The unavailability of institution-level exposures between banks, state-owned financial institutions and NBFI's, intersectoral data and banks' exposures to mega/giga projects limited the assessment of contagion and concentration risks.

B. Bank Stress Tests

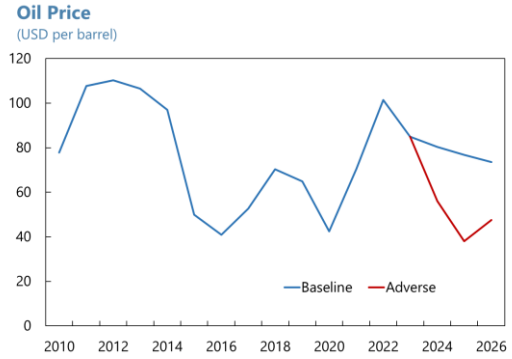
17. The solvency stress test suggests that the banking sector is resilient to severe macroeconomic shocks. Using a three-year horizon, the tests were conducted on the 11 Saudi banks as of June 2023, using the hurdle rate of the regulatory minimum capital (8 percent for the

[2] The G20 Data Gap Initiative's (DGI) sixth report, shows Saudi Arabia to lag significantly behind other G20 countries in financial accounts and balance sheet data collection and dissemination.

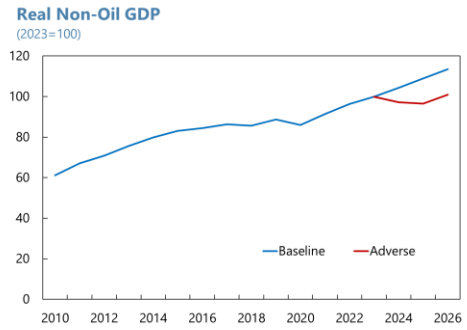
[3] The adverse scenario also considers risks transmitted to banks through lower oil revenues, e.g., disruption to oil production capacity due to regional conflicts or cyber-attacks, and lower prices due to climate transition.

Figure 8. Saudi Arabia: Macroeconomic Scenarios

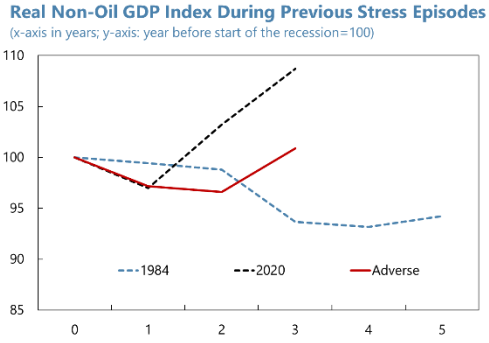
The adverse scenario features a global recession which leads to a sharp decline in oil prices (50 percent below baseline)…



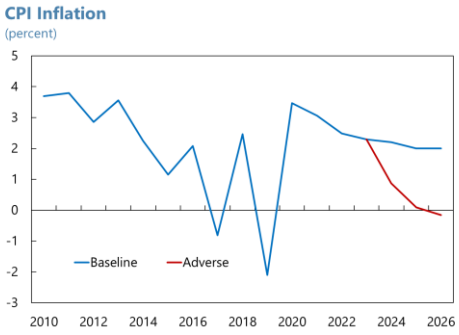
…leading to contraction in fiscal revenues, slowdown in NIS implementation and contraction in non-oil GDP.[1]



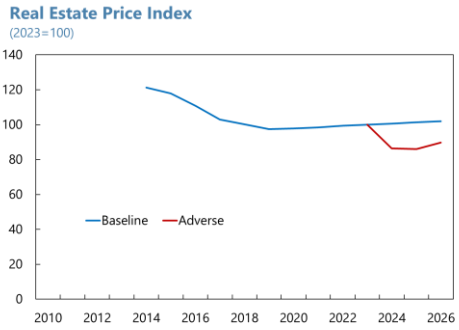
The non-oil GDP contraction is similar in magnitude as during the pandemic but with slower recovery.



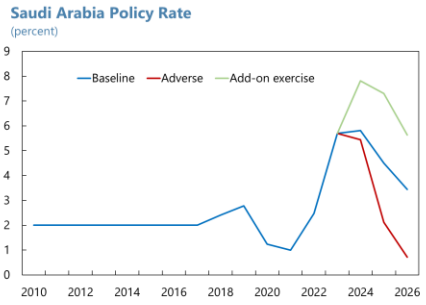
The global recession and lower energy prices induce lower inflation and policy rates.



Amid increased financial volatility, a higher risk premium leads to a significant drop in equity and real estate prices.[2]



An "add-on" scenario considers the risk of a sharp increase in policy rates, with all other variables coinciding with the adverse scenario.



Sources: Haver and IMF staff calculations.

[1] Two-year cumulative growth is two standard deviations below baseline and 2.3 standard deviations below mean.

[2] The exercise uses GASTAT's real estate price index. Sensitivity analysis addresses the possibility that it underestimates price growth. Baseline real estate price forecast is not available in WEO. Instead, we assume a baseline growth rate equal to the average growth rate over the period 2019–2023.

total capital ratio; 4.5 percent for CET1), plus the DSIB surcharge, plus the Pillar II add-on.[4] In the baseline scenario, the tests confirmed banks' strong initial capital positions and high profitability (Figure 16). In the adverse scenario, the capital ratio declines by 2.6 percentage points (pp) relative to baseline—mainly due to higher credit losses—with all banks remaining above the hurdle rate. Meanwhile, in an extreme add-on exercise with higher interest rates, only one non-DSIB falls marginally below its hurdle rate. Interpretation of these results should consider the beforementioned data challenges.

18. The sensitivity analysis further suggests banks' resilience, while providing insight into potential vulnerabilities (Figures 17 and 18). The NFC portfolio showed the highest contribution to credit losses due to its large size and higher expected losses from NPLs. A reverse stress test conducted on top of the adverse scenario indicates that a persistent additional 5–9 pp increase in default rates for the whole credit portfolio would create solvency pressures in the aggregate banking system. Other sensitivity exercises indicate banks' resilience to lower house prices, sectoral corporate shocks, and marking to market the whole securities portfolio. An increase in the cost of funding (on top of the adverse scenario with higher interest rates)—e.g., due to a further shift from non-remunerated to remunerated deposits—would lead three non-DSIBs to fall below their hurdle rates (by only 0.15 percent of GDP on aggregate) while the aggregate banking system remains above.

19. The liquidity stress tests indicate that banks generally have enough counter-balancing capacity to manage liquidity stress—although some banks would face liquidity pressures in the more extreme scenarios—while revealing significant funding concentration. The tests covered the same 11 domestic banks, using as hurdle rate the regulatory minimum of 100 percent for LCR and NSFR. In the most severe cases considered, with deposit runoffs and haircuts to the valuation of sovereign bonds, the aggregate LCR declined from 189 to 108 percent—with three banks falling below the hurdle—and the NSFR declined from 115 percent to 99 percent—with seven banks falling below the hurdle (Figures 19 and 20)—reflecting the need diversify funding sources to better support long-term lending. The aggregate liquidity shortfalls in the most severe scenario are 0.8 and 1.2 percent of GDP for LCR and SFR, respectively. Analysis of large deposit runoffs reveals significant funding concentration.

20. SAMA is updating its stress testing approach and should complement it with improved data collection and large concentration monitoring and consider structural micro-macro credit risk modelling. SAMA is developing a scenario-based solvency stress testing framework—aligned with IFRS 9 for credit staging and provisioning—and updating their liquidity stress testing model. To help assess default rates during Saudi's structural transformation, SAMA should consider complementing its econometric approach by incorporating micro data for households and NFCs and establishing monitoring frameworks for financial system's exposures to large construction and infrastructure (e.g., mega/giga) projects. SAMA informed that it already collects information on large

[4] Due to the confidentiality of the Pillar II add-on, the hurdle rate is not disclosed.

funding concentration. SMA should periodically revisit the appropriateness of the applied their LCR run-off assumptions.

C. Interconnectedness

21. Contagion risks between domestic banks and cross-border appear low. Aggregate exposures between domestic banks are small relative to bank capital (3.6 percent of capital; Figure 21). Using Espinosa Vega and Sole (2010) methodology—where the unit of analysis was the aggregate banking sector for each country—cross-border contagion risks also appear low since no single failure of a foreign banking system would lead to the failure of the Saudi banking system.

22. The authorities should expedite ongoing efforts to incorporate contagion/ interconnectedness analysis into their stress testing and systemic risk monitoring frameworks. In the context of a rapidly developing domestic financial system, the authorities should close data gaps, monitor contagion risks between banks, state-owned financial institutions (including NDF) and NBFIs and publish the results—together with the stress testing results—in its Financial Stability Report (FSR). Efforts to address recommendations of the G20 Data Gap Initiative concerning sectoral accounts, and international banking statistics should be expedited.

D. Corporate Sector

23. Publicly listed NFCs are on average resilient to earnings and borrowing cost shocks. Under severe combined shocks to earnings and interest rates, the median ICR drops sharply but remains above 1 (Figure 22). Debt-at-risk increases substantially in the consumer, real estate, and industrial sectors.

FINANCIAL SECTOR OVERSIGHT

A. Macroprudential Policies

24. Macroprudential institutional framework works well—with a high level of de facto inter agency collaboration—but the authorities should consider expanding its remit. SAMA is the macroprudential authority and has control over banks and finance companies. The NFSC—which comprises SAMA, CMA, MoF, Insurance Authority (as of May 2024) and the National Debt Management Center—extends the financial stability perimeter to the institutions supervised by the CMA and the newly created Insurance Authority. However, the NDF and its funds are not subject to prudential supervision and data sharing is limited. While the authorities collaborate in various committees, NFSC´s potential recommendations concerning funds would need to be escalated to decision making bodies outside the NFSC membership. Under the current framework, the authorities' willingness and ability to make recommendations to the NDF and its funds may be hampered, especially if these were to interfere with the goals of the broader Vision 2030. To strengthen macroprudential analysis, the authorities need to guarantee regular and timely access to NDF data. There is also merit going forward in placing the NDF and its funds under an independent supervisory

authority, and increasingly so considering NDF's ongoing transition into a fully-fledged development finance institution.

25. The authorities have in place good processes for cooperation, which should be published—along with other elements—in a macroprudential strategy. Within SAMA, there is a clear division of labor between financial stability and banking supervision in the use of prudential tools. Coordination among NFSC members takes place in designated subcommittees. A published macroprudential strategy document can foster public awareness, counter inaction bias, and prepare the public for relaxing macroprudential tools. It should describe intermediate policy objectives and map these to macroprudential tools. It could explain the policy process, how the authorities plan to use their tools, and what indicators guide their decision making.

26. Systemic risk monitoring should be strengthened, and data gaps closed. To assess transmission channels from potential shocks and spot emerging vulnerabilities, SAMA should conduct regular assessment of interconnectedness and distributional information about households and NFCs. Distributional mortgage data should include household debt (e.g., DSTI, debt-to-disposable income, debt to GDP) and characteristics (e.g., first vs. second time buyer, age). Ongoing work to overhaul the real estate price index methodology should be expedited, including to support the construction and publication of affordability indicators (e.g., price-to-income, price-to-rent), which are useful for gauging potential overheating in the real estate markets.

27. Tightening macroprudential tools would benefit the resilience of the financial system. Saudi Arabia has a fairly comprehensive suite of macroprudential tools at its disposal. The CCyB was added to SAMA's toolkit in 2016 but has always been set at 0 percent and other macroprudential tools have not been tightened since the issuance of SAMA's Responsible Lending Principles in 2018.

- *Now is an opportune time for SAMA to introduce a releasable capital buffer by changing its CcyB framework to a "positive neutral" CcyB.* A positive neutral CcyB recognizes the difficulty of forecasting the onset of a banking crisis, providing a baseline level of resilience, i.e., a tool for releasing bank capital when faced with a crisis that would otherwise stifle banks' ability to continue financing the real economy.[5] The case for releasable buffers is strong: continuous credit is needed while pursuing Vision 2030; and—due to the currency peg—banks need to adapt to SAMA's monetary policy changes, regardless of the domestic economic conjuncture. When banks are profitable or have voluntary capital buffers—as in Saudi Arabia—the cost of building buffers is typically small.

- *Under the current "0-neutral" framework, the CCyB could also be increased from a conjunctural perspective (Figure 9).* While recently moderating, credit growth remains strong and may increase with lower interest rates; the current account has a tendency of large swings, house transactions

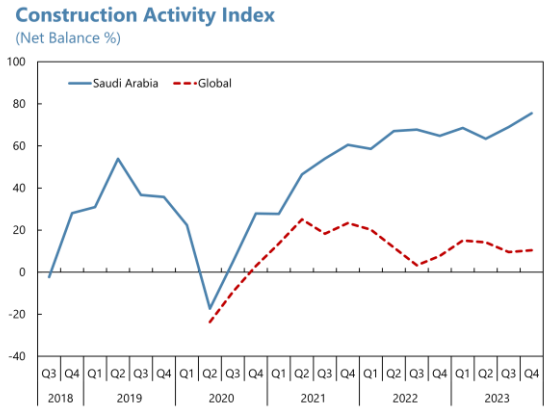
[5] The updated BCPs (April 2024) are agnostic about the way that releasable capital is introduced but mentions sectoral capital requirements.

prices show double-digit annualized growth, and mortgage lending standards are fairly lax in support of the Vision 2030 goals.

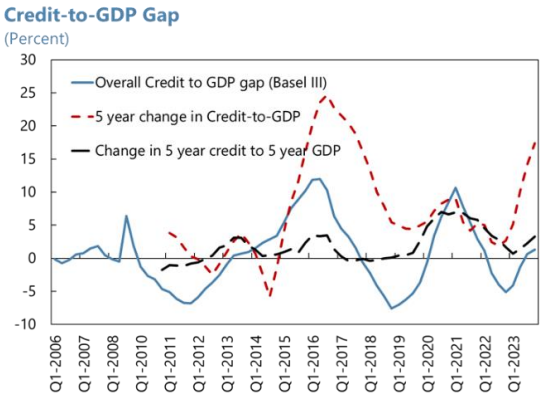
- *SAMA's prudential lending standards should be re-evaluated to safeguard household resilience.* At 65 percent of income with mortgage subsidies, the maximum DSTI is high in international comparison (Table 4), and a significant share of borrowers has DSTIs above 50 and 60 percent. The LTV limit is also relatively high at 90 percent for first home buyers (95 percent under the Dhamanat guarantee program). Tighter limits would be needed, especially if credit growth remains strong (or picks up again). However, to avoid unintended changes in the housing market, revised limits should be phased in gradually.

Figure 9. Saudi Arabia: Broad-Based Vulnerabilities

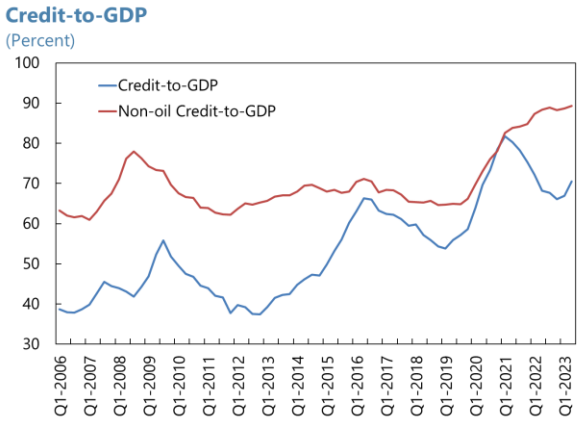
Vision 2030 implementation is evident from the construction sector survey data.



The standard credit to GDP gap and other credit measures for systemic risk signal upswing in the credit cycle.



Non-oil credit-to-GDP has climbed to nearly 90 percent.



A large share of banks' new mortgages has high DSTIs.[1]

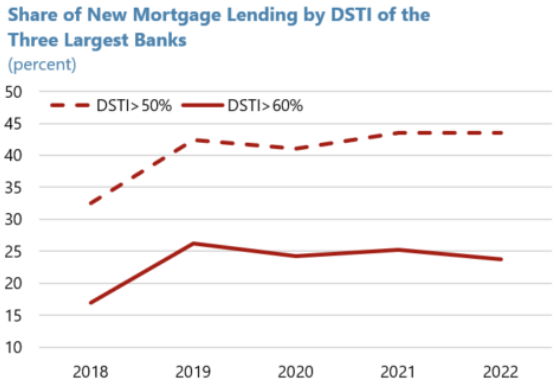
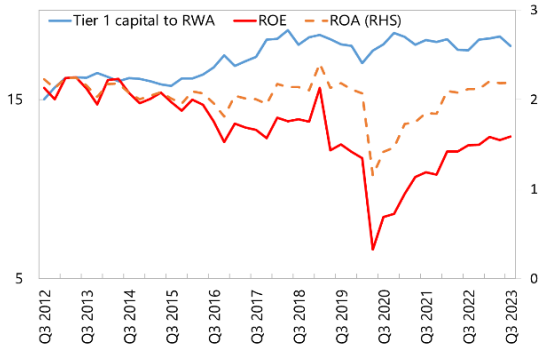


Figure 9. Saudi Arabia: Broad-Based Vulnerabilities (Concluded)

Banks are profitable, with sizable voluntary capital buffers that facilitate implementation of a CcyB.

Bank Capital and Profitability
(percent)



Jurisdictions that have recently adopted a Positive-Neutral CCyBs framework, have set the rate between 0.5 to 2 percent.[2]

Adopters of a Polytive Neutral CCyB Rate
(Percent)

Armenia	1.5	Latvia	1.0
Australia	1.0	Lithuania	1.0
Czech Republic	1.0	New Zealand	1.5
Cyprus	0.5	Netherlands	2.0
Estonia	1.0	Slovenia	1.0
Hong Kong	1.0	South Africa	1.0
Ireland	1.5	Sweden	2.0
Georgia	1.0	United Kingdom	2.0

Sources: SAMA, RICS, CMA, Miettinen and Nier (2024), staff calculations.
[1] Together the three largest banks provide around 80 percent of new mortgages.
[2] In New-Zealand, the CcyB decision takes effect in July 2028.

Table 4. Saudi Arabia: Median Borrower-Based Macroprudential Measures

Median	Advanced Economies			Emerging Market and Developing Countries			Middle East and North Africa, Afghanistan, and Pakistan		
	Min	Mid-range	Max	Min	Mid-range	Max	Min	Mid-range	Max
Cap on DSTI	52.5	53.75	55	40	45.75	50	31.5	42	50
Cap on LTV	70	80	90	75	80	85	75	80	80

Source: IMF Macroprudential Database.
Note: The table describes DSTI and LTV limits in countries that report borrower-based measures in the IMF's macroprudential survey for 2021 using net income for DSTI. Minimum refers to the median of the countries' BBM range minimum, maximum refers to the median of countries borrower-based measure range maximum. Mid-range is the also the median of the mid-point between the min and max of countries.

B. Financial Supervision and Regulation

28. SAMA implements a uniform regulatory and supervisory framework to its mixed system of Islamic banks and conventional banks that also offer Islamic products (Islamic windows). The framework is based on the Basel Core Principles for Effective Supervision (BCP), embedding relevant standards from the Islamic Financial Services Board's (IFSB) Core Principles for

Islamic Financial Regulations (CPIFR). The FSAP conducted an assessment against the BCPs and a focused review against the CPIFR.[6]

BCP Assessment

29. Much progress has been achieved in strengthening Saudi Arabia's banking regulatory and supervisory framework in recent years, and additional enhancements are under preparation. Recent updates include the SBCL (2020), the AMLL (2017), and regulations to address emerging risks such as financial fraud and cyber risks. The authorities intend to use the new draft BCL to further strengthen the framework. Public consultation on the Bill ended in early-2023 and—as the authorities consider the feedback received—the FSAP findings will prove useful in finalizing the Bill and further align the framework with the BCP. SAMA's Banking Policy Development Framework (2021) is in the process of reviewing and updating all regulations. Given significant changes in the operating environment, accounting standards, Basel standards and guidelines, and international supervisory practices, it is important that these processes be expedited.

30. SAMA's responsibility for banking supervision is clearly set out in the law, although preserving banks' safety and soundness is not an explicit or primary mandate. SAMA is empowered to perform several supervisory functions but does not yet have a full suite of powers, such as: (i) calibrating prudential requirements and supervisory reporting proportionate to risk profile and systemic relevance; (ii) reviewing, rejecting, and imposing prudential conditions on proposals to transfer significant ownership and controlling interest in banks; (iii) taking timely corrective actions and imposing sanctions based on supervisory judgment, ahead of legal or regulatory breach; (iv) accessing banks' and banking groups boards, management, staff, and records; and (v) reviewing the activities of parent companies and companies affiliated with parent companies.

31. There is room to strengthen SAMA's operational independence, accountability framework, transparency, and legal protection. Key enhancements would include setting the qualifying criteria for Governor and Vice Governors, establishing the grounds for their removal while in office, and making the appointment and removal process for Governor, Vice Governors, and members of SAMA's governing body more transparent. The law requires SAMA to obtain prior approval of the Minister or Council of Ministers at several stages of banking supervision, and empowers the Minister, with Council of Ministers' approval, to exempt banks from certain provisions of the law in exceptional circumstances—both of which erode SAMA's operational independence. Legal protection should be strengthened for SAMA and its staff and should be extended to its retired staff and agents.

32. Strengthening powers and updating regulations, along with developing internal guidelines, will help strengthen processes for licensing, transfer of significant ownership and controlling interest, and major acquisitions by banks. Besides obtaining additional powers in

[6] The CPIFR adds some criteria to several BCP principles, and five additional core principles, i.e., (i) the treatment of profit-sharing investment accounts (PSIA)/investment account holders; (ii) Shariah governance framework; (iii) equity investment risk; (iv) rate of return risk; and (v) Islamic "windows" operations.

those areas, formalizing the assessment processes—by including the applicable criteria that consider all elements required under the BCPs through policies and/or internal guidelines—can help streamline the processing, make the processing comprehensive, strengthen due diligence, and establish criteria and grounds for reviewing, rejecting, and imposing licensing and/or prudential conditions. Some key elements that need to be explicitly considered in these processes include, among others, identification and due diligence on ultimate beneficial owners, assessment of risks to the bank and the banking group, SAMA's ability to supervise and take appropriate corrective actions, and resolvability of the bank and the banking group.

33. Strengthening powers will also help ensure timely corrective and sanctioning actions. SAMA, or the Minister, or the Council of Ministers is empowered to take corrective actions when a bank breaches any requirement set in law or regulations, or when a bank adopts a policy that could threaten its solvency or liquidity. These powers should be extended to taking corrective and sanctioning actions based on supervisory judgment ahead of a regulatory or legal breach or in response to unsound or unsafe practices.

34. SAMA's well-established risk-based approach would benefit from a review of the scope of application. SAMA employs a risk-based approach which is embedded and reflected in the activities and scope of its supervisory work. The supervisory risk profiling, enforcing prudential requirements, and supervisory reporting are largely focused on the banking group, and more focus is needed on the safety and soundness of the solo bank, the risk assessment of the group entities, and their impact on the risk assessment of the bank or the banking group. SAMA's onsite inspections should also move more towards assessing qualitative aspects, including of banks' corporate governance and risk culture, and enhanced with supervisors engaging systematically with each bank's boards, board committees, and independent board members, to challenge them on board strategy and to discuss individual banks' supervisory examinations, external audits, and risk profiles.

35. Most SAMA regulations are consistent in substance with Basel standards, but enhancements are needed in some key areas. Some regulations are more conservative in some areas than Basel standards (such as the scope of HQLA in the liquidity regime). However, the definition of affiliates in the related-party rules should be broadened and related-party limits introduced for banks and for government owned entities that are related to the controlling shareholders. Other key regulations that need updating include those on transfer and country risk, risk management, management of interest rate risk in the banking book, and operational risk. SAMA is encouraged to increase their monitoring of exposures to government and government-owned commercial entities—from a concentration risk perspective—because these exposures are exempt from the large exposure limits, banks have significant exposures to these entities, and these exposures are expected to grow as part of Vision 2030.

36. Effective cooperation and coordination are important in Saudi Arabia given the structure of the banking system. Twenty-three foreign banks from eighteen jurisdictions are licensed to have a branch presence (of which sixteen currently operating) and Saudi banks are operating branches or subsidiaries in eight jurisdictions. The current arrangements can be made

more comprehensive with relevant domestic authorities (including the recently established Insurance Authority) and foreign supervisors and should be expanded to remaining home and host jurisdictions. More importantly, the arrangements should promote proactive periodic sharing and exchange of data and information, and not remain reactive, as it is currently.

CPIFR Assessment

**37. In Saudi Arabia, Sharī`ah compliance—the most critical factor in sustaining the trust of Islamic banking customers—is ensured by a Sharī`ah Governance Framework (SGF) based on decentralized Sharī`ah Committee model.** Individual Islamic banks and Islamic windows have their own Sharī`ah Committees, which are responsible for issuing the fatwās, i.e., Sharī`ah opinions on various aspects of banks operations and Sharī`ah approvals for their products and services. Saudi has adequate human resources required to ensure effective operation of SGF for the Islamic banking industry, including availability of Sharī`ah scholars.

38. Because of Saudi banks' relatively simple Islamic products, the materiality of some CPIFRs is low, especially those relating to treatment of PSIAs and equity investment risk. SAMA's current regulatory framework includes provisions addressing some of the essential criteria related to PSIAs, Islamic window operations and equity investment risk, though they have not yet been fully implemented.

39. Regulation and supervision of Sharī`ah governance is consistent with the CPIFR and should be further enhanced with supervisory guidance and disclosures. SAMA's regulation on SGF came into effect on January 1, 2023, and SAMA carries out periodic supervisory reviews to monitor and confirm compliance. SAMA uses a range of supervisory tools, including periodic and thematic inspections driven by its risk-based supervision framework. Review inspection reports relating to SGF and Management of Sharī`ah Non-Compliance Risk, provide evidence of effective supervision by SAMA. In line with the SGF, SAMA should develop supervisory guidance for managing liquidity risk separately for Islamic Windows, with the aim of precluding any perceived risk of contamination as well as to promote consistency in liquidity risk management practices by Islamic windows. To enhance transparency and market discipline, Pillar 3 disclosures should also be enhanced in line with the IFSB standards.

40. SAMA should continue efforts to ensure effective implementation of recently issued regulations. Over the last 12 months, SAMA has updated its regulatory framework for SC banking with a series of enhanced regulations covering some of the key criteria of CPIFRs. It will be important for SAMA to provide supervisory guidance to Islamic banks and windows and develop supervisory tools to enable its supervisors to monitor and confirm effective implementation of these regulations. In particular, SAMA should ensure effective implementation of the enhanced regulations on management of equity investment risk, regulations relating to fiduciary duties to Investment Account Holders and capital adequacy calculations for transformation of risk in SC financing.

C. Financial Integrity

41. SAMA should continue to strengthen the effectiveness of AML/CFT supervision. The understanding of risks informs SAMA's allocation of resources for AML/CFT supervision. Targeted inspections increased in 2023, signaling an improved monitoring of data on risks. As the financial sector expands and diversifies, the authorities should continue to assess the evolving risks and give adequate weight to potentially higher risk financial activities. Conducting thematic inspections on the implementation of key customer due diligence measures (such as those related to beneficial ownership and politically exposed persons) and the reporting of suspicious transactions, as well as levying sanctions for non-compliance with AML/CFT requirements should contribute to enhancing further the effectiveness of supervision.

D. Systemic Liquidity Risk Management

42. The authorities have made significant advancements in systemic liquidity management. Stronger fiscal discipline in periods of higher oil prices has weakened the link between excess liquidity and oil prices (Figure 10); improved regulatory framework for capital markets has broadened banks' funding options; Basel III LCR/NSFR are implemented; and SAMA's liquidity management instruments and forecasting framework have been improved. The enhanced SAIBOR methodology (reducing the role of expert judgement), provides a more informative market-based benchmark rate for the money market; and a functional SC repo market was established to promote secured interbank lending—both of which help contain the volatility of interbank market rates.

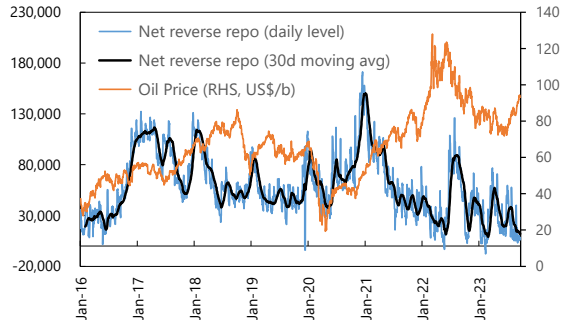
43. While SAMA's liquidity management framework has proven effective, enhancements are recommended:

- *Improving the reserve requirement framework* to encourage banks to utilize it for liquidity management. Align the maintenance periods with the schedules of US FOMC meetings.
- *Enhancing the collateral framework for open market operations (OMO).* To account for market risk—and support effective market price discovery—SAMA should introduce maturity-based haircuts on eligible collateral and gradually transition to a market valuation. As the market matures, SAMA can consider including private debt securities (e.g., corporate bonds, MBS, and covered bonds) as eligible collateral in crisis times, subject to strict quality requirements.
- *Continued use of market-based tools.* In 2022, liquidity pressures were eased through injections of unsecured SAMA deposits and the recycling of MoF funds. Starting in 2023, however, government deposits are auctioned through variable rate auctions, with SAMA acting as an agent of the government.
- *Enhancing liquidity forecasting.* This would involve improving the institutional arrangements with government entities to enhance forecast accuracy of government related flows, which are the primary drivers of liquidity volatility.

Figure 10. Saudi Arabia: Systemic Liquidity, Reserve Requirement, and Collateral Framework

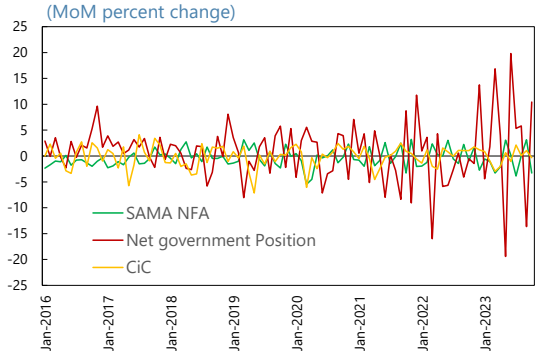
The linkage between excess liquidity and oil price has weakened, but volatility persist.[1]

Net Excess Liquidity
(SAR Mil)



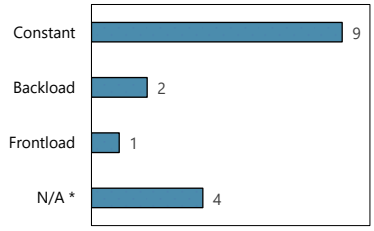
Liquidity volatility is primarily driven by changes in the net government position, underscoring the need to enhance forecast accuracy of government-related flows.

Monthly Percentage Change of Autonomous Factors of Liquidity
(MoM percent change)



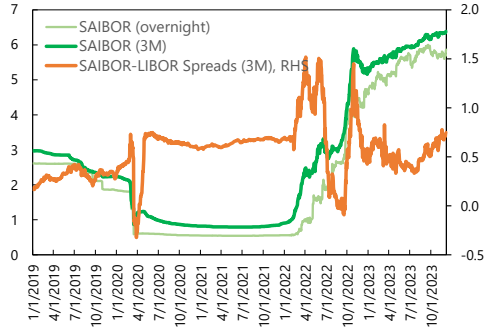
In a survey conducted for the FSAP, only three banks indicated active use of the reserve averaging framework.[2]

Pattern of Reserves Requirement Fulfillment
(# of commercial banks, total = 16)



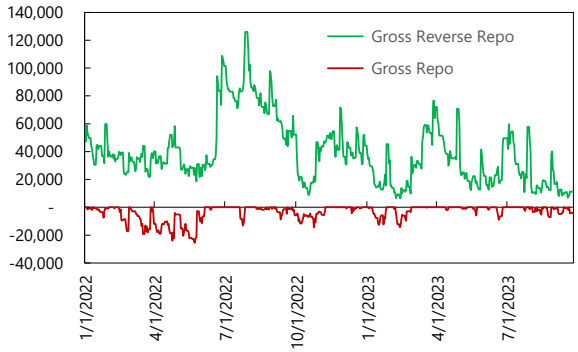
Two episodes of liquidity squeezes in 2022, were eased through SAMA's ad hoc operations.

SAIBOR and SAIBOR-LIBOR Spread
(Percent)



Sizable volume of gross reverse repo vs. gross repo on the same day indicates interbank market inefficiency and the need for further promoting interbank repo trading.

Banks' Daily Access to Refinancing Facilities
(SAR Mil)



Current eligible collateral assets for OMOs are priced at face value with uniform haircuts applied across residual maturities.

Eligible Securities	Original Maturities	Haircuts
SAMA Bills	All (1/4/13/26/52 weeks)	2% on face value
Government Sukuks	All (5-30 years)	2% on face value
Government development bonds	All (2/3/5/7/10 years)	2% on face value
Murabaha	All	2% on face value
Government-guaranteed bonds	All	10% on face value

Sources: SAMA, FSAP Commercial Bank Survey, and IMF staff calculation.
[1] Net excess liquidity is measured by the net reverse repo (gross reverse repo—gross repo).
[2] Daily levels of required reserves are not available (not required by the SAMA). "N/A" represent banks that did not provide an explicit response (only reiterated SAMA's requirement) and suggests that they may not fully aware of its potential benefits.

44. Ongoing interbank and securities market development supports risk mitigation. A SC interbank repo market is in place, with some technical impediments to be resolved (e.g., align cut-off time on delivery vs. payment platform, reduce fees). The market has the potential to grow and serve as an additional liquidity shock absorber—by facilitating banks' management of counterparty risks. To support ongoing efforts to develop long term funding options, the authorities could consider, in the medium-term, the potential eligibility of high-quality private debt securities in OMO.

FINANCIAL SAFETY NET

A. Resolution and Deposit Insurance

45. The authorities have made good progress in developing the legal framework for bank resolution and are encouraged to pursue further reforms to ensure its effective implementation. Adopted in 2020, the SIFIL covers systemic financial institutions that are under SAMA and CMA supervision. While the SIFIL introduces a resolution framework with most elements of an effective resolution regime,[7] its effectiveness will depend on establishing a bank specific liquidation framework, providing forward-looking resolution triggers, and empowering SAMA to order banks to remove barriers to resolvability. The law should also be amended to explicitly cover all banks (systemic and non-systemic). The creation of a new insurance authority in late 2023 requires legal amendments to bring the insurance sector back under the purview of the law. SAMA has already drafted legal provisions on hierarchy of claims in bank liquidation, which provides a good first step for reforms. SAMA is establishing a Crisis Management Framework Development and Implementation Project (CMFDIP) which aims at aligning its safety net function with international best practice within three years.

46. Draft Implementing Regulations—already prepared by SAMA—should be finalized and adopted, and a methodology prepared for the designation of SIFIs in resolution. The SIFIL is very general, and regulations are needed before SAMA can implement the provided powers and tools. Draft regulations shared with the FSAP were generally in line with best practice but could be further strengthened on depositor preference, the repayment of resolution funding—whether provided by a resolution fund or the government—ahead of shareholders, and allowing broader ownership of bridge banks (beside SAMA). Until the SIFIL is revised to explicitly cover all banks, a methodology should be adopted for designation of SIFIs at the time of resolution.

47. SAMA hosts the functions of bank supervision, resolution, deposit insurance, and—once established—the resolution fund. While this allows for many synergies and may be justified at the infancy stages of the resolution function, SAMA rightly understands that this might create conflicts of interest and—in the medium term—operational independence is needed for each function. The resolution and supervision authorities should have different reporting lines to the higher echelons of SAMA, and the deposit insurance function should have operational and

[7] Financial Stability Board's Key Attributes of Effective Resolution Regimes for Systemically Important Financial Institutions.

budgetary independence. Interagency coordination is through the NFSC, which should be provided a clear mandate related to crisis prevention and management.

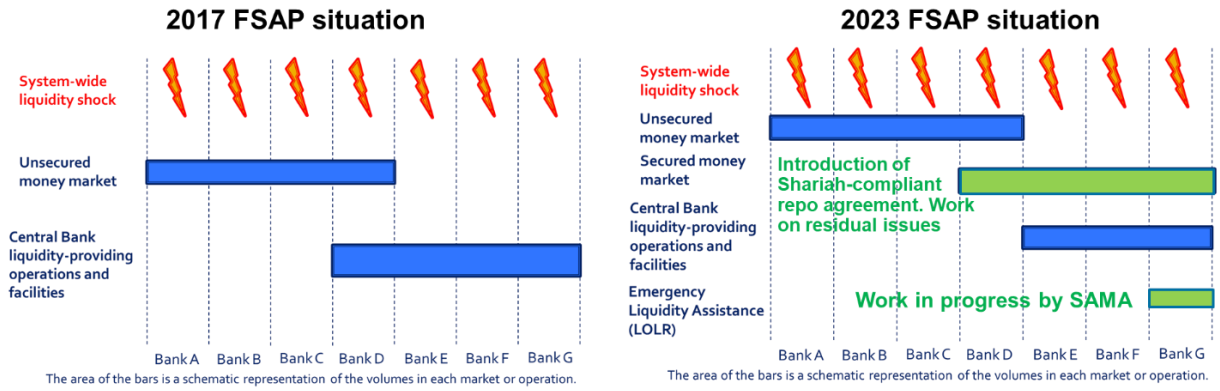
48. SAMA should finish structuring and staffing the SIFI Resolution Division and commence resolution planning. The work involves identifying resolution strategies for each SIFI and developing resolution manuals and playbooks that identify steps, responsibilities, and coordination needed during resolution planning, resolvability assessments, and resolution. SAMA's supervision function should be mandated to review the recovery plans submitted by all DSIBs in 2023.

49. SAMA is developing a legal framework for the DPF. The deposit insurance has been collecting premiums from the industry since 2016 but is still to be operationalized. A new DPF framework is envisaged under the CMFDIP.

B. Emergency Liquidity Assistance

50. The FSAP team's discussions with SAMA indicated good progress in designing an ELA framework (Figure 11). The SCBL provides a very general legal basis for the ELA framework, leaving significant leeway to SAMA to design a sound and effective ELA framework. While a draft ELA regulation could not be shared during the pertinent FSAP mission, technical discussions with SAMA experts suggest that SAMA has done significant exploratory work, including assessing other leading central banks' ELA policies. To set appropriate incentives and manage expectations of all economic agents, SAMA should publish its ELA regulation once ready. The regulation should outline all requirements (e.g., solvency, discretionary nature, use only as last resort, full collateralization, conditionality) and parameters (high interest rate, short maturity). Internal ELA procedures are also needed, covering collateral policies and internal organization. The framework should be operationalized through internal simulations and exercises involving banks, in particular through the prepositioning of collateral.

Figure 11. Saudi Arabia: Progress Towards a Complete Set of Lines of Defense Since 2017



Source: Staff presentation.

51. SAMA and the Ministry of Finance should establish a Memorandum of Understanding (MoU) defining information exchanges and the use of government guarantees for the use of ELA in resolution and other critical scenarios. The MoU should establish the conditions that require the use of government guarantees, e.g., uncertain solvency, uncertain capacity of the bank to provide sufficient ELA collateral, or ongoing resolution with a clear prospect for the emergence of a solvent, viable bank in the near term. These conditions should be reflected in the MoU and may also require adjustments to the current legal framework.

FINANCIAL SECTOR DEVELOPMENT

52. To support efficiency and effectiveness of the Saudi government's large footprint in the economy and financial sector, there is a strong case for undertaking a strategic review of the role of development finance. The authorities use a combination of mechanisms to direct public funds to end users, in line with Vision 2030. This may suppress financial sector development and there are opportunities to shift the state's intervention to playing a more catalytic role, including through a shift to wholesale financing and financing risk capital. The review would identify market and financing gaps and help articulate an overall vision for the role of the state in the financial sector to achieve key development objectives. Given the PIF's significant footprint in the financial sector, it should be incorporated in the strategic review. In moving towards its ambitions of achieving a credit rating and eventually issuing securities, NDF will need to significantly enhance transparency and its performance monitoring framework. There are opportunities for streamlining mandates and aligning functions among market-facing funds to reduce overlaps and enhance efficiency. To help design incentives for market facing funds, the NDF is also urged to treat separately funds that perform quasi-government functions related to the achievement of social mandates.

53. Access to finance for firms has been on the rise, but substantial gaps remain for smaller enterprises, warranting changes to development finance programs and further capacity building. Banks are the main source of credit, and micro and small enterprises (MSEs) account for only 0.7 and 2.5 percent of banks' total credit portfolio, respectively. Reliable data remains among key challenges for informing policy. Stakeholders need to systematically collect and report data on micro, small and medium sized enterprises (MSMEs), and explicitly target MSEs, including women-owned or led businesses. To support better targeting, the current MSME definitions—which include relatively large enterprises—merit review. The effectiveness of the Kafalah loan guarantee program and relevant NDF funds can be enhanced by improving their design (e.g., portfolio guarantees, shifting to wholesale model) and targeting (e.g., to serve MSMEs that don't already have access to finance), and more effectively crowding-in banks and NBFIs.

54. Development of the corporate debt market will help diversify funding. To support market development, the authorities are urged to create a market for qualified professional investors where private placement bonds can be freely traded and enhance the clearance and settlement system to support negotiated over-the-counter (OTC) trades. A trade repository should be mandated to collect all OTC transaction information in a timely manner to enhance transparency and could

offer pricing services for thinly traded bonds based on a model approved by CMA. The ongoing NDF reforms will eventually allow the NDF to tap the markets and gradually reduce reliance on public funding. There are also opportunities to introduce covered bonds or MBS to diversify funding sources of banks and improving their liquidity position.

55. The payments infrastructure in Saudi is comprehensive and well-developed and the legal and regulatory framework was recently reformed. Saudi Payments—the payment system operators—operates: (i) the mada card switch, which supports both the domestic debit scheme and international card scheme transactions; (ii) the sarie Instant Payments System (IPS); and (iii) the SADAD bill payment system. All systems settle in SAMA's Real Time Gross Settlement (RTGS) System, which is also used for interbank large value and low value payments. Seeking to align oversight in line with international good practices and standards, the Law of Payments and Payment Services of 2021 and its implementing regulations of June 2023 expanded SAMA's oversight to all payment systems and their operators, and all payment services and their providers. SAMA is advised to revise its Payments Oversight Framework to reflect the latest legal and regulatory developments, incorporate specific standards for various payment systems and services, and establish a schedule for overseer and independent assessments. This will provide a more comprehensive and transparent oversight process, fostering an innovative and inclusive payments environment. SAMA and CMA should also ensure that all Financial Market Infrastructure (FMI) entities publish disclosures in observance of the principles set for FMIs by the International Committee of Securities Commission (IOSCO).

56. SAMA should prioritize assessing the financial impact of climate risk on the banking sector to inform the development of an evidence-based supervisory approach. SAMA and CMA have initiated climate risk management efforts, facilitating national coordination with the financial sector, and preparing an institutional strategy on climate risk and sustainability. Upon finalization, authorities should disclose their strategy to mobilize the financial sector and provide clarity on the way forward. The definition of supervisory guidelines, currently under development with SAMA, should fully align with the Basel principles on climate-related financial risks and explore integrating a prudential approach to transition plans. This integration aims to foster the management of transition risks while mobilizing financial resources towards the transition to a low-carbon economy, aligning with the Kingdom's objective to diversify its economy away from oil.

AUTHORITIES' VIEWS

57. Saudi Arabia is strongly committed to the FSAP process and the insights it provides into the Saudi financial sector. The authorities welcomed the FSAP's recognition of the meaningful progress made since the 2017.

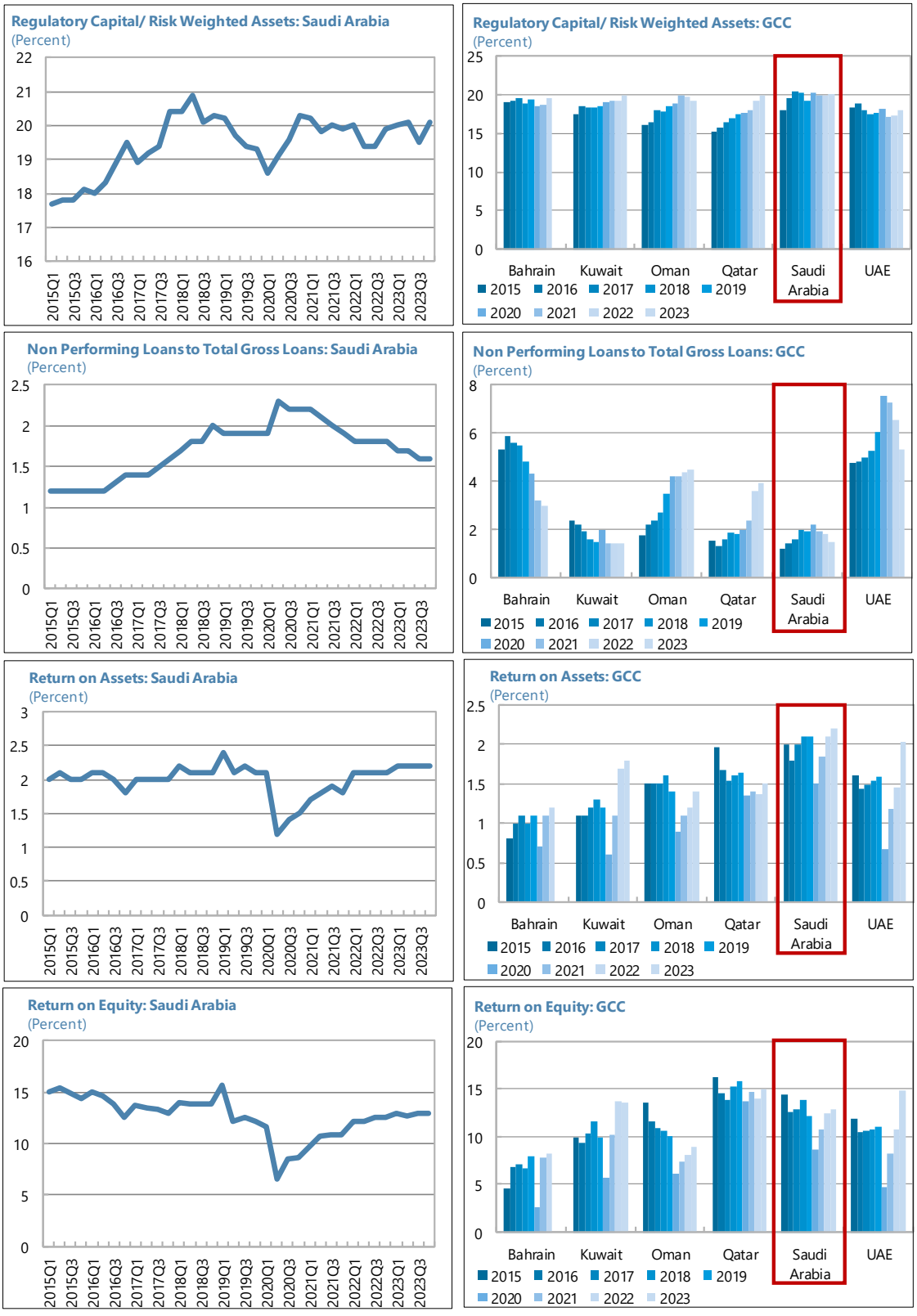
58. The authorities agreed with the systemic risk assessment, which suggests that banks are resilient to a wide range of severe solvency and liquidity shocks. They noted that the FSAP recommendations will be useful as SAMA works to expand their risk assessment toolkit and acknowledged the importance of closing material data gaps to ensure the tools' effectiveness.

59. The authorities welcomed the FSAP's confirmation of the well-functioning institutional framework for macroprudential policy and the well-developed macroprudential policy toolkit. They noted the FSAP recommendations related to the macroprudential regulatory perimeter, risk monitoring framework, and the setting of prudential tools, but argued that these could have been better tailored to the current conjuncture and mitigants arising from strong fiscal buffers. The authorities emphasized the NDF's ongoing progress with improving the focus and effectiveness of the development funds, noting that their activities do not at present create financial stability risks, and argued that independent prudential supervision of the NDF could be considered once these reforms are completed. The funds are adopting international accounting standards and preparing to resume regular reporting of financial results.

60. The FSAP notes several accomplishments in strengthening the regulatory and supervisory framework for banks. However, the authorities pointed that the BCP assessment should better reflect the strengths and performance of SAMA's supervisory approach and actual practice, and steps to strengthen SAMA's operational independence. The authorities note substantial progress in strengthening the supervisory oversight and performance of SAMA, and the new draft BCL, which is expected to be submitted for legislative authorities' approval in 2024 and further align the framework with best international standards. The authorities welcomed the FSAP's confirmation about the regulatory framework's broad alignment with the CPIFR.

61. The authorities considered the findings and recommendations on systemic liquidity management, crisis management and safety nets useful. They welcomed the FSAP's recognition of significant advances in systemic liquidity management, and progress in developing the legal frameworks for ELA and SIFI resolution. They noted that SAMA has the authority to designate any bank as systemic at any point, including at the point of failure, arguing that this would mitigate one of this and the 2017 FSAP's key perceived limitation of the SIFI. They noted the CMFDIP, which aims at full alignment with international best practice within three years.

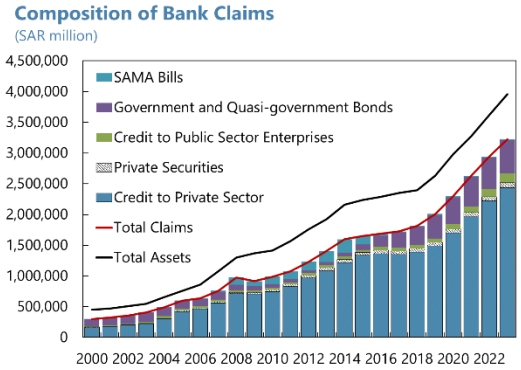
Figure 12. Saudi Arabia: GCC Solvency and Asset Quality Metrics



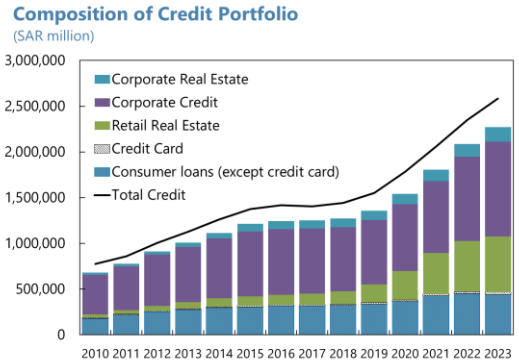
Source: IMF Financial Soundness Indicators.

Figure 13. Saudi Arabia: Commercial Banks Asset Composition

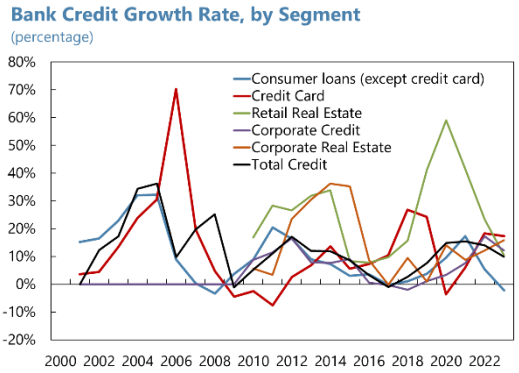
Bank assets are composed mostly of credit to the private sector and public securities.



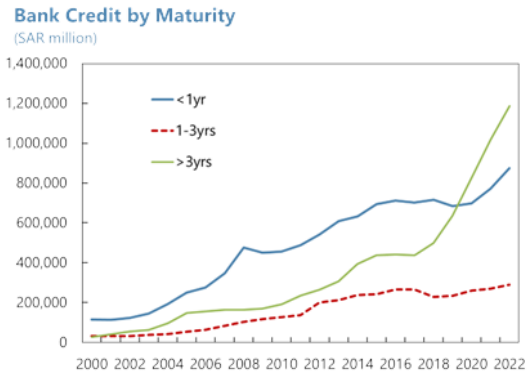
Corporate credit is the largest segment of the credit portfolio. Retail real estate lending was very small until a few years ago, but is now one of the largest segments…



…as it has grown at a very fast pace, particularly in 2020.

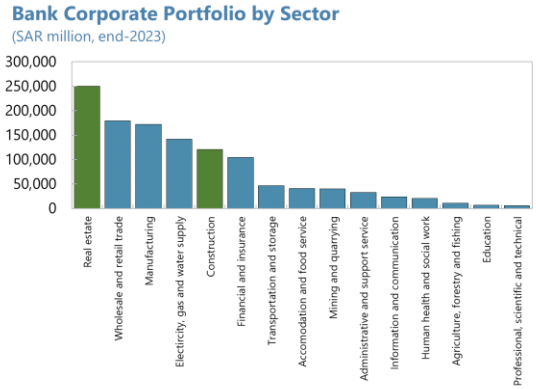


With a growing retail real estate portfolio, the



average maturity of bank credit has increased in recent years.

Real estate activities (including CRE loans) and construction are among the largest sectors in banks' corporate portfolio.[1]

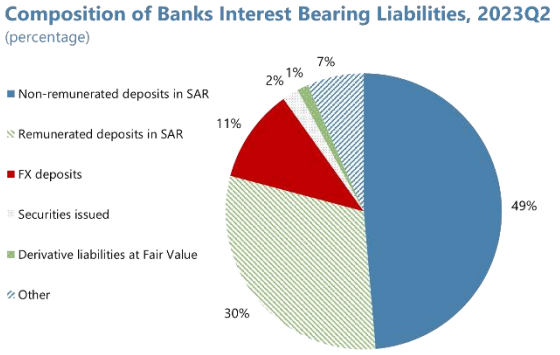


Source: Haver.

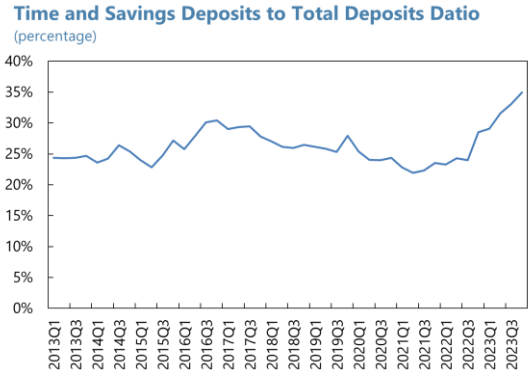
[1] Real estate segment includes commercial real estate loan.

Figure 14. Saudi Arabia: Commercial Banks Liability Composition

Banks are financed mostly with deposits, many of which are not remunerated.

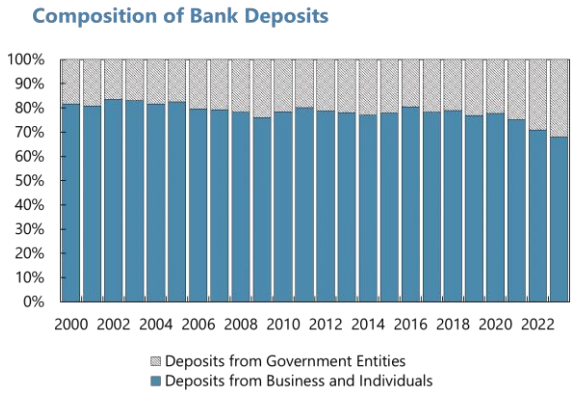


In a context of high interest rates, there has been a shift from demand to time deposits.

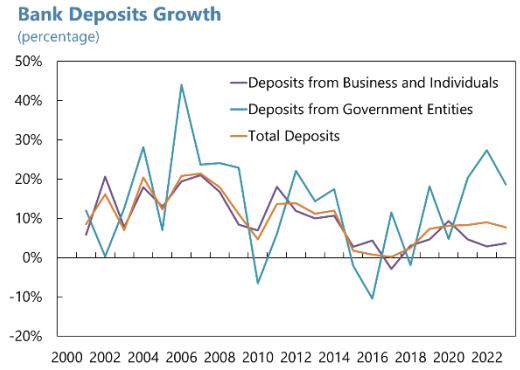


Source: Haver.

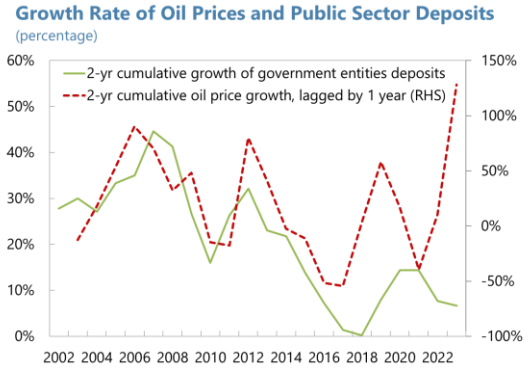
Deposits from public entities account for over a quarter of total bank deposits…



…and have been growing at a faster rate than private sector deposits.



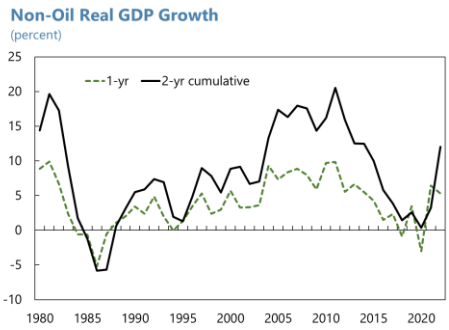
Government deposits have historically been highly correlated with oil prices, although the correlation seems to have diminished in recent years.



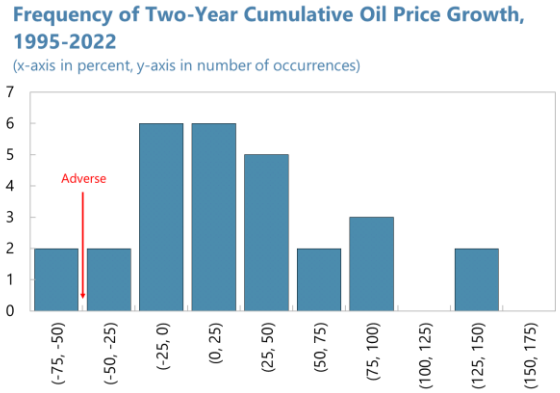
Sources: Haver and IMF staff calculations.

Figure 15. Saudi Arabia: Adverse Scenario Benchmarks

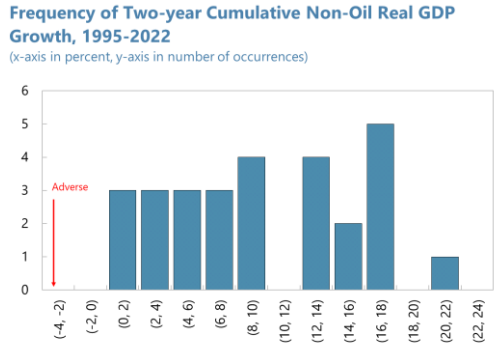
The two-year cumulative non-oil GDP growth has been highly volatile, with a standard deviation of 5.7 percentage points over the period 1995–2022.



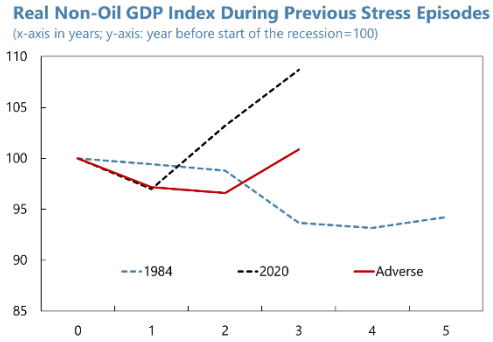
The shock to oil prices represents a 50 percent decline (relative to baseline) in the second year, which is equal to 1 standard deviation.



The adverse scenario two-year cumulative growth for non-oil GDP is-3.4 percent, which is 2 standard deviations below baseline and 2.3 standard deviations below mean.

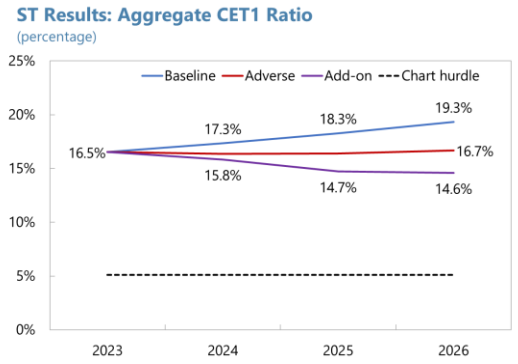


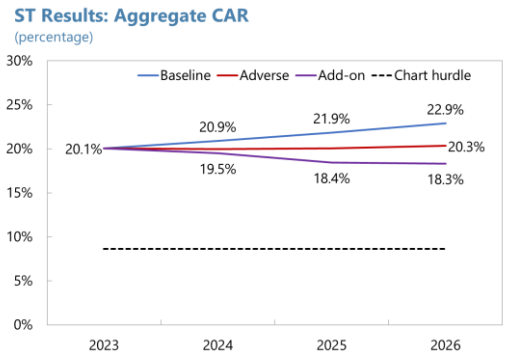
The non-oil GDP contraction in the adverse scenario is of similar magnitude as during the pandemic, but recovery is slower. The adverse is much milder than the mid-1980s recession.

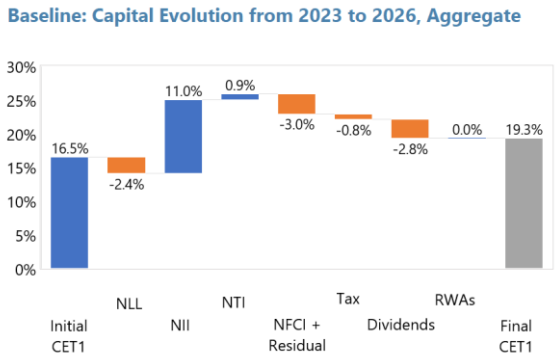


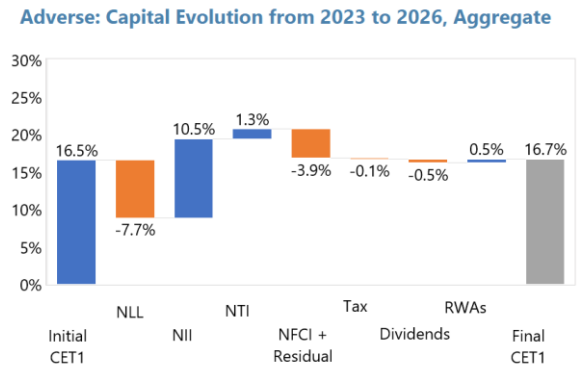
Sources: Haver and IMF staff calculations.

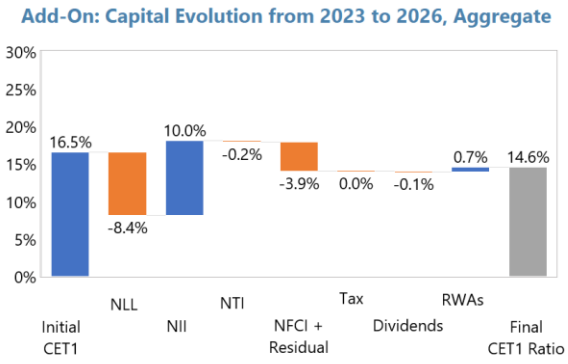
Figure 16. Saudi Arabia: Solvency Stress Test Results for the Aggregate Banking System





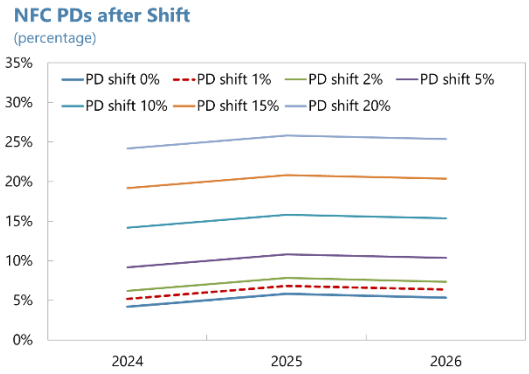


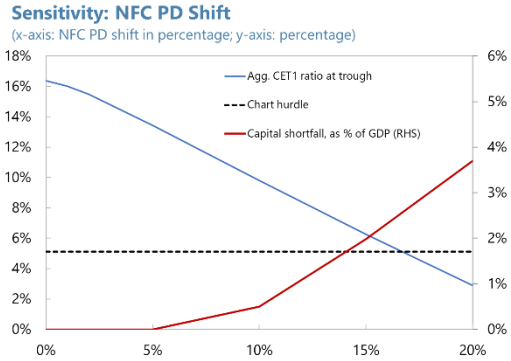


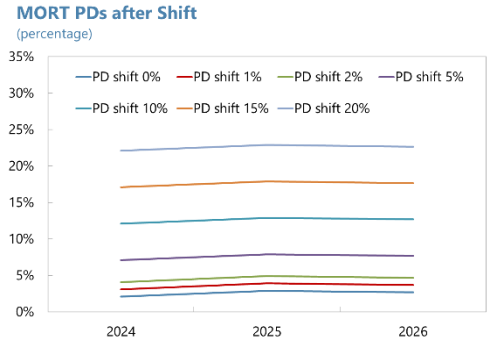


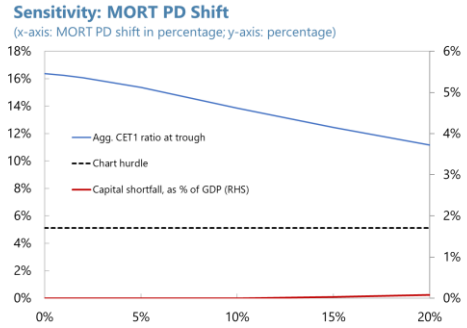
Source: IMF staff calculations.
Note: Due to confidentiality of the Pillar II add-on, the dashed horizontal line which corresponds only to the minimum capital requirement plus the average DSIB surcharge is displayed as "chart hurdle." However, any references to the hurdle (and capital shortfalls relative to the hurdle) in the text includes the Pillar II add-on.

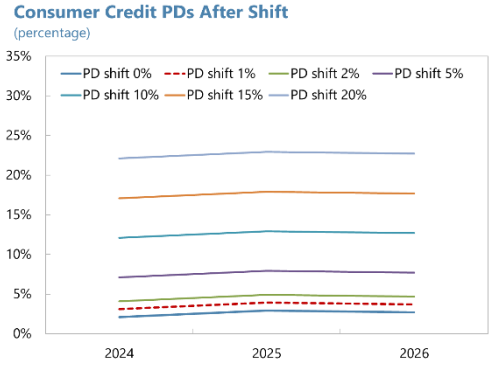
Figure 17. Saudi Arabia: Sensitivity Analysis with Respect to Default Rates











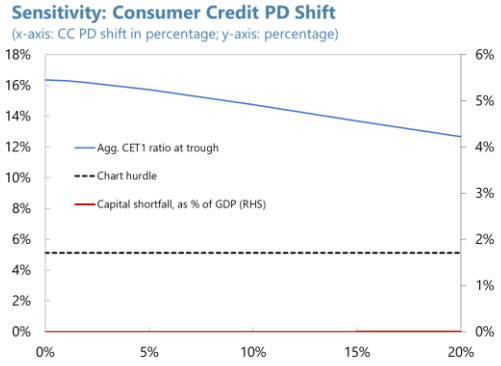
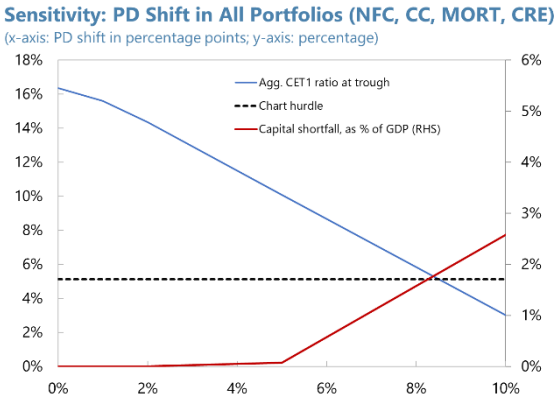


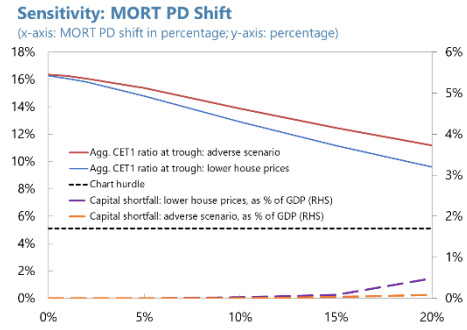
Figure 17. Saudi Arabia: Sensitivity Analysis with Respect to Default Rates (Concluded)



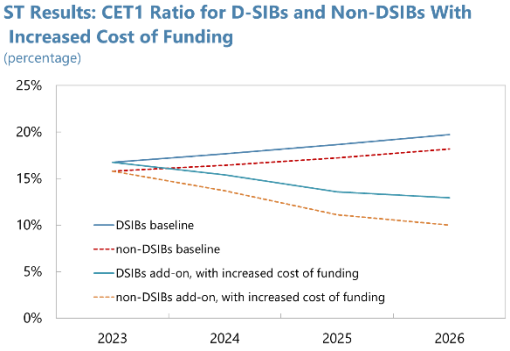
Source: IMF staff calculations.
Note: The sensitivity exercises apply a parallel shift upwards of the portfolio segment-specific PD curves relative to the adverse scenario. For each shift of the PD curve (left panels), the corresponding CET1 ratio of the aggregate banking system (at the trough of the stress testing window) and the capital shortfall relative to the hurdle are displayed (right panel). Four cases are considered: a shift of the PD curve in the NFC segment only; a shift in the consumer credit (CC) segment only; a shift in the mortgage (MORT) segment only; and a shift in all segments at the same time. Due to confidentiality of the Pillar II add-on, the dashed horizontal line which corresponds only to the minimum capital requirement plus the average DSIB surcharge is displayed as "chart hurdle." However, any references to the hurdle (and capital shortfalls relative to the hurdle) in the text includes the Pillar II add-on.

Figure 18. Saudi Arabia: Other Sensitivity Analyses

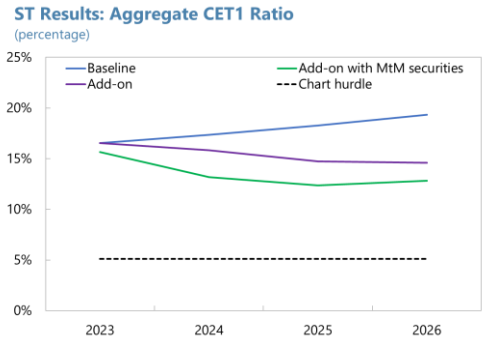
With house prices dropping by 40 percent (relative to 2023) at the trough, the collateralization of mortgages would deteriorate but the banking system would remain resilient to higher default rates in this portfolio segment.



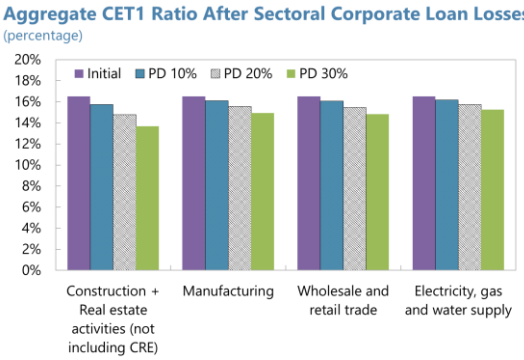
With a 10 percent of bank liabilities shifting from non-remunerated deposits to earning the current policy rate, the CET1 ratio would drop to 13 and 10 percent for DSIBs and non-DSIBs respectively.



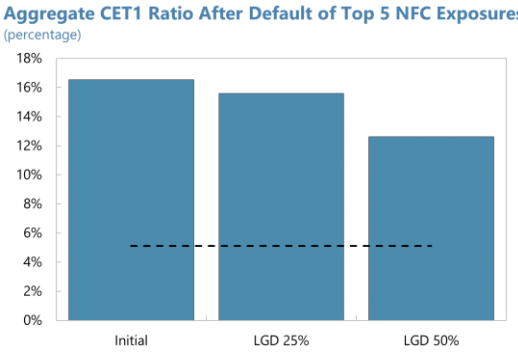
With the whole securities portfolio marked-to-market, the aggregate CET1 ratio would drop by 0.8 percentage points at the starting point due to the realization of unrealized losses and would be 12.8percent by 2026.



A one-time default of 10, 20 or 30 percent in individual economic sectors of the NFC portfolio would lead to a drop of at most 2.8 percentage points in the aggregate CET1 ratio.



Banks would broadly remain resilient to top five corporate exposure defaults.



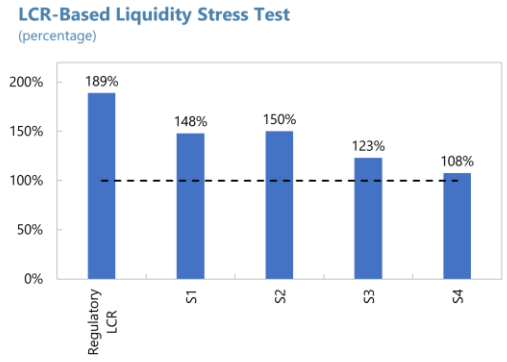
Sources: SAMA and IMF staff calculations.
Note: Due to confidentiality of the Pillar II add-on, the dashed horizontal line which corresponds only to the minimum capital requirement plus the average DSIB surcharge is displayed as "chart hurdle." However, any references to the hurdle (and capital shortfalls relative to the hurdle) in the text includes the Pillar II add-on.

Figure 19. Saudi Arabia: LCR-Based Liquidity Stress Test

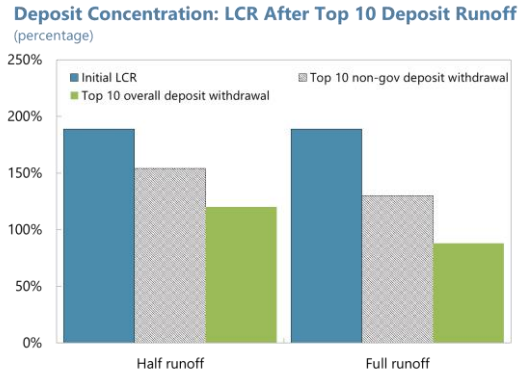
The LCR-based liquidity stress test considered regulatory parameters and four scenarios of additional stress on: retail deposits (S1), wholesale deposits (S2), all deposits (S3=S1+S2), plus haircuts on HQLA (S4).

		Weights				
		Regulatory LCR	S1	S2	S3	S4
Cash outflows	Insured deposit in trans account with 5% runoff at home	5%	15%	5%	15%	15%
	Insured deposit in trans account with 5% runoff not at home	5%	15%	5%	15%	15%
	Insured deposit in non trans account with 5% runoff at home	5%	15%	5%	15%	15%
	Insured deposit in non trans account with 5% runoff not at home	5%	15%	5%	15%	15%
	Uninsured deposit	10%	20%	10%	20%	20%
	Term deposit wo supervisory runoff	0%	10%	0%	10%	10%
	Uninsured deposit small bz	10%	10%	20%	20%	20%
	Non operational deposits by NFC fully insured	20%	20%	30%	30%	30%
	Non operational deposits by NFC not fully insured	40%	40%	50%	50%	50%
	Non operational deposits by sovereign, CB, PSEs, MDB fully insured	20%	20%	30%	30%	30%
	Non operational deposits by sovereign, CB, PSEs, MDB not fully insured	40%	40%	50%	50%	50%
HQLA haircuts	Zero risk securities issued by sovereigns	100%	100%	100%	100%	80%
	Zero risk securities guaranteed by sovereigns	100%	100%	100%	100%	80%
	Zero risk securities issued or guaranteed by CB	100%	100%	100%	100%	80%
	Zero risk securities issued or guaranteed by PSEs	100%	100%	100%	100%	80%
	Zero risk securities issued or guaranteed by IOs	100%	100%	100%	100%	80%

The aggregate LCR remains above the 100 percent hurdle across the stress scenarios.



The withdrawal of top 10 large deposits would have a sizeable impact on the LCR, thus indicating significant concentration in deposits.[1]



Sources: SAMA and IMF staff calculations.

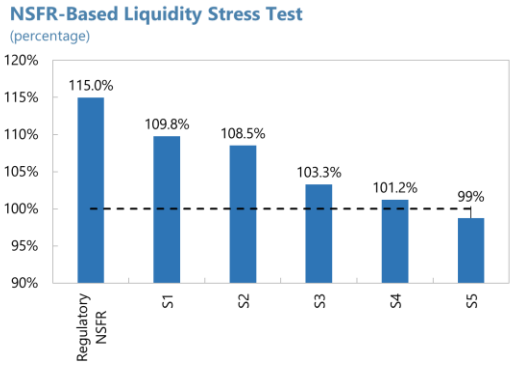
[1] LCR after the remainder of the top 10 deposits (after the regulatory runoff rate) are withdrawn by half or fully. Deposits from financial institutions are ignored in this exercise since they are already fully withdrawn in the baseline LCR.

Figure 20. Saudi Arabia: NSFR-Based Liquidity Stress Test

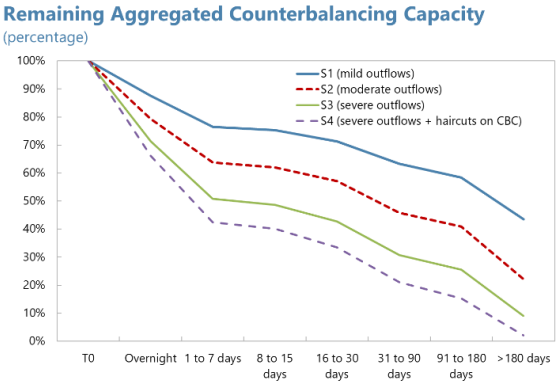
The NSFR-based liquidity stress test considered regulatory parameters and five scenarios of additional stress on: retail deposits (S1), wholesale funding (S2), all funding (S3=S1+S2), plus haircuts on HQLA (S4) and portfolio reallocation towards longer maturities (S5).

			Weights				
			Regulatory NSFR	S1	S2	S3	S4
ASF	Stable demand and/or term deposits from retail and small business customers	< 6 months	95%	85%	95%	85%	85%
		6 to 12 months	95%	85%	95%	85%	85%
	Less stable demand and/or term deposits from retail and small business customers	< 6 months	90%	80%	90%	80%	80%
		6 to 12 months	90%	80%	90%	80%	80%
	Unsecured funding from non-financial corporates	< 6 months	50%	50%	40%	40%	40%
		6 to 12 months	50%	50%	40%	40%	40%
	Unsecured funding from sovereigns/PSEs/MDBs/NDBs	< 6 months	50%	50%	40%	40%	40%
		6 to 12 months	50%	50%	40%	40%	40%
RSF	Securities eligible as L1 HQLA unencumbered	< 6 months	5%	5%	5%	5%	15%
		6 to 12 months	5%	5%	5%	5%	15%
		> 1 year	5%	5%	5%	5%	15%

The aggregate NSFR remains above the 100 percent hurdle except in the most stringent scenario (S5).



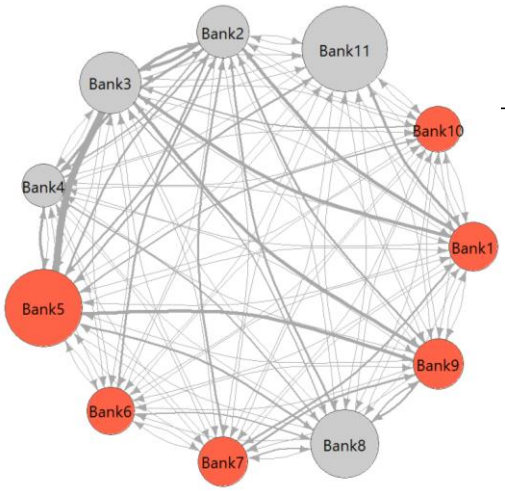
The cashflow analysis is consistent with the LCR- and NSFR-based exercises: banks have enough counterbalancing capacity to face outflows except in the most severe stress scenarios.



Sources: SAMA and IMF staff calculations.

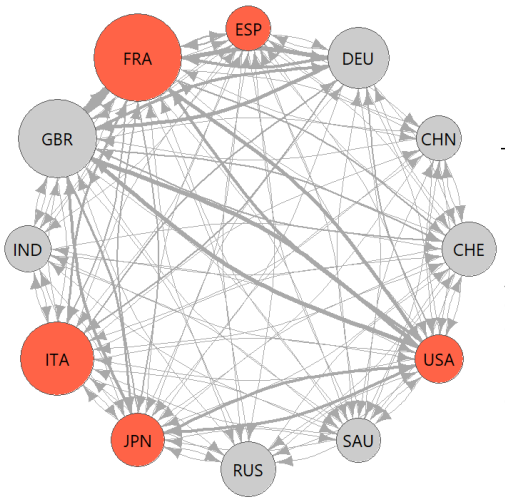
Figure 21. Saudi Arabia: Interconnectedness Analysis

The unsecured interbank market in Saudi Arabia is small relative to banks' capitalization, so one bank's failure never triggers the failure of any other banks.



	Induced Failures	Contagion Rounds	Hazard	Hazard Rate (percent)	Index of Contagion (percent)	Index of Vulnerability (percent)
Bank 1	0	0	0	0	0.9	0.1
Bank 2	0	0	0	0	0.8	0.6
Bank 3	0	0	0	0	0.6	1.0
Bank 4	0	0	0	0	0.3	0.3
Bank 5	0	0	0	0	1.4	0.5
Bank 6	0	0	0	0	0.2	0.0
Bank 7	0	0	0	0	0.3	0.3
Bank 8	0	0	0	0	0.3	1.7
Bank 9	0	0	0	0	0.5	1.6
Bank 10	0	0	0	0	0.1	0.3
Bank 11	0	0	0	0	0.1	1.7

The failure of the Saudi banking sector would have a negligible impact on foreign banks. When prioritizing data provided by SAMA (whenever different from that available from other reporting countries in the BIS's locational banking statistics), the Saudi banking sector never fails when foreign banking sectors fail.



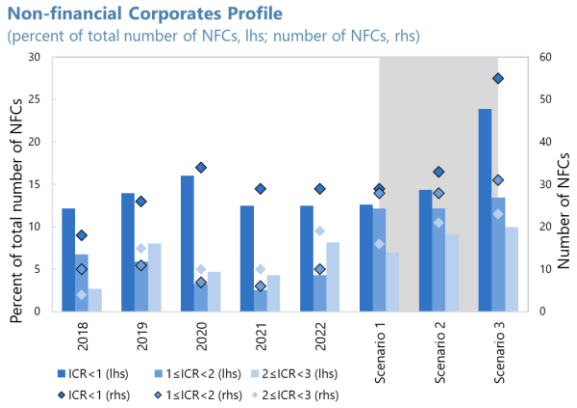
	Induced Failures	Contagion Rounds	Hazard	Hazard Rate (percent)	Index of Contagion (percent)	Index of Vulnerability (percent)
SAU	0	0	0	0.0	0.3	6.8
DEU	7	3	3	27.3	43.5	29.9
FRA	7	2	3	27.3	42.9	32.8
ITA	0	0	4	36.4	4.9	34.7
ESP	0	0	4	36.4	4.2	34
JPN	0	0	4	36.4	9.6	31.6
CHE	0	0	4	36.4	4	34
GBR	7	2	3	27.3	43.7	34.4
USA	7	2	3	27.3	41.1	19.6
RUS	0	0	0	0.0	0.2	9.5
CHN	0	0	0	0.0	2.4	2
IND	0	0	0	0.0	0.5	7.4

Sources: SAMA and IMF staff calculations.
Note: Interconnectedness analysis based on Espinosa-Vega and Sole (2010).
Network charts: Red nodes: net borrowers; grey nodes: net lenders; arrows pointing from A to B indicate A owes to B; size of arrow edge indicates size of exposure; size of node indicates net exposure as a percentage of CET1.
Contagion analysis tables: Induced Failures: number of bank failures induced by this bank; Contagion Rounds: number of contagion rounds until no banks fail due to the failure of this bank; Hazard: number of banks whose failure will result in the failure of this bank; Hazard Rate: the percentage of other banks whose failure will result in the failure of this bank; Index of Contagion: averaged percentage of loss of other banks due to the failure of this bank; Index of Vulnerability: percentage of loss due to the default of all other banks.
Cross-border charts prioritize data provided by SAMA whenever different from that available from other reporting countries in the BIS's locational banking statistics.

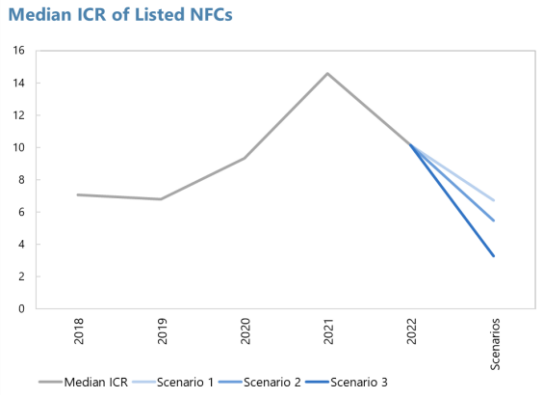
Figure 22. Saudi Arabia: Listed NFCs' Sensitivity to Shock to Earnings and Borrowing Costs

Three scenarios combining shocks to earnings before interest, taxes, depreciation and amortization (EBITDA) and interest rate are used to assess the resilience of NFCs. In Scenario 1, EBITDA declines by 15 percent, while the implied interest rate increases by 100 basis points (bps). Scenario 2 has EBITDA declining by 25 percent and interest rates increasing by 150 bp, scenario 3 is the most adverse with EBITDA decling by 40 percent and interest rates increasing by 300 bp. ICR is defined as the ratio of EBITDA to interest expense, and debt-at-risk – as the debt of firms with an ICR below 1.

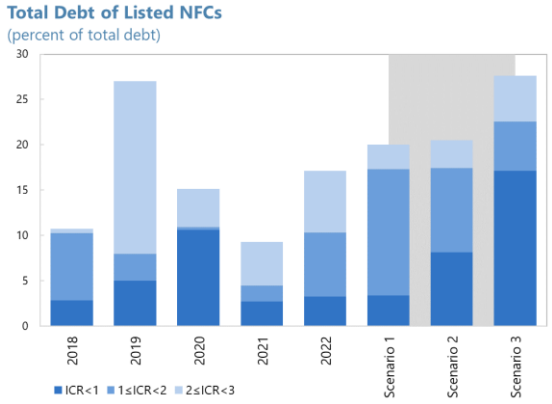
Listed NFCs appear resilient—even severe shocks have the share of companies with ICR< 1 increase by only 5pp.



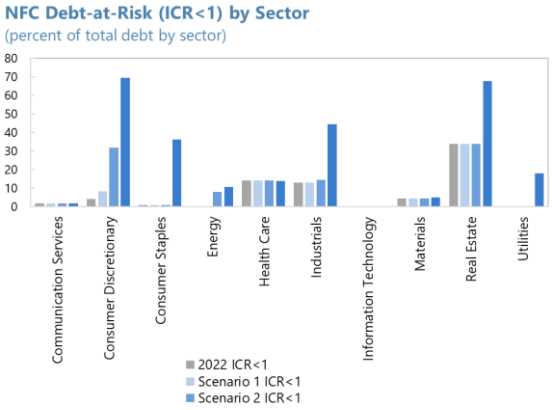
The median ICR dips but still remains above 1 under the adverse scenarios.



As companies' ICRs deteriorate under the most adverse scenario, relative impact on debt-at-risk is larger—debt-at-risk would increase to 15 percent from a low base of 2 percent.



The most vulnerable listed companies are in consumer discretionary, real estate, energy, and industrial sectors.



Sources: S&P Capital IQ and IMF staff calculations.
Note: 2018 Article IV Staff Report and 2023 Article IV Staff Report analyzed corporate resiliency, with consistent findings. For information on the sample, please see a note under Figure 4.

Table 5. Saudi Arabia: Selected Economic Indicators

	2020	2021	2022	Est. 2023	Proj. 2024	Proj. 2025	Proj. 2026	Proj. 2027	Proj. 2028	Proj. 2029
	(Percent change; unless otherwise indicated)									
National income and prices										
Crude oil production (million of barrels per day)	9.2	9.1	10.6	9.6	9.0	9.7	10.2	10.5	10.7	11.0
Average oil export price (U.S. dollars per barrel)[1]	42.7	73.2	102.0	84.3	82.5	77.8	75.4	72.9	71.1	70.0
Nominal GDP (SAR billions)	2,754	3,278	4,157	4,003	4,108	4,312	4,538	4,762	5,010	5,290
Nominal GDP (US$ billions)	734	874	1,109	1,068	1,096	1,150	1,210	1,270	1,336	1,411
Nominal non-oil GDP (SAR billions)	2,032	2,160	2,358	2,530	2,670	2,845	3,025	3,213	3,406	3,613
Nominal GDP per capita (US$)	23,271	28,396	34,454	32,530	32,728	33,675	34,748	35,745	36,873	38,171
Real GDP	-3.6	5.1	7.5	-0.8	1.7	4.7	4.1	3.6	3.5	3.5
Oil	-6.9	1.2	15.0	-9.0	-4.5	5.8	3.8	2.4	2.6	2.6
Non-oil [2]	-2.3	5.6	5.3	3.8	3.5	4.4	4.3	4.1	3.9	3.9
Consumer price index (avg)	3.4	3.1	2.5	2.3	1.9	2.0	2.0	2.0	2.0	2.0
External sector										
Exports f.o.b.	-33.5	58.9	48.9	-21.6	-7.0	5.3	4.9	1.3	1.6	2.2
Oil	-40.5	69.4	61.8	-24.0	-12.6	3.2	2.3	-0.9	-0.5	0.0
Imports f.o.b.	-10.2	11.0	25.9	11.2	9.2	11.9	8.5	5.9	5.4	5.0
Current account balance (percent of GDP)	-3.5	4.8	13.7	3.2	-0.1	-1.1	-1.4	-2.1	-2.5	-2.7
Export volume	-5.2	5.2	9.2	-7.7	-0.9	11.0	9.1	4.1	5.0	4.5
Import volume	-9.5	0.4	14.3	14.0	7.4	10.8	7.7	5.0	4.2	3.7
Terms of trade	-34.0	46.5	31.9	-15.6	-6.8	-7.0	-4.8	-4.5	-4.3	-3.6
Money and credit										
Net foreign assets	-8.9	-4.5	3.8	-7.4	-2.2	0.2	5.2	5.8	4.8	4.3
Net domestic assets	24.9	19.3	12.6	18.8	11.0	11.0	9.9	8.7	8.1	7.5
Of which: claims on private sector	14.0	15.4	12.6	10.0	10.1	9.7	8.8	7.4	7.1	6.5
Money and quasi-money (M3)	8.3	7.4	8.1	7.6	8.8	9.0	7.4	6.5	6.3	6.0
3-month Interbank rate (percent p.a.) [3]	0.8	0.9	5.3	6.2	...	...	...	...	...	...
Central government finances	(Percent of GDP)									
Revenue	28.4	29.5	30.8	30.3	29.6	29.6	29.4	28.6	27.8	27.1
Expenditure	39.1	31.7	28.2	32.3	32.9	32.4	32.2	31.6	30.9	30.1
Expense	33.4	28.1	24.8	27.6	27.8	27.4	27.2	26.5	25.7	24.9
Net acquisition of non-financial assets	5.6	3.6	3.5	4.7	5.0	5.0	5.1	5.1	5.2	5.2
Net lending (+)/borrowing (-)	-10.7	-2.2	2.5	-2.0	-3.3	-2.9	-2.9	-3.0	-3.1	-3.0
Excluding oil revenue	-25.7	-19.4	-18.1	-20.9	-21.2	-20.5	-20.1	-19.4	-18.5	-17.7
Non-oil primary balance/non-oil GDP	-37.2	-29.1	-32.2	-33.0	-32.4	-30.4	-29.4	-27.8	-26.1	-24.7
Non-exported oil primary balance/non-oil GDP	-35.3	-26.9	-29.4	-33.0	-32.4	-30.4	-29.4	-27.8	-26.1	-24.7
Central government deposits at SAMA	15.9	11.8	11.1	10.9	10.6	10.1	9.6	9.2	9.1	9.2
Central government gross debt	31.0	28.6	23.9	26.2	28.7	30.0	31.0	32.3	33.8	35.3
Central government net financial assets	-10.2	-11.1	-8.6	-14.1	-16.9	-18.7	-20.4	-22.1	-23.7	-25.2
Memorandum items:										
SAMA's total net foreign assets (US$ billions)	449.2	438.2	440.5	417.1	405.2	403.2	422.5	445.4	465.1	483.3
In months of imports of goods and services [3]	25.2	20.4	18.1	15.8	14.1	13.1	13.2	13.4	13.4	13.4
Imports goods & services/GDP	24.8	24.4	23.3	27.3	28.8	30.1	30.4	30.3	30.0	29.4
Real effective exchange rate (2010=100, end of period) [3]	113.9	114.7	119.6	118.6	...	...	...	...	...	...
Average exchange rate Saudi riyal/U.S. dollar	3.75	3.75	3.75	3.75	...	...	...	...	...	...
Population (millions)	31.6	30.8	32.2	32.8	33.5	34.1	34.8	35.5	36.2	37.0
Unemployment rate (nationals)	13.7	11.3	9.4	8.3	...	...	...	...	...	...
Unemployment rate (overall)	7.7	6.6	5.6	4.9	...	...	...	...	...	...
All-Shares Price Index (TASI)	8,760	11,282	10,478	11,967	...	...	...	...	...	...

Source: IMF's July 2024 WEO.
Note: The FSAP baseline follows the IMF's January 2024 WEO.
[1] Includes refined products.
[2] Recent reclassification of national accounts is not yet fully reflected.
[3] Latest observation. PIF's investments are classified as private.

Table 6. Saudi Arabia: Structure of the Financial System (2016 and 2022)

2022

	Number	Total assets			
		In billions of riyals	In billions of US dollars	In percent of total	In percent of GDP[8]
Commercial banks	27	3,621	966	61	87
Domestic	11	3,537	943	59	85
Foreign	16	84	22	1	2
Pension fund (GOSI)	1	1,278	341	21	31
NDF Development Funds[1]	11	415	111	7	10
Investment funds[2]	939	478	128	8	12
Insurance companies	27	81	22	1	2
Finance companies[3]	37	78	21	1	2
Total	**1042**	**5,951**	**1,587**	**100**	**143**
Public Investment Fund (PIF)[4]	1	2,910	776		70

2016 Adjusted to the 2024 FSAP Presentation

	Number	Total assets			
		In billions of riyals	In billions of US dollars	In percent of total	In percent of GDP[8]
Commercial banks	24	2,289	610	51	92
Domestic	12	2,220	592	50	89
Foreign	12	69.3	18	2	3
Pension funds[5]	2	1,169	312	26	47
Development Funds (SCIs)[6]	4	472	126	11	19
Investment funds[2]	494	217	58	5	9
Insurance companies	34	57	15	1	2
Finance companies	34	39	10	1	2
Total	**592**	**4,243**	**1,131**	**95**	**170**
Public Investment Fund (PIF)[4]	1	350	93		8

2016 As Presented in the 2017 FSAP

	Number	Total assets			
		In billions of riyals	In billions of US dollars	In percent of total	In percent of GDP[8]
Commercial banks	24	2,289	610	51	92
Domestic	12	2,220	592	50	89
Foreign	12	69.3	18	2	3
Pension funds[5]	2	1,169	312	26	47
Specialized credit institutions (SCIs)	5	822	219	18	33
Investment funds[7]	275	88	23	2	4
Insurance companies	34	57	15	1	2
Finance companies	34	39	10	1	2
Total	**374**	**4,464**	**1,190**	**100**	**179**

Sources: SAMA, CMA, PIF, GOSI, and IMF staff calculations.
[1] One newly established Fund with small balance sheet is excluded.
[2] Includes public and private investment funds.
[3] Includes SRC.
[4] PIF's "assets under management" at end-2022 were US$596 billion. FSAP data for 2016 was estimated based on end-2015 (SAR 319 bn).
[5] The two pension funds have since merged.
[6] Excludes PIF. During the 2017 FSAP, development funds were called "Specialized Credit Institutions" and included PIF.
[7] Public Investment Funds only.
[8] The reduction in financial sector size measured against GDP in 2022 compared with 2016 is partly due to reclassification of PIF and partly due to the large nominal increase in 2022 GDP on the back of increased oil production.

Table 7. Saudi Arabia: Financial Soundness Indicators (2018–2023)

(Percent, unless otherwise indicated)

	2018	2019	2020	2021	2022	2023
Banking sector						
Structure of the banking sector						
Number of licensed banks	29	25	25	26	27	28
Number of banks accounting for:						
25 percent of total assets	2	2	2	1	1	1
75 percent of total assets	6	6	6	5	5	5
Total assets (percent of GDP)	80.1	81.6	104.9	97.2	84.3	95.9
Of which: Foreign currency-denominated (as percent of total assets)	9.4	9.5	8.7	8.1	8.2	8.3
Total loans (percent of GDP)	48.3	51.8	67.6	65.4	58.5	66.7
Credit to private sector (percent of GDP)	46.7	47.4	61.9	60.3	53.5	60.9
Total deposits, excluding interbank (as percent of GDP)	56.3	57.1	70.6	64.6	55.2	61.8
Capital adequacy						
Regulatory capital to risk-weighted assets	20.3	19.3	20.3	19.9	19.9	20.1
Tier-1 capital to risk-weighted assets	18.5	18.0	18.7	18.2	18.4	18.6
Asset quality						
Net loans to total assets	62.6	63.5	64.4	67.3	69.3	69.5
Gross NPLs to gross loans	2.0	1.9	2.2	1.9	1.8	1.5
Total provisions to gross NPLs	157.2	148.1	134.7	147.7	124.5	129.8
Net NPLs to total capital	1.1	1.6	2.5	2.5	2.7	2.2
Total provisions for loan losses (as percent of total loans)	3.2	2.8	2.9	2.7	2.2	1.9
Loans to property and construction sector to total loans	-	-	-	-	-	-
Loans to domestic manufacturing sector to total loans	-	-	-	-	-	-
Contingent and off-balance sheet accounts to total assets	71.3	73.9	69.0	63.3	65.6	64.5
Profitability						
Profits (percent change)	9.8	4.5	-24.0	42.9	28.5	11.5
Average pretax return on assets	2.1	2.1	1.5	1.8	2.1	2.2
Return on equity	13.8	12.1	8.6	10.8	12.5	12.8
Noninterest expenses to total income [1]	36.3	35.9	36.2	36.1	34.0	32.9
Average lending spread	3.9	3.9	3.5	3.2	3.1	3.1
Liquidity						
Liquid assets to total assets	22.3	25.4	26.8	24.7	22.8	21.8
Liquid assets to short-term liabilities [2]	35.5	41.3	43.8	41.3	39.7	38.9
Customer deposits to net loans	115.6	115.0	109.6	102.6	97.5	96.1
Demand deposits to total deposits	62.2	61.2	66.0	64.6	57.9	53.1
Sensitivity to market risk						
Foreign currency-denominated deposits to total deposits	8.7	8.6	7.4	9.5	11.2	9.8
Foreign currency-denominated loans to total loans	8.4	8.9	8.6	7.5	7.5	8.1
Foreign currency-denominated contingent and off-balance sheet accounts to total assets	27.1	27.5	28.0	27.1	28.7	28.3
Net open foreign currency position to capital	6.4	6.7	7.3	0.0	-2.4	1.2
Stock market						
Stock market capitalization (percent of GDP)	63.0	287.0	330.6	307.3	237.7	281.2
Overall stock market price index (change in percent)	8.3	7.2	3.6	29.8	-7.1	14.2
Bank stock price index (change in percent)	31.1	12.4	-6.4	61.0	-5.6	5.7

Source: SAMA.

[1] Total income includes net interest income and gross noninterest income.

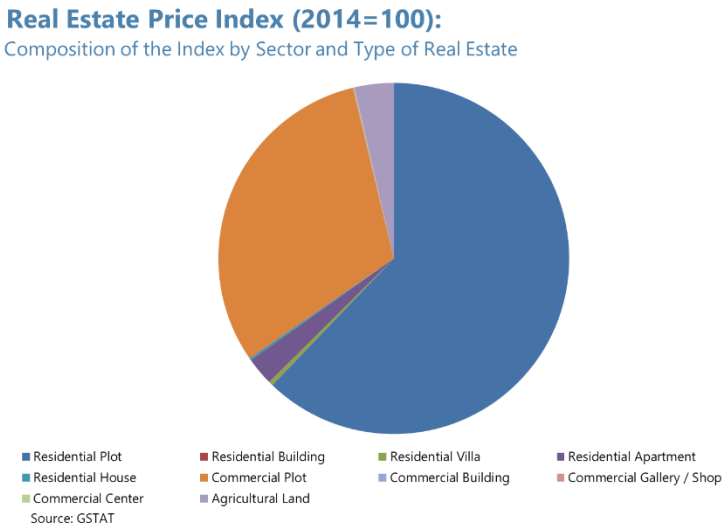
[2] Short-term liabilities include demand deposits maturing in 90 days or less. Liquid assets include cash, gold, Saudi government bonds and treasury bills and interbank deposits maturing within 30 days.

Appendix I. Residential and Commercial Real Estate Prices

1. The GASTAT is responsible for the compilation of real estate price indices in Saudi Arabia. The price indices are based on a dataset of real estate transactions that are available from the MoJ.

Appendix I. Figure 1. Saudi Arabia: Composition of the Real Estate Price Index

The land weight (plot) for residential real estate, commercial real estate, and agriculture represents over 95 percent of the total weight.



Source: GASTAT.

2. The authorities have identified flaws in the compilation of real estate price indices. The indices are based on stratification and weights determined in 2014, missing neighborhoods developed across the Kingdom since. Over half of recent real estate transaction data is misclassified as land. Moreover, "off-plan" transactions—where a property is sold before its completion—are included in the indices upon the completion of the construction project, resulting in a 2–3-year lag. GASTAT is updating the methodology (weighting and stratification) and correcting the misclassification by leveraging Census 2022 and data from MOMRAH and REGA. The commercial real estate price index also needs an update regarding weights and property classifications.

3. While the overall indices for real estate need an overhaul, price information on house transactions is available through the MoJ's real estate exchange. The MoJ exchange contains a registry that includes all housing transactions for completed residential and commercial real estate projects. However, the registry does not include off-plan transactions, and MoJ is exploring how best to include them in the future. Many government entities use this data to monitor the housing market including the Real Estate General Authority, that publishes house price data is based on MoJ register.

Appendix II. Risk Assessment Matrix (Early 2024)

Nature/ Source of Main Risks[1]	Likeli-hood	Expected Impact on the Financial Sector if Risk is Realized
Global Risks (Conjunctural)		
Intensification of regional conflicts. Escalation or spread of the conflict in Gaza and Israel, Russia's war in Ukraine, and/or other regional conflicts or terrorism disrupt trade (e.g., energy, food, tourism, supply chains), remittances, FDI and financial flows, payment systems, and increase refugee flows.	**High**	**Medium** • Intensification of Israel-Gaza conflict into a prolonged regional conflict poses a threat to energy and trade infrastructure and/or critical supply chains, FDI and financial flows, including for the Vision 2030 mega/giga projects. • An economic slowdown and increase in the risk premium would have adverse effects on the fiscal, corporate, and household sectors. Increased credit risk and higher cost of funding would dent on bank solvency. • Increases in oil prices in the event of disruptions to energy markets would help counterbalance the effects of an economic slowdown and tighter financial conditions.
Abrupt global slowdown. Global and idiosyncratic risk factors cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial channels, and market fragmentation triggering sudden stops in EMDEs. • **China:** Sharper-than-expected contraction in the property sector weighs on private demand, further amplifies local government fiscal strains, and results in disinflationary pressures and adverse macro-financial feedback loops. • **Europe:** Intensifying fallout from Russia's war in Ukraine, supply disruptions, tight financial conditions, and real estate market corrections exacerbate economic downturn. • **U.S.:** Amid tight labor markets, inflation remains elevated, prompting the Fed to keep rates higher for longer and resulting in more abrupt financial, housing, and commercial real estate market correction.	**Medium**	**Medium** • A global slowdown would lead to lower oil prices, impacting economic growth, and deteriorating the current account and fiscal balance. • Under the SAR-USD peg, Fed monetary tightening would be followed by domestic rate hikes, leading to higher real interest rates and real appreciation, thus deepening the economic slowdown (historical evidence, however, suggests a low elasticity of Saudi GDP with respect to Fed policy rates – see for example, IMF Selected Issues Saudi Arabia 2022). • The tightening of global financial conditions would cause an increase in the risk premium, with adverse effects on the fiscal, corporate, and household sectors. • In this context of economic slowdown and tighter financial conditions, an increase in default rates would dent on bank solvency ratios, while higher interest rates would negatively impact the valuation of securities portfolios. • Adverse feedback loops between banks and corporates and households would lead to further deterioration in their financial and solvency indicators.
Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts, export restrictions, and OPEC+ decisions) and demand fluctuations causes recurrent commodity price volatility, external and fiscal pressures in EMDEs, cross-border spillovers, and social and economic instability.	**High**	**Medium** • A large and persistent decline in oil prices would impact investment and economic activity. Disruptions to food supply would have a dampened effect given Saudi Arabia's policies to constitute food stocks and regulate some food prices on the domestic markets. • Financial conditions would tighten, leading to higher funding costs for banks, non-financial corporations and the Vision 2030 mega/giga projects. • Credit quality would deteriorate, with potentially adverse consequences on bank solvency. • Fluctuations in commodity prices would impact the fiscal sector and the current account.
Systemic financial instability. High interest rates and risk premia and asset repricing amid economic slowdowns and political uncertainty (e.g., from elections) trigger market dislocations, with cross-border spillovers and an adverse macro-financial feedback loop affecting weak banks and NBFIs.	**Medium**	**Medium** • Lower oil prices would impact the fiscal sector and put pressure on the balance of payments. • The tightening of global financial conditions would cause an increase in the risk premium, with adverse effects on the fiscal, corporate, and household sectors. • Impact on Saudi Arabia would be dampened by ample fiscal buffers and a domestically-oriented banking sector with limited cross-border exposures.

Nature/ Source of Main Risks[1]	Likeli-hood	Expected Impact on the Financial Sector if Risk is Realized
Monetary policy miscalibration. Amid high economic uncertainty, major central banks loosen policy stance prematurely, hindering disinflation, or keep it tight for longer than warranted, causing abrupt adjustments in financial markets and weakening the credibility of central banks.	**Medium**	**High** • Major central banks need to tighten monetary policy to bring inflation back to target, leading to a sharp tightening of financial conditions and a global economic slowdown. • In a global stagflationary scenario, there is an increase in interest rates, long-term bond yields, risk premia, and corporate spreads, with plunging consumer confidence. Inflation rate in Saudi Arabia increases (given the USD-SAR peg), although dampened by low domestic inflationary pressures going into the recession, flexible labor supply, and subsidies to key sectors, including energy.
Global Risks (Structural)		
Cyberthreats. Cyberattacks on physical or digital infrastructure and service providers (including digital currency and crypto assets) or misuse of AI technologies trigger financial and economic instability.	**Medium**	**Medium** • Disruptions to oil production in case of cyberattacks to oil infrastructure, leading to an economic slowdown, loss of confidence and higher risk premia. • Significant disruption to payment systems that threaten confidence in the banking system and bank supervision. • Direct losses caused by cyberattacks and adverse confidence effects that lead to deposit instability, increasing banks' vulnerabilities to a run and raising their funding costs.
Extreme climate events. Extreme climate events driven by rising temperatures cause loss of human lives, severe damage to infrastructure, supply disruptions, lower growth, and financial instability.	**Medium**	**Low** • Saudi Arabia is subject to extreme events made more frequent and intense by climate change, such as droughts, sandstorms, and floods, and Saudi Arabia's drought exposure is particularly high, compared to most countries. The impact of extreme events can extend to multiple sectors, such as industry and infrastructure, agriculture, energy, and tourism. • A severe natural disaster would cause higher NPLs on banks' loans to borrowers in affected regions, affecting bank profitability and solvency.
Disorderly energy transition. A disorderly shift to net-zero emissions (e.g., owing to shortages in critical metals) and climate policy uncertainty cause supply disruptions, stranded assets, market volatility, and subdued investment and growth.	**Medium**	**Medium** • A faster-than-anticipated decrease in the price of oil in the context of intensified global decarbonization efforts would lead to lower economic growth, a deterioration in the current account and fiscal balance, and a tightening of financial conditions for the sovereign, corporates, and households.
Domestic Risks		
Delayed implementation of Vision 2030 projects. Due to geopolitical risks or a deteriorating fiscal balance in the context of lower oil prices, public infrastructure investment projects (particularly giga-projects) are delayed.	**Medium**	**Low** • Public investments to diversify the Saudi economy away from oil have been a major driver of non-oil sector growth in recent years. Delays in project execution or extended suspension would slowdown economic growth, and directly affect corporates involved as developers and contractors. • Banks would face increased impairments, particularly in the corporate portfolio which is the largest loan segment for Saudi banks on aggregate.

Nature/ Source of Main Risks[1]	Likeli-hood	Expected Impact on the Financial Sector if Risk is Realized
Overheating due to an accelerated implementation of the NIS.[2]	**Medium**	**Medium**
		• With investment already growing at a very fast pace, an acceleration in the implementation of the NIS, particularly giga-projects, could lead to an overheating of the economy. • Inflation increases, the corporate sector becomes overleveraged, and asset prices increase beyond fundamentals. • Faced with a strong demand for credit from the corporate sector, banks increase their lending portfolio at a very fast rate, leading to tighter liquidity, lower solvency ratios (due to higher RWAs), and a build-up of vulnerabilities.
Sudden real estate downturn. After years of very fast growth in mortgage lending, a tightening of financial conditions leads to a contraction in demand and a sharp downturn in real estate prices.	**Low**	**Medium**
		• A drop in real estate prices would result in higher impairment charges for banks, caused by defaults or delayed loan repayments by highly leveraged households. • Lower house prices could depress domestic demand through reduced consumption, hitting banks' profits further. • Several factors could dampen the impact of a real estate downturn: REDF mortgage subsidies and guarantees would help borrowers continue to repay their loans, create incentives not to default (as the subsidy would be lost) and reduce the impact of defaults on bank solvency; mortgages are recourse loans, so borrowers cannot strategically default when they have negative home equity; most mortgages are to borrowers employed in the public sector and therefore have lower risk of unemployment; and most mortgages have salary assignment (i.e., borrower's salary is deposited in an account that the bank can use to withdraw mortgage payments).

[1] The Risk Assessment Matrix, prepared in early 2024, presents the FSAP team's assessment of the key tail risk that could expose the financial sector to significant stress. Please see the Risk Assessment Matrix in the IMF 2024 Article IV Staff Report for a broader discussion of risks and expected impacts as of June 2024.
[2] In line with the overheating scenario considered in the 2023 Saudi Arabia Article IV Staff Report, and again in the 2024 Article IV Staff Report, paragraph 13.

Appendix III. Stress Test Matrix

A. Solvency Banking Sector Testing Matrix		
Domain		**Assumptions**
Banking Sector: Solvency Risk		
1. Institutional perimeter	Institutions included	• All 11 domestic banks.
	Market share	• The 11 domestic banks account for 98 percent of total assets and deposits of the banking system.
	Data source and starting date	• Supervisory data provided by SAMA, special requests to banks, public sources (GaStat, CMA), commercial databases (Fitch, Haver Analytics), IMF Global Assumptions (GAS) and IMF WEO. • Data as of June 2023. • Consolidated at national bank level.
2. Methodology	Overall framework	• Balance sheet-based tool and satellite models developed by FSAP team.
	Satellite models for macrofinancial linkages	• Credit risk: The credit portfolio was divided into six main segments: real estate (RE)-collateralized household credit (MORT), household credit not collateralized by RE (CC), RE-collateralized corporate credit (CRE), corporate credit not collateralized by RE (NFC), financial institutions (FIN), and sovereign exposures (GOV). Modeling relies on regulatory classification of performing exposures (PE) and non-performing exposures (NPE), and their corresponding provision coverage ratios. Credit risk modeling faced several data challenges: (i) time-series for PDs and NPL ratios were short, highly-volatile and did not cover any large recessions; therefore, attempts to develop satellite models for these variables failed to identify sensitivity to the macro cycle. (ii) structural transformations of the Saudi economy under Vision 2030 introduce structural breaks, so an econometric approach may not be well suited to project future credit losses; corporate and/or household micro data was not available to complement the econometric analysis with a structural approach. (iii) it was not possible to quantify banks' exposures to mega/giga-projects. The main stress testing results rely on a direct econometric modeling of the aggregate banking sector's NLL ratio, despite limited sensitivity to macro variables. In order to generate a path of portfolio-specific PDs to use as the starting point for sensitivity analysis, the FSAP team took the following approach: calculate the historical average PD for each portfolio, and assume that in the stress testing window the portfolio-specific PDs are equal to their historical average multiplied by a scaling factor common across portfolios. This scaling factor was computed so as to be consistent with the aggregate NLL ratio (see Box 2). LGDs (proxied by the ratio of accounting stage 3 provisions to accounting stage 3 exposures) are projected using a structural model for RE collateralized portfolios (see Gross et al., 2020) and are based on empirical correlations with PDs in the case of non-RE collateralized portfolios (see Frye and Jacobs, 2012).

Domain		Assumptions
Banking Sector: Solvency Risk		
		• Net Interest Income: Interest income was projected using a structural model based on the repricing structure of banks' balance sheet and historical data on interest rates of new originations (see Box 3). On the liability side, since the vast majority of bank funding consists of sight deposits or term-deposits that reprice within a year, the FSAP team opted for a simpler approach based on a bank-specific econometric estimation of the passthrough from policy rates to effective interest expense rates. • NFCI and other income/expenses: NFCI rate (defined as the NFCI divided by interest-bearing assets) was stressed by first calculating its historical standard deviation from trend, and then applying a two standard deviation shock in the adverse scenario. Other income/expenses were kept constant at their historical average (as a percentage of interest-bearing assets). • Market risk: Duration approach for interest rate instruments.
	Stress test horizon	• 3 years (2024–2026).
	Assumptions	• Passive balance sheet assumption: (i) static portfolio (i.e., zero growth); (ii) the composition of the asset and liability sides of the balance sheet remains constant throughout the stress test horizon; and (iii) banks build capital through retained earnings. • Dividend distribution allowed if net income after taxes plus other comprehensive income is positive. The dividend payout ratio is assumed to be 50 percent (based on historical average).

3. Type of analyses	Scenario analysis	• Scenario-based stress tests focus on the impact of the macroeconomic environment on credit risk, net interest income and market risk in a context of global recession, sharply lower oil prices, and lower interest rates and inflation.
		• Given the domestic orientation of banks, the scenarios focus on domestic macro-financial variables (e.g., GDP, policy rate, real estate and equity prices).
		• Two macroeconomic scenarios were simulated at annual frequency, with the baseline using the January 2024 WEO forecast and the adverse generated using MCM's GFM model (Vitek, 2018):
		  ○ Baseline scenario: The baseline uses the January 2024 WEO forecast, complemented with bridge regressions to project scenario-consistent additional variables. It assumes inflationary pressures in the U.S. ease after 2023, and the U.S. policy rate peaks at 5.4 percent and loosens after 2024. Global economic activity remains resilient, and oil prices gradually decline but stay moderately elevated throughout. On the domestic front, the economy continues to grow at a fast pace (9 percent cumulative 2-year non-oil GDP growth in 2025), supported by the timely implementation of the NIS.
		  ○ Adverse scenario: The adverse is derived from the GFM (Vitek, 2018), complemented with bridge regressions to project scenario-consistent additional variables. There is a

Domain		Assumptions
Banking Sector: Solvency Risk		
		global economic slowdown, with the U.S. and China displaying a 2-year cumulative GDP growth of -4.5 and -8.3 percent, respectively, below baseline over the first two years of the stress testing window. Oil prices fall by a cumulative 50 percent
3. Type of analyses	Scenario analysis	50 percent below baseline by 2025. [1/] As a consequence of the contraction in Saudi fiscal oil revenues, there is a slowdown in the implementation of the NIS, with investment dropping by 14 percent at the trough (in real terms, relative to baseline). Saudi non-oil GDP contracts sharply, with a two-year cumulative growth of -3.4 percent in 2024–25 which is 11.4 percent below baseline (two standard deviations). [2/] Overall GDP contracts by 5 percent over the same period, which is 12.3 percent below baseline. In a context of slowing economic activity and falling energy prices, the domestic policy rate drops by 270bps relative to baseline in 2026 (470bps relative to 2023) and CPI inflation falls to -0.2 in 2026. Amid increased financial volatility, a higher risk premium leads to a significant drop in equity and real estate prices (-36 and -15 percent, respectively, relative to baseline at the trough). In order to address the risk of higher interest rates, an additional "add-on" scenario was also considered; this scenario coincides with the adverse, except for the policy interest rate which sharply increases in 2024 (2.1 percentage points above 2023) and then declines back to the starting point by 2026.
	Sensitivity analysis	• Given the challenges for credit risk modeling, the main results were complemented with sensitivity analysis with respect to default rates. • A more severe real estate downturn was considered through a 40 percent decline in prices, which results in higher LGDs in the mortgage portfolio. This exercise is motivated both by concerns about GASTAT's real estate price index not representing accurately conjunctural price developments and by cross-country experience. The value of 40 percent was based on cross-country evidence of peak-to-trough declines. For example, house prices in Greece declined by 42 percent between 2008 and 2017, and in Spain they declined by 37 percent between 2007 and 2013. • Portfolio concentration risks on the asset side were analyzed by assuming additional stress on top corporate exposures. • Sectoral corporate concentration was analyzed by assuming a one-off default of 10, 20 or 30 percent of the portfolio in each economic sector. • Cost of funding risks were modeled as a shift in the composition of banks' liabilities from non-remunerated deposits (their main source of funding) to remunerated accounts. Data for 2022-2023 displays a significant composition shift from demand- to term-deposits in a context of higher interest rates, so this sensitivity

Domain		Assumptions
Banking Sector: Solvency Risk		
		exercise captures an acceleration of this trend. The ratio of time and savings deposits to total deposits increased from 25 percent (average over 2018-22) to 35 percent by end-2023. The sensitivity analysis approximately considers a further 10 percent shift. This is approximate because the exercise considers a 10 percent shift of total liabilities (rather than total deposits), which is a somewhat more stringent assumption.
4. Risks and buffers	Risks/factors assessed	• Credit risk. • Interest rate risk. • Market risk from fixed income securities.
	Buffers	• Existing loan loss provisions and capital buffers. • Internal capital generation (i.e., retained earnings). • No new capital injections.
5. Regulatory standards	Regulatory/ accounting and market-based standards	• National regulatory framework.
6. Reporting format for results	Output presentation	• Capital ratios for the aggregate baking system and by groups of banks (DSIBs and non-systemic banks); contributions of individual risk factors to evolution of capital ratios; systemwide capital shortfalls relative to the hurdle rate.

B. Liquidity Banking Sector Stress Testing Matrix

Domain		Assumptions
		Top-down by FSAP Team
1. Institutional perimeter	Institutions included	• All 11 domestic banks.
	Market share	• The 11 domestic banks account for 98 percent of total assets and deposits of the banking system.
	Data and starting date	• Data source: supervisory reports for Liquidity Coverage Ratio and Net Stable Funding Ratio; special data requests to banks for cashflow data. • Data as of June 2023. • Consolidated at national bank level.
2. Methodology	Methodology	• LCR and NSFR statistics, using regulatory parameters and more severe scenarios. • Cashflow-based liquidity stress test. • LCR data available by currency only at a high level (i.e., HQLA and net cash outflows, without detailed breakdown), and only for banks that have sufficiently large liabilities in the corresponding currency.

Domain		Assumptions
		Top-down by FSAP Team
		• Large depositor withdrawal tests to address concentration risks.
	Stress test horizon	• 30 days for LCR-based tests, one year for NSFR-based tests, and up to six months for cash-flow-based analysis.
3. Type of analyses	Scenario analysis	• Baseline and various scenarios are considered, with varying intensity of adverse liquidity conditions. Main risks analyzed are deposit run-offs (including government deposits) and illiquidity of secondary markets for sovereign bonds.
4. Risks and buffers	Risks/factors assessed (how each element is derived, assumptions)	• Funding liquidity risk is reflected in funding run-off rates in the stress scenario, calibrated to reflect scenarios of system-wide deposit runs. The run scenario would address both conventional runs and potential deposit withdrawals if a bank is deemed Sharī`ah non-compliant. • Market liquidity risk is reflected in asset haircuts, which could be influenced by market movements, potential fire sales and thin/illiquid secondary markets for securities.
	Behavioral adjustments	• Liquidity from the central bank is not considered.
	Buffers	• Capacity of banks to generate liquidity from assets under stress (counter-balancing capacity).
5. Regulatory standards	Regulatory/accounting and market-based standards	• For both LCR and NSFR, the hurdle rate is set at 100 percent at the aggregate currency level (per Basel III and domestic regulation).
6. Reporting format for results	Output presentation	• Outputs include: (i) changes in the system-wide liquidity position; and (ii) number of institutions with LCR/NSFR below regulatory limits. •
1. Institutional Perimeter	Institutions included	• Interbank network: all 11 domestic banks accounting for 98 percent of total banking sector assets; • Aggregate cross-border data: domestic and foreign banking sectors at aggregate level.
	Data and starting position	• Data source: special requests to banks for inter-institution exposures; data from SAMA and BIS Locational Banking Statistics for cross-border interconnectedness. • Data as of June 2023.
2. Methodology	Overall framework	• Contagion analysis based on Espinosa-Vega and Sole (2010). • Descriptive charts to map network structure.
3. Risks and buffers	Risks	• Credit shock and funding shock bringing capital impairment due to inter-institution exposures.
	Buffers	• Institution's own capital buffers.
4. Reporting format for results	Output presentation	• Network charts mapping inter-institution exposures. • Indices of vulnerability and contagion based on Espinosa-Vega and Sole (2010) contagion analysis.

Appendix IV. Status of 2017 FSAP Recommendations

Recommendation	Current Status
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, under exceptional circumstances, to exempt any bank from regulation.	The authorities have consulted a new Banking Control Law (BCL), which represents an excellent opportunity to address many of the FSAP findings. Consultation ended in early 2023 and the authorities are considering the feedback and the FSAP results before finalizing a Bill which will then progress through the legislative process.
Codify and publish all bank legislative circulars and eliminate those superseded.	SAMA officially launched its Circulars Portal in December 2020. Action on codification, access to all circulars and elimination of superseded circulars is a work-in-progress.
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.	The new risk-based banking supervisory framework has been rolled out. A banks' risk rating is now based on a combination of its inherent risk rating and its control rating. The supervisory planning process for on and off-site supervision is now based on a bank's risk profile. In terms of loan examinations, documentation has been enhanced.
Develop a licensing manual for banks and publish guiding principles for bank licensing.	Revised licensing criteria and guidelines on application processes were developed and published on SAMA's website in January 2019. SAMA is yet to develop a licensing manual or internal guidelines for processing license applications.
Provide guidance to banks on mapping the risk profiles of Islamic products to the Basel framework.	SAMA has issued the regulation - "Additional requirements on capital adequacy for Sharī`ah-compliant banking" in October 2023, which sets out the regulatory guidance for identifying the risk exposures arising at various stages of the lifecycle of Sharī`ah-compliant contracts used to deliver credit by Islamic banks. This regulation also sets out the mapping for the identified risk exposures and refers to the relevant methodologies for calculation of applicable capital charges for those risk exposures. This regulation is based on the relevant IFSB standard on capital adequacy for Sharī`ah-compliant banks. However, this regulation has only come into effect on January 1, 2024. In the CPIFR assessment, which took place in December 2023, it was observed that this regulation has not yet been fully implemented. SAMA is yet to develop and employ reporting requirements, supervisory monitoring and inspection procedures to

Recommendation	Current Status
	ensure that this regulation is being effectively complied with by the Islamic Banks and Islamic Windows in calculating applicable capital charges for the exposures arising from the Islamic contracts used by them.
Adopt the draft regulation on loan classification and ensure regular, comprehensive reporting on the size of rescheduled and restructured loans.	SAMA adopted IFRS9 requirements which address loans classification and provisioning from an accounting perspective and banks are compliant with these requirements since 2018. SAMA has also implemented BCBS Guidelines on "Prudential treatment of problem assets – definitions of non-performing exposures and forbearance." The central bank is now in the process of issuing its own prudential requirements with regards to loans classification and provisioning which will serve as additional requirements aiming to further strengthen the existing framework. SAMA is yet to obtain regular comprehensive reporting on details of rescheduled and restructured loans.
Require banks to establish formal policies and procedures for loan rescheduling, refinancing, and restructuring and to submit prudential returns on such loans.	SAMA issued rules on management of problem loans in January 2020 that requires banks to establish restructuring policy that considers only viable restructuring solutions. They have not yet established full prudential reporting, or public disclosure, on such loans.
Strengthen cross-border cooperation by entering into MoUs with foreign regulators.	SAMA has signed an MoU with the supervisory authorities in one of the eight host jurisdictions and is yet to sign MoU with the supervisory authorities from sixteen home jurisdiction.
Liquidity Management	
Establish a liquidity-forecasting framework to guide money market operations.	SAMA's liquidity forecasting model was developed in 2018. TA delivered in September 2023 provided SAMA with a liquidity forecasting toolbox, tutorial sections, and recommendations, which are expected to improve SAMA's existing framework. The TA mission underscored the need for coordination amongst external stakeholders to fulfill data requirements pertaining to exogenous factors that influence liquidity conditions, such as the information on government's plans on frequent basis.
Financial Safety Nets	
Adopt and implement the Draft Resolution Law (DRL).	**Largely implemented** The law on resolution of systemically important financial institutions was issued in December 2020, but does not fully consider the 2017 FSAP recommendations, i.e., to expand the scope to all banks and detail powers, and tools and provide for a bank specific liquidation framework. Key regulations are drafted but are yet to be adopted to support implementation of the law.
Financial Safety Nets	
Establish an Emergency Liquidity Assistance (ELA) framework.	Partially Implemented. SAMA has developed a general ELA framework, which is yet to be adopted.

Recommendation	Current Status
Establish a timeframe for DPF deposit payouts and ensure a back-up funding line.	The draft law is under public consultation. However, the draft does not allow for the DPF's independence, rather placing it under SAMA's "supervision and oversight" and it does not clearly define DBF's mandate.
Macroprudential Policy	
Broaden the definition of debt service-to-income in the regulations to include all types of debt and income.	The principles that set the debt service-to-income ratio were issued in May 2018 and implemented in August 2018.
Strengthen data collection and use for the household, corporate, and real estate sectors.	Monthly data on new residential mortgages and SMEs finance are now published. Work is ongoing to further strengthen data collection.