INTERNATIONAL MONETARY FUND

IMF Country Report No. 23/304

January 2023

REPUBLIC OF TÜRKIYE—FINANCIAL SYSEM STABILITY ASSESSMENT

This paper was prepared by a staff team of the International Monetary Fund for the Executive Board's consideration on January 18, 2023. This report is based on the work of an IMF Financial Sector Assessment Program (FSAP) mission to Republic of Türkiye during January to July 2022. The FSAP findings were discussed with the authorities in July 2022 and incorporate data and policies as of end-June 2022. It is based on the information available at the time it was completed on December 9, 2022.

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Price: $18.00 per printed copy

International Monetary Fund
Washington, D.C.

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INTERNATIONAL MONETARY FUND

REPUBLIC OF TÜRKİYE

FINANCIAL SYSTEM STABILITY ASSESSMENT

December 9, 2022

KEY ISSUES

Context: Türkiye's bank-dominated financial sector has grown markedly and shown areas of resilience since the last Financial Sector Assessment Program (FSAP). However, macrofinancial volatility has risen significantly, foreign investors have receded from local markets, and demand for dollarized and state-guaranteed foreign-exchange (FX) protected Lira deposits has risen alongside a deeply negative real policy interest rate set against the backdrop of rapidly tightening global financial conditions. An array of idiosyncratic measures has been deployed that attempt to offset the highly negative policy rate and achieve multiple objectives.

Findings: Financial sector risks have risen since the last FSAP and are now high and growing. Several are interconnected and could undermine systemic stability if realized. In particular, FX liquidity risks have risen alongside a tightened bank-central bank nexus. Banks could face capital pressure absent restrained credit growth. Idiosyncratic measures have introduced distortions and some work at cross purposes. Operational autonomy has been eroded in key agencies, policy and resource pressures have resulted in banking supervisory practices and a regulatory framework that require critical enhancement, and the systemic liquidity management framework has been diluted. Several gaps in the crisis management framework identified in the last FSAP remain.

Policies: There is a need to realign fundamental financial incentives; rationalize policy measures while ensuring their consistency and Basel compatibility; and refocus on financial stability. FX liquidity deserves enhanced attention and contingency planning, and credit growth warrants restraint. The bank supervisory approach should be reengineered, and regulatory and accounting practices re-aligned with Basel standards. Interest-rate policy needs to focus on inflation control while net international reserves are built over time, and reforms to the emergency liquidity assistance framework are implemented. Improvements in the bank resolution and crisis management framework are critical.

Approved By
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Prepared By
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This report is based on the work of the Financial Sector Assessment Program (FSAP) mission conducted virtually and in person during January to July 2022. The FSAP findings were discussed with the authorities in July 2022 and incorporate data and policies as of end-June 2022.

- The FSAP team was led by John Nelmes (IMF) and Erik Feyen (World Bank (WB)), and included deputy mission chiefs Katharine Seal (IMF) and Johanna Jaeger (WB); Vincenzo Guzzo, Caterina Lepore, Dulani Seneviratne, Piyabha Kongsamut, Ana Carvalho, Joelle El Gemayel, Rangachary Ravikumar, Natsuki Tsuda, and Francisca Fernando (all IMF) and Peter Lohmus (IMF external expert); Fernando Dancausa, Harish Natarajan, Heinz Rudolph, Ines Fila, Jing Zhao, Jose Antonio Gragnani, Martijn Regelink, Matei Dohotaru, Pamela Lintner, Tetsutaro Shindo (all WB) and Joaquin Gutierrez (WB external expert).

- The mission met officials from regulatory and government agencies, including the Central Bank of the Republic of Türkiye (CBRT), the Banking Regulation and Supervision Agency (BRSA), the Ministry of Treasury and Finance (MOTF), the Savings Deposit Insurance Fund (SDIF) and other public sector institutions, financial institutions, industry organizations, and the private sector.

- 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.

- Türkiye is deemed by the IMF to have a systemically important financial sector according to Mandatory Financial Stability Assessments Under the Financial Sector Assessment Program—Update (11/18/2013), and the stability assessment under this FSAP is part of bilateral surveillance under Article IV of the Fund's Articles of Agreement.

- This report was prepared by John Nelmes and Katharine Seal with contributions from the FSAP team members.

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Glossary

AMC	Asset Management Company
AIM	Aide-Mémoire
AML/CFT	Anti-money laundering/counter terrorist financing
ARA	Assessing Reserve Adequacy
BaaS	Banking as a Service
BAT	Banking Association of Türkiye
BCP	Basel Core Principles for Effective Banking Supervision
BCBS	Basel Committee for Banking Supervision
BKM	Bankalararası Kart Merkezi (inter-bank card payment system)
BL	Banking Law
BRSA	The Banking Regulation and Supervision Agency
CAR	Capital Adequacy Ratio
CBAM	Carbon Border Adjustment Mechanism
CBRT	Central Bank of the Republic of Türkiye
CBDC	Central Bank Digital Currency
CCDR	Country Climate and Development Report
CCP	Central Clearing Counterparty
CCyB	Countercyclical Capital Buffer
CET1	Common Equity Tier 1
CGF	Credit Guarantee Fund
CFM	Capital Flow Management
CMB	Capital Markets Board
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
DSIB	Domestic Systemically Important Banks
EBC	Enforcement and Bankruptcy Code
EIM	Early Intervention Measures
ELA	Emergency Liquidity Assistance
EM	Emerging Market
ESG	Environmental, Social, and Governance
FATF	Financial Action Task Force
FA	Framework Agreements
FMI	Financial Market Infrastructure
FPS	Fast Payment System
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSC	Financial Stability Committee
FX	Foreign exchange
GDAP	Green Deal Action Plan
GHG	Greenhouse Gas
G-RAM	Global–Risk Assessment Matrix

HQLA	High Quality Liquid Assets
ICR	Interest Coverage Ratio
ICP	International Association of Insurance Supervisors' Insurance Core Principles
ICT	Information and Communication Technology
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPRSA	Insurance and Private Pension Regulation and Supervision Authority
IRRBB	Interest Rate Risk in the Banking Book
ISSB	International Sustainability Standards Board
KKB	Kredi Kayıt Bürosu (Credit Bureau)
LCR	Liquidity Coverage Ratio
MASAK	Financial Crimes Investigation Board
MOTF	Ministry of Treasury and Finance
MSME	Micro, Small and Medium Enterprises
NFC	Non-Financial Corporation
NGFS	Network of Central Banks and Supervisors for Greening the Financial System
NPE	Non-Performing Exposure
NPL	Non-Performing Loan
NRA	National Risk Assessment
NSFR	Net Stable Funding Ratio
ORSA	Own Risk and Solvency Assessment
PE/VC	Private equity/Venture capital
PFI	Public Finance Institutions
PFMI	CPSS-IOSCO Principles for Financial Market Infrastructures
PSB	Presidency, Strategy and Budget
RAM	Risk Assessment Matrix
REPL	Regulation on Procedures and Principles for Classification of Loans and Provisions to Be Set Aside
RWA	Risk-weighted assets
SDIF	Savings Deposit Insurance Fund
SDR	Special Drawing Rights
SME	Small and Medium Enterprises
SRMG	Systemic Rick Monitoring Group
STeM	Stress Testing Matrix
SWF	Sovereign Wealth Fund
TCIP	Turkish Catastrophe Insurance Pool
VASP	Virtual Asset Service Provider
WB	World Bank

EXECUTIVE SUMMARY

1. **Türkiye's bank-dominated financial sector has grown markedly and shown areas of resilience following the last Financial Sector Assessment Program (FSAP).** Banks' access to external financing has been retained in volatile times, their lending has shifted away from foreign exchange (FX), and elements of systemic liquidity management have improved. The Insurance and Private Pension Regulation and Supervision Authority (IPRSA) was established.

2. **Financial sector stability has been challenged, however, by periods of macrofinancial volatility, which has risen significantly recently.**[1] Persistently high inflation increased to almost 80 percent in mid-2022, the Turkish Lira (TL) has depreciated markedly, bank credit growth has been extremely rapid, and foreign investors have receded from local markets. Demand for dollarized and state-guaranteed FX-protected TL deposits has risen alongside the adoption of a deeply negative real policy interest rate set against the backdrop of rapidly tightening global financial conditions. The impact of the war in Ukraine, including higher commodity prices, has further complicated the environment.

3. **Heterodox and idiosyncratic policy measures have been employed to restrain credit growth and direct it to priority economic activities, limit dollarization, support the exchange rate, and lower government funding costs.** The result is a complicated mosaic of policies, some of which work at cross-purposes or diverge from international standards (see Table 2). Many create distortions while attempting to enhance the pricing of risk and thereby restore financial incentives that, because of the deeply negative real policy rate, are inadequate to protect TL savings or control credit growth. Furthermore, risks are being transferred to the government's balance sheet. Taken as a whole, the measures are unclear in their overarching objective, may mask underlying problems, and are unlikely to be effective over the medium term.

4. **Financial sector risks are now high and growing.** Credit growth, led by increasingly less profitable state-owned banks (SOBs), has contained reported non-performing loan (NPL) ratios, but SOBs have required repeated capital injections to maintain capital adequacy ratios (CARs). Restructured loans have risen, and regulatory changes have impaired the accuracy of key supervisory indicators while facilitating loan refinancing on which data is not collected, potentially representing a stock of accrued problem assets that could test future systemic capital adequacy. Corporate FX debt has declined, but high leverage and low interest coverage ratios in some sectors are risks. The Financial Action Task Force (FATF) has placed Türkiye on its grey list.

5. **Several important risks are interconnected and could undermine systemic stability if realized.** FX liquidity risks have risen along with deposit dollarization and low Central Bank of the Republic of Türkiye (CBRT) reserves. A strong nexus exists between the CBRT and banks, whose FX assets held at the CBRT were about double CBRT readily available FX gross reserves and gold

[1] The FSAP's cut-off date for data and policies is end-June 2022 except for stress tests, which are based on end-2021 data and policies.

holdings in mid-2022. Banks' holdings of government debt have risen, making up for a decline in foreign ownership and reflecting demand for inflation-indexed government securities to protect profitability in the context of high inflation and lending competition from SOBs who offer lower loan rates to support growth. As well, regulatory changes will force banks to hold a larger share of low-interest sovereign debt, raising potential adverse feedback risks.

6. Solvency stress tests indicate that banks could face capital pressure in the absence of restrained credit growth. Under the FSAP's baseline scenario the average CAR for the 10 largest banks would decline to just above the 8 percent regulatory minimum. In an adverse scenario, the minimum CAR threshold would be breached. Uncertainty over supervisory metrics also bears on these results.

7. Liquidity stress tests suggest that banks were resilient to moderate FX deposit outflows at end-2021, but were vulnerable to severe outflows, and meeting FX liquidity needs could potentially drain CBRT international reserves to low levels. Banks could meet moderate FX deposit outflows at end-2021. Under a severe FX deposit outflow scenario, banks would need to draw heavily on their reserves held at the CBRT, and potentially seek additional FX from the CBRT. Meeting such needs would drain CBRT gross international reserves to very low levels, risking adverse feedback effects. This result would be more acute if capital flight were to take place concurrently, or if banks' access to external funding was severely pressured.

8. Three cross-cutting themes are recommended: realigning fundamental financial incentives; rationalizing idiosyncratic policy measures; and refocusing on financial stability objectives. Achieving macrofinancial stability will require realigning financial incentives such that real interest rates reflect macroeconomic fundamentals and limit the buildup of financial sector vulnerabilities. Idiosyncratic measures reduce policy predictability and are unlikely to incentivize systemic capital allocation consistent with macrofinancial stability over time. Implementing such a transition will require strengthening the operational autonomy, resourcing, and prioritization of financial stability at key agencies.

9. The systemic risk monitoring framework would benefit from greater emphasis on financial stability, and a tightening and simplification of macroprudential policies is critical. Greater clarity in the prioritization of financial stability in the Financial Stability Committee's (FSC) mandate is advised. Idiosyncratic measures should be phased out in favor of tighter broad-based macroprudential capital tools as financial incentives are realigned, and banking regulations restored to international standards. To increase resilience in the event of an adverse shock, an increase in the countercyclical capital buffer is warranted. Selective use of borrower-based tools targeting sectoral stability risks could be maintained.

10. Protracted policy and resource pressures have resulted in banking supervisory practices and a regulatory framework that require enhancement. The financial stability mandate of the Banking Regulation and Supervision Agency (BRSA) has been compromised by government policies and it is severely resource constrained. Official information on credit quality, capital adequacy, and liquidity risk unlikely reflects increased risk since the last FSAP owing to regulatory

revisions and forbearance. Operational autonomy, adequate remuneration to avoid staff attrition, a reengineering of the supervisory process, re-aligning regulatory and accounting practices with Basel and other international standards, and intensive liquidity monitoring are critical to provide an accurate assessment of risks, and to ensure banks remain adequately capitalized and liquid (especially in FX).

11. Operational elements of systemic liquidity management have improved, but the overarching policy framework has been diluted. The CBRT's liquidity management has been simplified, but room exists for greater clarity in the interest-rate target and adherence to the corridor's mid-point. More broadly, the overarching policy framework has become opaque due to a multiplicity of instruments and objectives, while the CBRT's operational autonomy has eroded. It is recommended that interest-rate policy focuses on inflation control in the context of restored autonomy to strengthen policy predictability and reduce macrofinancial volatility. To mitigate liquidity risks, FX intervention should be restrained while net international reserves are built over time, and reforms to the emergency liquidity assistance framework adopted.

12. Cyber risks are well recognized in Türkiye. Cybersecurity is supported by the legal framework and institutional arrangements, but room for improvement exists in regulatory coverage, consistency, and coordination. Integrating cyber risk into the overall supervisory process is vital.

13. Addressing gaps identified in the last FSAP in the bank resolution and crisis management framework is critical given financial stability risks. Türkiye has a reasonably clear institutional framework for recovery and resolution. Although recovery planning for domestic systemically important banks has been introduced and the resolution framework is being updated, the authorities ought to consider extending recovery planning to all banks and there is a need to enhance the Savings Deposit Insurance Fund's (SDIF) resolution powers, assessments, planning, and resolution financing.

14. Persistent challenges impinge on capital markets deepening. Reforms to improve investor protection and enable new instruments have been introduced. Yet, factors including volatile macrofinancial conditions and a complex tax framework inhibit a deepening of the TL capital markets and institutional investor base, resulting in a "short maturity, dollarized" equilibrium not conducive to meet TL investment needs.

15. Türkiye has embraced technology to strengthen financial efficiency and inclusion and advanced a policy framework that attends to risks. High levels of digitalization have promoted financial inclusion, and initiatives taken to encourage the safe adoption of fintech. Fintech and crypto-asset risks are well recognized. It is important to integrate these into the supervisory framework, ensure a level playing field, and foster institutional coordination.

Table 1. Republic of Türkiye: Main Recommendations

Recommendations	Agency	Time *
Systemic Risk and Macroprudential Policies		
Rationalize heterodox and idiosyncratic policy measures while realigning financial incentives to reduce distortions; activate countercyclical capital buffer.	CBRT, BRSA	ST
Refocus the systemic risk monitoring framework to ensure clarity of financial stability as the primary objective of the Financial Stability Committee (FSC).	FSC	ST
Strengthen FX systemic liquidity analysis incorporating systemic FX availability, contingency planning, and consider interlinkages when discussing macroprudential policy options.	FSC (SRMG)	ST
Banking and Insurance Supervision and Regulation		
Amend the Banking Law to confirm financial stability as the primary objective of the BRSA and enshrine policy independence, operational autonomy and adequacy of resources to provide a stable cadre of experienced staff and modern tools.	MOTF, BRSA	MT
Restore and/or enhance, as applicable, the standards for intrusive, effective supervision for all banks, notably for liquidity, FX, sovereign and concentration risk, credit risk, including problem assets and provisions, and interest rate risk in the banking book. Revisions must include aligning regulations with international minimum standards, or higher.	BRSA	ST
Intensify supervisory engagement and monitoring using meaningful reporting practices, accompanied by robust, timely intervention and follow up with banks.	BRSA	ST
Enhance the risk-based, forward-looking perspective of the CAMELS process, integrating Pillar 2 assessments (ICAAP and SRP), off-site work, stress-testing and ICT/Cyber dimensions.	BRSA	MT
Set financial stability as the legal objective of insurance supervision, ensure transparency of the nomination, appointment and dismissal processes of IPRSA's board members; and introduce a formal Own Risk and Solvency Assessment process.	Presidency, IPRSA	MT
Systemic Liquidity		
Strengthen the CBRT's operational autonomy, focus interest rate policy on inflation. Implement the interest rate corridor through monetary operations on the interbank money market solely.	CBRT	ST
Limit FX interventions to the most extreme cases of exchange rate volatility. Define a volatility-based FX rule. Build FX reserves over time.	CBRT	MT
Finalize review of the ELA framework.	CBRT	ST
Cyber Resilience		
Ensure FSC discusses ICT/cyber risks regularly and facilitates coordination among member agencies. Integrate ICT/cyber risk supervision within overall supervisory process.	MOTF, BRSA, CBRT, CMB	ST
Factor ICT/cyber risks in the financial stability analysis, develop a crisis management plan to address potential large-scale cyber-attacks.	BRSA, CBRT	MT
Financial Integrity		
Take steps to exit the FATF grey list by demonstrating effectiveness and addressing all areas identified in the FATF's action plan, including with respect to politically exposed persons.	MASAK, BRSA, CBRT	ST
Monitor key financial integrity risks stemming from the grey listing, and other cross-border regulatory actions.	MASAK, MOTF, BRSA, CBRT	MT
Implement FATF Recommendation 15 to address virtual asset risks.	MASAK, CMB	ST
Crisis Management and Resolution		
Introduce resolution planning and consider extending recovery planning to all banks; extend recovery requirements to entire groups and foreign affiliates.	SDIF, BRSA	ST
Enhance SDIF resolution powers in line with the FSB Key Attributes and empower SDIF to start preparations in the run up to resolution. Introduce a full P&A concept beyond insured deposits for all banks regardless of SDIF shareholdership status.	SDIF, MOTF	ST
End the use of SDIF funds for all loss coverage, liquidity, and recapitalization purposes and introduce loss absorbance principles in line with the liquidation hierarchy. Introduce resolution funding and the least-cost concept for SDIF funds.	SDIF, MOTF	ST

* Immediate (I) = within one quarter; short-term (ST) = within one year; medium-term (MT) = over one year

MACROFINANCIAL SETTING

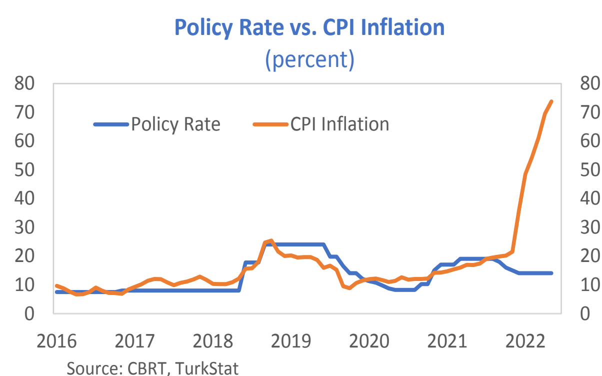
A. Recent Macrofinancial Developments

16. Türkiye has experienced high but volatile growth since the last FSAP. Real economic growth averaged almost 5 percent, but periods of strong expansion were followed by sharp slowdowns. Double-digit inflation has persisted (the official target is 5 percent) and the Lira (TL) has depreciated, especially sharply in 2018 and 2021 (Figures 2, 3). External financing needs have remained high and deposit dollarization has risen steadily, while foreign exchange (FX) reserve adequacy has slipped. While the public debt ratio is relatively low, at just over 40 percent, fiscal risks due to contingent liabilities have risen (see below).

17. The authorities responded resolutely in 2020 to the COVID-19 pandemic, facilitated by several exceptional measures. The CBRT cut its policy rate repeatedly and expanded its balance sheet. Credit expanded rapidly through SOBs and was supported by state guarantees. A regulatory Asset Ratio and changes to reserve requirements were introduced, penalizing banks with lower credit growth. Extensive regulatory measures (including delayed stage two and NPL classification) combined with payment deferrals supported non-financial corporates (NFCs) and masked NPL data.

18. Growth rebounded very strongly in 2021 to more than 11 percent. The relaxation of mobility restrictions and external demand supported activity. Despite a positive output gap and inflation already four times the inflation target, in late 2021 the CBRT reduced the policy rate by 500 basis points.[2]

Policy Rate vs. CPI Inflation
(percent)



Source: CBRT, TurkStat

19. Macrofinancial volatility spiked in late 2021. The highly expansionary monetary policy led to a collapse in the Lira, which rapidly lost half of its value against the dollar. Conversion of Lira deposits into FX deposits accelerated sharply, while sizable portfolio outflows occurred. The CBRT resumed FX intervention despite scarce reserves.[3] The authorities announced a "Liraization Strategy", a wide range of administrative measures aimed at incentivizing holdings of Lira assets to promote de-dollarization and stabilize the exchange rate. Most prominent was a scheme compensating Lira term deposits for losses against the dollar. Deposits in these FX-protected TL accounts reached 15 percent of total deposits in mid-2022, transferring risk to the government's balance sheet and raising contingent liabilities.

20. Acute market turmoil receded in early 2022, but macrofinancial risks are elevated, including lower buffers and uncertainty over policy frameworks. The strategy provided temporary support to the exchange rate, but it subsequently resumed depreciating, and inflation and credit growth rose to almost 80 and over 60 percent by mid-2022, respectively. A significantly

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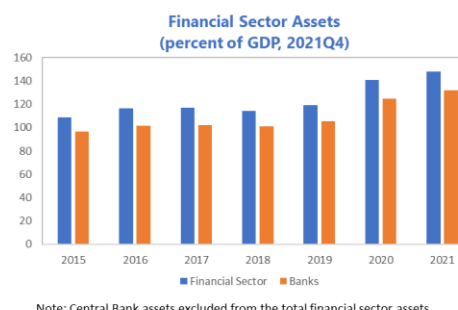
[2] Further reductions have taken place since the FSAP cut-off date.

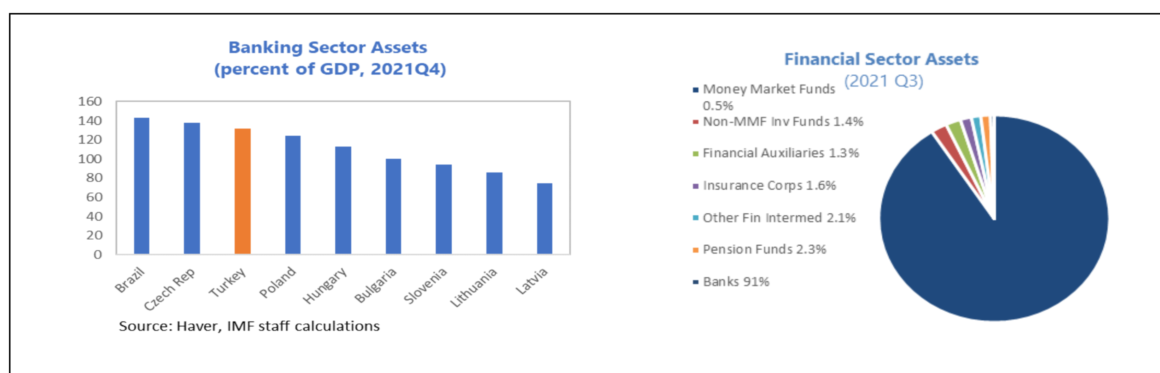
[3] Reserves fell below 90 percent of the Assessing Reserve Adequacy (ARA) metric.

negative real policy rate and a structural lack of FX remain, and sovereign credit default swap spreads reached high levels. The war in Ukraine added to Türkiye's inflation challenges, and exacerbated the current account deficit, raising external financing needs and pressuring international reserves.[4]

B. Financial System Structure and Performance

21. The Turkish financial system is dominated by banks and has grown rapidly. Financial assets stood at 148 percent of GDP in 2021, significantly higher than at the last FSAP. Banks account for 90 percent of these assets and the size of the banking system is above most EM peers. Banking sector assets have expanded nearly four times since the last FSAP and, while the exchange rate has inflated the TL value of FX assets, TL assets have also grown threefold, exceeding GDP growth. Deposits have grown comparably, with FX deposits accounting for an increasing share.





22. State-owned banks have played a major role. Credit growth has been driven by SOBs, which now account for almost half of total loans by deposit-taking institutions (30 percent at the last FSAP). By offering lending rates around 300 basis points below those of the rest of the system (on average since the last FSAP), SOBs have gained market share from domestic private and foreign institutions.[5] Participation banks (i.e., Islamic banks) and development and investment banks account for smaller, albeit rising shares of the broader banking system. Several banks and insurance companies operate within large conglomerate groups.

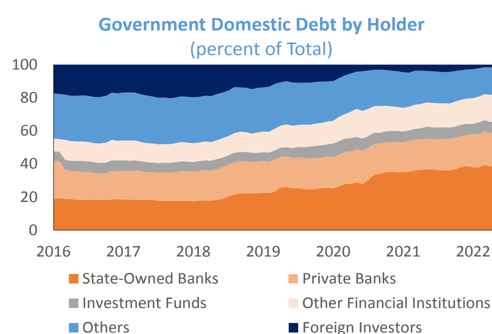
23. The non-bank financial sector is relatively small and underdeveloped, including compared to other EMs. It accounted for only 10 percent of domestic financial sector assets (as of 2021Q3). The share of pension funds and insurance companies stood at 3.5 percent and 2.4 percent respectively, while investment funds account for an even smaller share. Factoring, financing, and leasing companies are also small, accounting for less than two percent of financial sector assets.

[4] Cross-border claims vis-à-vis Russia and Ukraine were negligible (both bank and nonbank sectors).

[5] See also World Bank Financial Sector Assessment (FSA).

24. Despite a fast-growing life segment, Türkiye's insurance sector remains small and underdeveloped compared to peers. Gross premiums grew by almost 20 percent a year through 2020, but high inflation and Lira depreciation have led to higher claims and compressed profits. Total insurance penetration, measured as premiums to GDP, stood at less than 1.6 percent at end-2020, well below the average for upper middle-income countries, while the life insurance business was only 0.3 percent.

25. Capital markets and long-term savings are underdeveloped, while foreign investors have withdrawn from Türkiye. At end-2021, outstanding public and private debt amounted to 40 and 7½ percent of GDP respectively, while stock market capitalization was 30 percent of GDP, below peers. Government bonds account for more than 90 percent of debt securities. SOBs own around 38 percent of government bonds, while the CBRT holds just over 4 percent. Foreign investor holdings of public debt declined from 20 percent in 2017 to just 1.6 percent in mid-2022. Foreign participation in equity markets has also fallen precipitously. The corporate bond market is still underdeveloped compared to other large emerging economies and is characterized by short tenures. The size of private equity and venture capital investments is limited.



26. Households increasingly diversified their financial assets to seek protection from high inflation and TL depreciation. High inflation and depreciation have increased the attractiveness of FX and gold deposits, and more recently FX-protected TL deposits. Households have also sought to protect their savings through local equities, whose share of financial assets has climbed from less than 9 percent in 2018 to almost 14 percent, and real estate.[6]

27. Crypto assets have become popular. Türkiye is among the highest-ranked EMs in terms of crypto-asset activity. One of the most popular crypto assets appears to be Tether, a stable coin. Global daily transaction volumes of Tether against TL touched a peak of US$2.2 billion per day in 2021, approaching volumes seen in the FX market. Given the decentralized nature of these systems and underdeveloped reporting requirements, availability of reliable stock and flow data is limited.

Authorities' Views

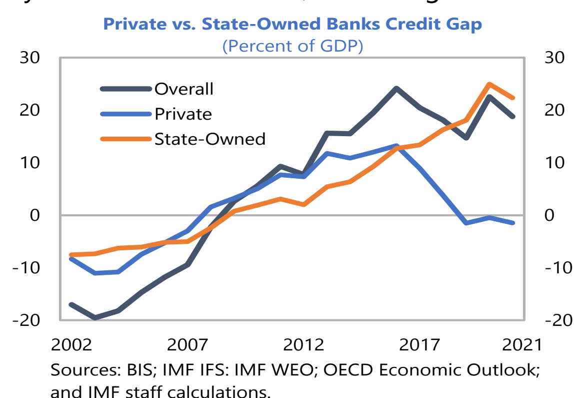
28. The authorities recognized the challenges associated with heightened macrofinancial volatility. Unanticipated global shocks, including owing to the war in Ukraine, have complicated the environment. They emphasized the social role played by state-owned banks, especially during economic downturns, and acknowledged the below-market lending rates offered by these banks, but also noted their ability to access cheaper retail funding through a broad branch network. They expected credit growth to moderate significantly going forward in response to the recently deployed policy measures.

[6] Equity prices rose strongly in 2022 in TL, although much less so in U.S. dollar terms.

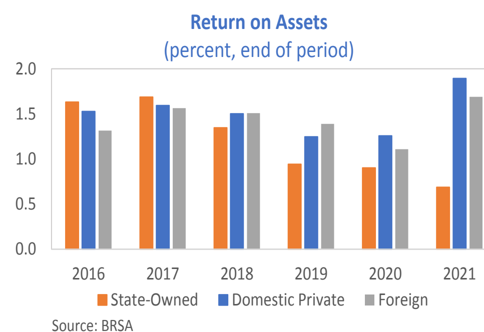
RESILIENCE AND VULNERABILITY ASSESSMENT

A. Sources of Resilience and Risk

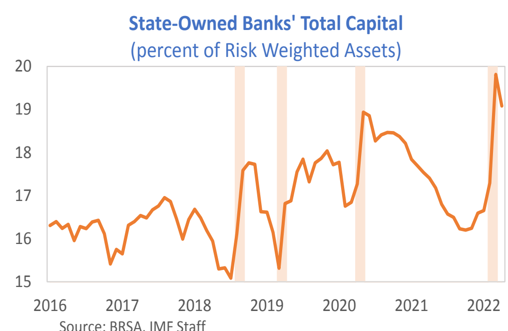
29. The financial system has exhibited areas of resilience, but risks have also risen to an elevated level. The composition of bank loans has gradually shifted from FX to TL, increasing resilience of banks and corporates to exchange rate shocks. Households, by regulation, cannot borrow in FX. Moreover, albeit declining, wholesale funding has proved resilient, even at times of market volatility. Maintaining stable access going forward will be critical. However, the economy has relied on rapid credit growth, which has turned into a source of pressure on banks' capital, especially with the impact of Lira depreciation on FX assets. It has also contributed to a sizable credit gap, weakened the efficient allocation of capital, and increased contingent liabilities for the government.[7]



Sources: BIS; IMF IFS: IMF WEO; OECD Economic Outlook; and IMF staff calculations.



Source: BRSA



Source: BRSA, IMF Staff

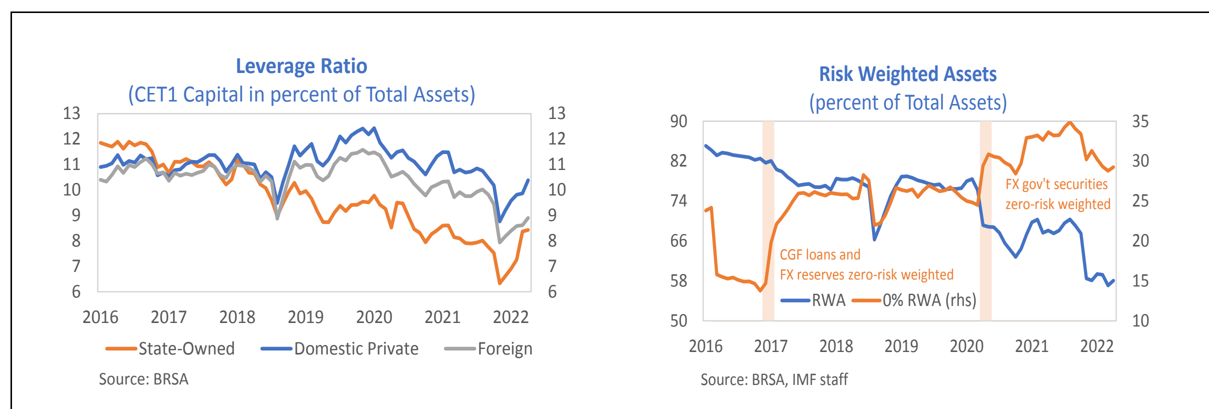
30. Banks have adopted two different business models. SOBs charge lower lending rates due partly to marginally lower deposit rates and credit rationing. Nevertheless, their profitability has been on a declining trend. Private banks charge higher lending rates and have preserved better profits but have lost significant loan market shares. Even with moderate reported loan losses and decreased risk weighted assets (RWA), SOBs have required repeated recapitalizations (totaling around 1.8 percent of GDP since 2018). SOBs have also grown a large (especially FX) securities' book. This has coincided with the return of the Turkish Treasury to the FX domestic bond market and a steady decline in foreign holdings. Recently adopted regulations will incentivize holdings of fixed-rate TL securities, which would weaken banks' profitability, and raise the risk of potential feedback in the event of an adverse shock.

31. There is high uncertainty over bank asset quality. Supported by strong loan growth and regulatory flexibility, the reported NPL ratio declined to 2.5 percent system-wide and 1.7 percent for SOBs. The stage two loan ratio has remained broadly stable at just below 10 percent and loan restructurings rose to 5.7 percent. However, there is no information on the types and performance of restructured loans. Regulatory easing, beyond accepted international norms, was extensive, even

[7] See IMF Global Financial Stability Report, April 2018, Chapter 2: The Riskiness of Credit Allocation: Source of Financial Vulnerability?

before the pandemic.[8] Furthermore, regulatory changes allowed existing loans to be refinanced including through the Credit Guarantee Fund and SOBs while retaining their performing status. Data on these refinanced loans is not collected. Despite regulatory easing, reported asset quality in some sectors, including construction, energy and tourism, is showing pressure.

32. Capital ratios have rebounded lately but would be much closer to regulatory limits in the absence of forbearance. Reported system-wide capital was over 18 percent of risk-weighted assets at end-May 2022, well above regulatory requirements, but this is inflated by regulatory flexibility, and significant disparities across banks exist.[9] Leverage ratios, which strip out the impact of lower risk weights used to calculate regulatory RWA, have been trending downward, raising banks' risk profile.



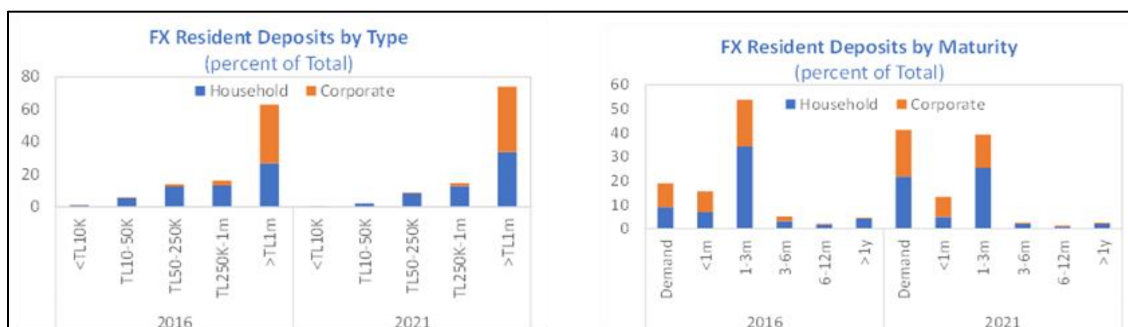
33. Deposit dollarization alongside a high concentration and low maturity of FX deposits raises considerable liquidity risk. FX deposits rose to around 65 percent of total bank deposits in December 2021. The introduction of state-guaranteed FX-protected TL deposits and other regulatory measures have interrupted this trend.[10] Historical experience shows that episodes of moderate to heavy FX deposits outflows are rare, but not implausible. Moreover, FX resident deposits are very concentrated, and they exhibit low maturity, exacerbating risks. At over 400 percent, the system-wide FX liquidity coverage ratio (LCR) is inflated by liquid assets held at the CBRT, including required reserves, as well as potential sizable inflows from swaps with the CBRT. Cross-border funding through European subsidiaries is relatively small.

[8] See the sections below on Stress Tests, and Financial Sector Oversight, for details.

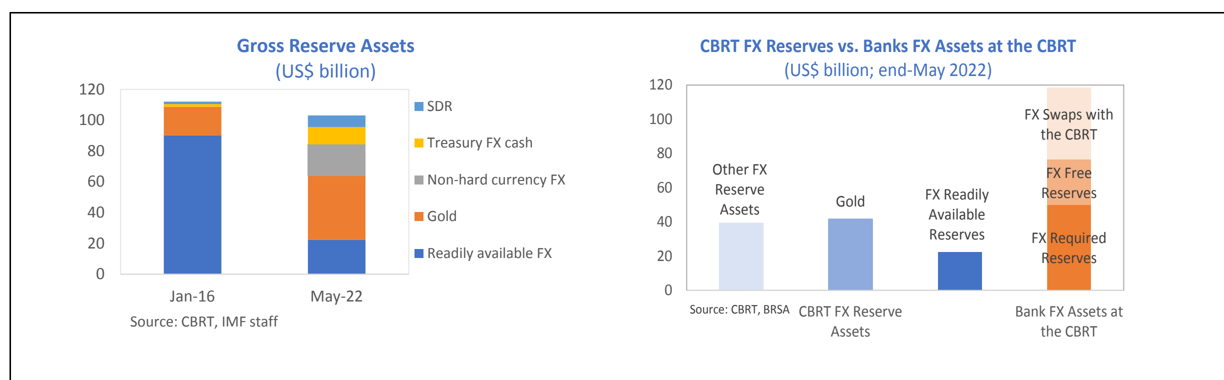
[9] The BRSA has a minimum CAR of 8 percent, consistent with Basel III, and a target CAR of 12 percent.

[10] For example, the CBRT imposed additional 500 basis points of required reserves for banks with a conversion rate from FX to TL deposits below a certain threshold.

34. The combination of lower FX loans and higher dollar deposits has resulted in a large currency mismatch on banks' balance sheets. This gap has been closed off-balance sheet with FX swaps, largely with the CBRT, following the introduction of restrictions on offshore FX swaps. Aside from CBRT FX swaps, banks carry large off-balance sheet positions. These include a mix of cross-currency swaps with foreign counterparts (not in TL) and interest-rate swaps with foreigners and domestic corporates at various maturities. The position is in balance.

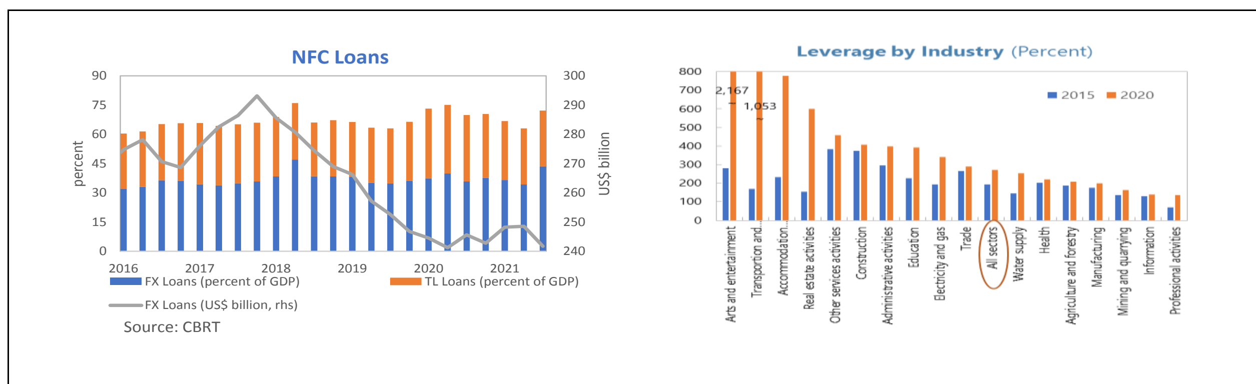


35. A strong bank-central bank nexus, exacerbated by a scarcity of readily available CBRT FX reserves, represents a key systemic risk. Gross reserves are below the ARA floor, partly reflecting FX intervention, and include a large share of gold and non-hard currencies. Readily available reserves—excluding gold, non-hard currency FX, Treasury FX cash, and SDRs—fell to 22 percent of total CBRT gross reserves (at mid-2022) from 80 percent at the last FSAP. Moreover, almost three quarters of CBRT FX liabilities are owed to domestic banks, in the form of deposits or swaps. This alone is larger than total CBRT FX reserves assets and is a large share of banks' FX liquid assets. In addition, a steady decline in foreign holdings of Turkish government securities has been offset by SOBs' holdings, heightening sovereign-bank interconnectedness. Sovereign credit ratings have deteriorated significantly.



36. Corporate FX debt has declined, but high leverage and onerous debt service costs are risks. FX-denominated corporate debt has declined since 2018, allowing NFCs to halve their net FX position in dollar terms. However, Lira depreciation has erased most of this progress. Corporate leverage has increased considerably. The pandemic took a toll on transportation and tourism, but

high leverage was already visible in 2019 across a broad range of sectors.[11] While operating profit margins have remained wide in recent years, net profits have been eroded by higher interest payments. Debt service costs have also weighed adversely on interest coverage ratios (ICR), which stood at around 1.5 on average across all sectors in 2020, although listed companies have improved since then. Conditions appeared particularly challenging for the tourism sector, where the ICR turned negative in 2020, although revenue has rebounded strongly in 2022. Transportation and real estate also had ICRs below one.



37. Household sector risks are on the rise from low levels, reflecting sharply higher real house prices. Household balance sheets exhibit low debt levels, accounting for only one fifth of total bank loans, less than 20 percent of GDP. Households carry a positive net FX position, reflecting restrictions on FX borrowing. Prior to the pandemic, the housing market had a large stock of unsold dwellings, a legacy of years of excess construction activity that resulted in a major correction in real house prices. Monetary policy easing and inflation protection motives have triggered a rebound in housing sales and a sharp rise in real house prices, which requires close monitoring. Despite the relatively low maturity of loan mortgages, however, broader financial stability risks appear limited, given the small number of mortgaged transactions.[12]

[11] High leverage reflects almost entirely bank funding, while debt securities account for less than 1 percent of total NFC liabilities.

[12] The average maturity of mortgage loans is 5.6 years, but they amount to only 6 percent of total banking sector loans.

Authorities' Views

38. The authorities recognized the extensive role of regulatory flexibility as part of the policy response to the pandemic. They also acknowledged its impact on reported NPLs and capital but stressed that most measures have now been unwound. They expected banks to remain adequately capitalized, even in the event of higher loan losses given prudent provisioning.

39. The authorities were sanguine regarding resilience to FX liquidity risks. While expressing concern for the rising long-term trend in deposit dollarization, they emphasized the stabilizing role played by the recently introduced FX-protected deposits. Banks' FX liquid assets were deemed ample to cover even sizable deposit outflows, and CBRT reserves were seen as adequate to handle any possible liquidity pressure. Moreover, while the increase in energy prices was seen a concern for the balance of payments, this would be tempered by FX inflows from foreign acquisition of Turkish assets, tourism, and corporates.

40. The authorities stated that the risks are improving in terms of high corporate leverage and rising debt service costs, especially for some sectors. However, they underscored the improvement in firms' net open FX positions and their growing short-term FX buffers, partly reflecting policies limiting borrowing in foreign currency. They recognized the exuberance of house prices but highlighted the high incidence of cash-only transactions and conservative bank mortgage lending practices.

B. Stress Tests and Network Analysis

41. Banking stress tests (ST) examined systemic solvency and liquidity resilience. The ST covered the 10 largest banks (four of which are state owned) by asset size, constituting approximately 80 percent of banking system assets.[13] Main macrofinancial risks stem from: high inflation, dollarization, and NFC leverage; very rapid credit expansion and weakening bank profitability for SOBs; elevated risk premia; and low CBRT reserves. These risks induce vulnerabilities to capital outflows, dollar deposit flight, and currency depreciation.

42. There were two ST scenarios with a three-year horizon (2022–2024, Figure 10):

- A baseline scenario drew on the preliminary July 2022 World Economic Outlook, in which growth decelerates, inflation and credit growth rise, and the Lira depreciates.

- An adverse scenario featured a sharp economic downturn followed by a recovery. It also incorporated an increase in inflation, currency depreciation, capital outflows and a rise in sovereign risk, resulting in increased funding costs for NFCs and solvency and liquidity pressure on banks. These shocks could be triggered by global geopolitical tensions, a sharp rise in global risk and term premia, a deterioration in sentiment or a prolonged pandemic (see the Risk Assessment Matrix in Table 5).

[13] In this section the banking system refers to the 10 largest banks by asset size, and the data/policy cut-off date is 2021Q4.

Solvency Stress Tests

43. Excluding regulatory forbearance leads to a sizable decline in the banking system total capital adequacy ratio (CAR) in 2021Q4. In line with BRSA stress testing, the impact of forbearance was excluded from the starting points. Furthermore, risk weights on sovereign debt securities in FX, and FX required reserves and receivables from the CBRT were increased to 100 percent, in line with Basel standards. These adjustments decreased the banking system CAR in 2021Q4 by 4 percentage points to 13.6 percent.[14]

44. Under the baseline scenario, banking system CAR would gradually decline close to the regulatory minimum of 8 percent in the absence of restrained credit growth.[15] Risk-weighted assets increase significantly due to high credit growth and TL depreciation.[16] Profits and other income are inadequate to offset the impact of risk-weighted assets on CAR, due mainly to the impact of higher interest rates on banks' short-term funding and sovereign debt exposures.

45. Under the adverse scenario, banking system CAR would decline significantly, falling below the regulatory minimum. CAR declines by around 7 percentage points over the horizon of the stress test (Figure 11), with six banks breaching minimum capital requirements. Aggregate capital needs would amount to around 2 percent of GDP. The decline is driven by an increase in risk-weighted assets and decline in income due to: (i) loss provisions; (ii) compression of lending spreads; and (iii) mark-to-market losses on sovereign debt exposures.

46. If restructured loans were to become non-performing, capital ratios would decline further. Two counterfactual analyses on restructured loans, which represent almost 6 percent of total loans, were undertaken. A fraction of restructured stage two loans (25 percent in the first counterfactual and 50 percent in the second) was assumed to become non-performing in 2021Q4. This would lead to an increase in NPL ratios of 1.5 and 3 percentage points in the first and second counterfactual analysis respectively, and aggregate banking system capital would decline by a further 0.5 and 0.7 percentage points over the horizon of the adverse stress test scenario.

Authorities' Views

47. The authorities agreed on the need to contain credit growth to avoid capital pressures on the banking sector and expect CARs to remain well above the regulatory minimum. They highlighted recent policy measures to restrain credit growth and expected a significant decline in nominal credit growth in the near term. Furthermore, they believed that banks could protect profits by widening interest margins and increasing their investment in CPI linked securities. Moreover, a

[14] Refinanced loans, on which no data is collected, would reduce CAR further if they were to become non-performing.

[15] Idiosyncratic policy measures and recapitalization of SOBs in 2022 were not included in the analysis, as the stress test starting point is based on 2021Q4 data.

[16] Credit grows at the rate of nominal GDP in the baseline (Figures 10, 11). While high, this is in line with recent historical experience.

more positive growth outlook, and the 2022 recapitalization of SOBs, would support banks' capital adequacy.

Liquidity Stress Tests

48. A cash-flow-based liquidity stress test (LST) and an LCR-based stress test were conducted to test banking-sector resilience to liquidity stress at end-2021. The LST assessed banks' liquidity, both total (TL and FX) and FX, under three scenarios of increasing severity. The first scenario is in line with LCR stress parameters, while the other two scenarios were calibrated drawing on Türkiye's historical experience and the solvency stress test scenario.[17] They included market liquidity stress (haircuts on debt securities) and funding liquidity stress (outflows of unsecured funding by retail and corporate customers, and outflows of funding from banks abroad). Scarce access to FX, accounting for CBRT readily available FX liquidity, was also examined.

49. Three assumptions were made regarding the CBRT's readily available FX liquidity to support the banking system (labeled as options). Under the first option, most gross international reserves (GIR) were assumed to be readily available FX liquidity, except for SDRs, official bilateral non-hard currency swaps, and treasury FX deposits held at the CBRT at end-2021. In the second option, an additional assumption was introduced, whereby the CBRT was assumed willing to sell 75 percent of gold holdings to provide FX liquidity to the banking system. The third option assumed that the CBRT would be willing to sell 50 percent of gold holdings.

50. Accounting for the CBRT's readily available FX liquidity significantly lowered banks' FX LCR starting points. The average reported LCR as of end-2021 was 450 percent in FX and 188 percent in total. However, the FX LCR is inflated by regulatory settings.[18] LCRs as of end-2021 were adjusted to: (i) cap the aggregate banking sector's FX reserves held at CBRT (counted as high quality liquid assets (HQLA)) to the CBRT's readily available FX liquidity (under the three options described above); (ii) impose a 35 percent haircut on Türkiye sovereign debt in FX; (iii) remove FX inflows (as well as TL outflows) from swaps with the CBRT. After these adjustments, the average FX LCR at end-2021 was 249 percent under option 1, 236 percent under option 2, and 208 percent under option 3 (Figure 12). These adjustments were less binding for total LCR as the positive effect of removing TL outflows compensated the negative impact of removing FX inflows from swaps with the CBRT.

51. The results of the LCR stress test revealed that banks could withstand moderate deposit outflows at end-2021 but were vulnerable to severe outflows. FX LCRs remained above the regulatory minimum of 80 percent under the stress scenarios for all banks. However, under the severe scenario banks' FX LCRs reached close to the minimum. Total LCRs stayed above the 100 percent regulatory minimum for all banks under scenario one. However, under the severe

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[17] The LCR assumes deposits outflows by retail customers and wholesale funding provided by small business customers of 5 percent (for stable deposits) and 10 percent (for less stable), as well as 5 to 40 percent outflows by unsecured funding provided by non-financial corporates.

[18] Specifically: (i) inclusion of the totality of FX required reserves as Level 1 high quality liquid assets (HQLA); (ii) inclusion of inflows from swaps with the CBRT that may not be readily available; (iii) revision to derivative market valuation in LCR; (iv) no haircut on Türkiye's sovereign debt in FX. See also Financial Sector Oversight section below.

scenario, total LCR fell below 100 percent for one bank under options 1 and 2, and for three banks under option 3. The key driver was funding outflows from retail and corporate deposits.

52. The cash-flow-based liquidity stress test analysis provided similar results. Most banks had enough FX and total liquidity to cover outflows under the moderate scenario at end-2021. Under the severe scenario a FX funding gap emerges, in which one third of banks would not have enough liquidity to cover short-lived outflows, and half of the banks would not have enough liquidity to cover liquidity outflows lasting 1 to 3 months.

53. The results demonstrate the importance of the CBRT's readily available FX in determining systemic liquidity risk. In the severe scenario, banks' usage of their free and drawable reserves held at the CBRT, and a need for additional FX from the CBRT to cover their funding gap, would reduce CBRT readily available FX liquidity to a low level. However, the CBRT would retain other GIR components (SDRs, official bilateral non-hard currently swaps, and remaining gold). These analyses do not account for capital flight outside of banks' deposits, a large adverse shock to all sources of banks' wholesale funding, a possible offshoring of banks' FX liquid assets (as happened in 2018), all of which would increase the scarcity of FX liquidity.

Authorities' Views

54. The authorities were confident in the banking sector's resilience to liquidity stress. They considered the deposit outflows in the severe stress test scenario as unlikely to materialize, given Türkiye's historical experience. Moreover, they considered FX readily available liquidity at the CBRT as adequate and FX inflows from banks' swaps with the CBRT as available. They also considered the FX LCR as adequately calculated.

Systemic FX Liquidity Stress Tests

55. Systemic FX liquidity stress tests assessed the impact of stress stemming from NFCs, households, and general government, and the transmission to CBRT reserves. The analysis incorporated large off-balance sheet FX derivatives positions (e.g., swaps) of the banking system vis-à-vis other sectors. It included first-round impacts on banks' liquidity, and second round effects stemming from nonbank inflows and outflows under a stress test horizon of one-month.[19] The cashflow-based liquidity stress tests' moderate and severe scenarios were used. The post-second-round funding gap of the banking system—after banks used their FX liquid assets and excess reserves to cover outflows—was assessed against the CBRT's readily available FX liquidity under the same three options as described above for the cash-flow and LCR exercises.

56. Results indicated that moderate FX liquidity stress could be met at end-2021 (Figure 13). In the moderate stress scenario, banks covered their first and second-round cashflow needs from liquid assets, excess reserves, and FX inflows mostly from external sources. The analysis assumed banks would use excess reserves before their interest-bearing FX liquid assets. As a result, the CBRT's readily available FX liquidity would decline.

[19] Note the horizon for the cashflow based stress tests was 3 months.

57. A severe FX liquidity stress scenario would require CBRT liquidity support, reducing CBRT readily available liquidity, significantly if accompanied by a reversal of capital flows (Figure 14). Severe first- and second-round outflows would generate a funding gap that would need to be covered by the CBRT, reducing CBRT's readily available FX liquidity to very low levels. In a sensitivity analysis where capital flight occurred alongside severe deposit outflows, the CBRT's readily available liquidity could reach close to zero (conditional on the assumption regarding CBRT's willingness to sell gold).

Authorities' Views

58. The authorities recognized that FX deposits are at the heart of systemic FX liquidity and welcomed the systemic FX liquidity stress test methodology. However, they considered the FX deposit outflows in the severe stress scenario to be implausible. They viewed such assumptions as relevant only for reverse stress tests. They reiterated that the CBRT's readily available liquidity is adequate to weather FX liquidity stress.

Interconnectedness and Contagion

59. The banking system's high degree of interconnectedness with the domestic NFC sector and households implies potential for shocks to propagate if risks were to materialize.[20] The banking system has considerable exposure to NFCs and households via deposits and loans (Figure 1). If stress materializes in the corporate sector, it could reverberate through the system via the credit risk channel. Sectors such as insurance, pension funds, and investment and money market funds are relatively small and the potential for systemic risks originating from these sectors is limited. Common exposure to asset classes could amplify risk transmission if vulnerabilities were to arise in one sector.

60. Interbank contagion analysis indicated that contagion risk among the 10 largest banks is limited reflecting low interbank credit exposures (Figure 15). The results suggested that a failure of one bank would not lead to a direct default of the other nine banks. On average, a failure of one bank in the system would deplete initial capital of other banks by about 0.2 to 1.8 percent.

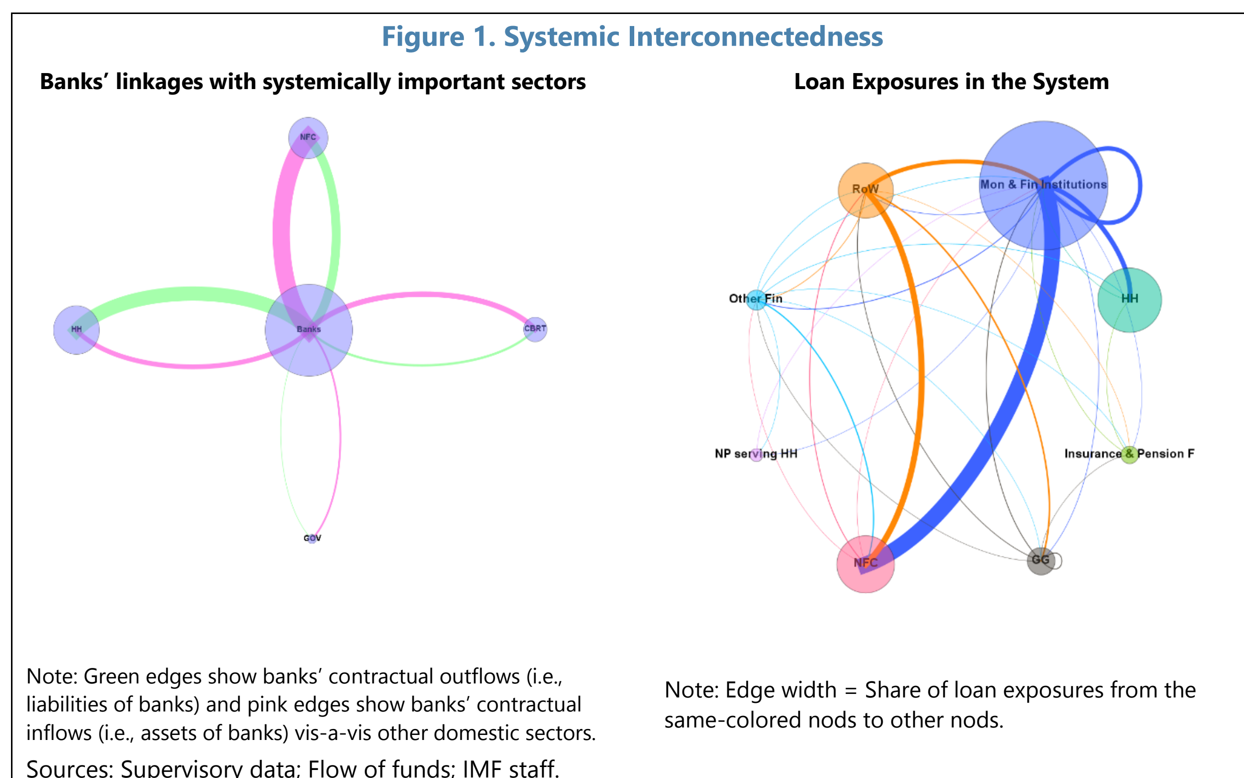
61. The Turkish banking system could be adversely affected by spillovers from abroad, but it is not a source of contagion to other major banking systems. Nearly two-thirds of cross-border claims of the Turkish banking system are via-a-vis the U.S., the U.K., and Germany (adding up to around 1.7 percent of GDP). Cross-border exposures to Russia and Ukraine appear limited. The banking system has large off-balance sheet currency swaps exposures that are mostly with global systemically important banks (GSIBs), and a quarter of these exposures have short maturity duration (0-3 months). However, as a share of foreign banks' assets, these exposures are relatively small. Contagion risks due to credit and funding shocks originating from other banking systems could deplete the Turkish banking system's capital by about 4 percent of its initial capital (Figure 16).

[20] The network analysis is limited in its capacity to fully reflect the bank-sovereign nexus through direct exposures or due to contingent fiscal liabilities.

Authorities' Views

62. The authorities broadly agreed with the findings of the interconnectedness analyses. They concurred that low domestic contagion risks reflect small domestic interbank exposures and explained that some regional cross-border exposures reflect the establishment of Turkish branches abroad. The authorities viewed the vulnerabilities stemming from the NFC and household sectors to be limited due to low levels of reported NPLs and did not see the potential for stress propagating from these sectors.

Figure 1. Systemic Interconnectedness



Note: Green edges show banks' contractual outflows (i.e., liabilities of banks) and pink edges show banks' contractual inflows (i.e., assets of banks) vis-a-vis other domestic sectors.

Note: Edge width = Share of loan exposures from the same-colored nods to other nods.

Sources: Supervisory data; Flow of funds; IMF staff.

Nonfinancial Corporate Sector Stress Tests

63. Stress tests to assess NFC resilience indicated viability could deteriorate significantly for about one third of firms as real interest rates rise (Figure 17).[21] Many NFCs have high leverage. In both the baseline and adverse ST scenarios, firms would face substantially higher interest burdens as real interest rates rise. The median firm's ICR remained around the critical threshold of two at the trough of the stress episode.[22] However, about 35 percent of NFCs in the sample faced viability challenges with their ICR falling below one.

[21] NFC stress tests were based on listed firms' data covering about 25 percent of the Turkish NFC universe. Access to a broader dataset of firms was not made available, limiting the richness of the analysis.

[22] An ICR of two or lower is generally considered an early warning level, suggesting that the company might need to tap into cash reserves to pay its debt obligations in the near-term. Evidence from past crises suggest that firms may already be in destress by the time they reach an ICR of 1.5.

64. Larger and non-services sector firms appeared to be more resilient. Under the adverse scenario, the ICR of the median top 50 firms fell from around 5 to 3. The next 51–100 firms' ICRs reached the critical threshold of two, while other firms fell below two. The median non-services-sector firm's ICR remained well above the threshold of two, while the median services sector firm's ICR reached closer to one in the adverse scenario.

65. Credit risk increased significantly during the stress episode. A debt-at-risk (DaR) analysis suggested that under the adverse scenario, debt held by firms with poor viability (i.e., ICR below two) would rise to nearly 60 percent from a pre-stress level of 20 percent.

Authorities' Views

66. The authorities highlighted the resilience of larger NFCs in the stress tests. They noted that although roughly one third of firms fall below an ICR of one during the stress episode, this is driven by smaller listed firms, while larger listed firms are more resilient. The authorities believed export-oriented firms maintain a natural hedging capacity for the FX revenue surrendered under the 40 percent export revenue surrender requirement given that these firms may purchase FX in the market.

C. Climate Risk

67. Türkiye's financial sector faces low to mid-range exposure to climate-related risks. Exposure to physical risk is mid-range according to the INFORM climate risk indicator.[23] Transition risk is lower mid-range based on a carbon-reduction preparedness index, but this could increase if the European Union finalizes its Carbon Border Adjustment Mechanism (CBAM) which would impose import tariffs on carbon-intensive products.[24],[25] According to the BRSA's transition risk analysis, CBAM could impact borrowers in the five affected sectors albeit not significantly (an estimated 0.09 percent increase in the overall NPL ratio).[26] A pilot exercise on physical risk analysis is being used to build a risk assessment model by the BRSA. The insurance sector's exposure to climate-related risks appears limited and centered on the agricultural sector for which most policies are written by the Agricultural Insurance Government Pool (TARSIM).

68. There is a range of national plans to support climate change mitigation and adaptation, but actions in the financial sector are still at an early stage. There is a National Climate Change Strategy (2010–2023), Green Deal Action Plan (GDAP), Climate Council Advisory decisions, and targets to reduce carbon emissions to net zero by 2053. Turkish financial regulators have taken initial steps to integrate climate issues in their governance and strategies, and they are aware of the Basel Committee on Banking Supervision's (BCBS) recent principles setting out a framework for the supervision of climate risks. Most financial institutions, however, are at an early

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[23] INFORM is a collaboration of the UN Inter-Agency Standing Committee and the European Commission. See Financial and Risk Indicators | Climate Change Indicators Dashboard (imf.org).

[24] See World Bank, "Diversification and Cooperation in a Decarbonizing World", Chapter 5.

[25] Initial results from a study by the European Bank for Reconstruction and Development and others (July 2021), estimate increased costs of 0.04–0.07 percent GDP for companies exporting cement, aluminum, electricity, and steel.

[26] Iron and steel, cement, fertilizer, aluminum, and electricity generation.

stage of integrating climate risks into their strategy and operations and have called for more guidance.

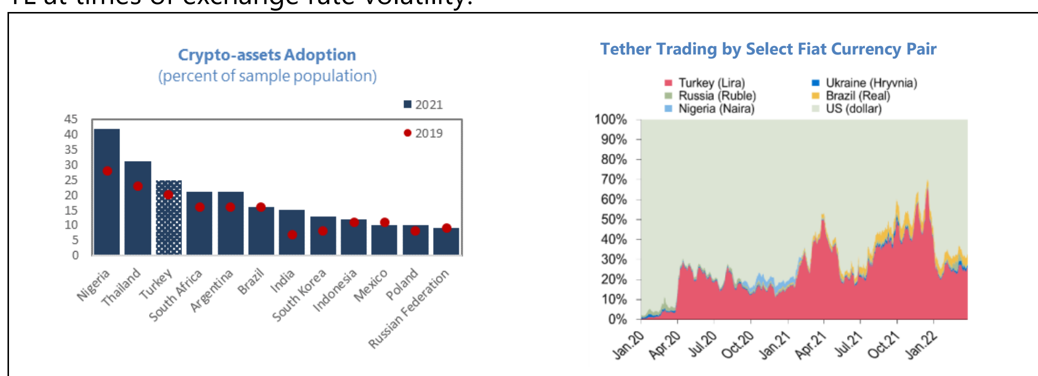
69. Enhancing data capacity and risk assessments would be beneficial. Efforts could be aimed at harmonizing and enhancing climate related data, such as firm-level carbon intensity or granularity of data on location for loans, with close coordination among relevant stakeholders. Simplified climate risk assessments (e.g., by measuring exposures) to explore the potential implications of climate risks for the insurance and pension fund sectors and their supervisory objectives could also be undertaken.

Authorities' Views

70. The authorities were seeking to build on their efforts to support climate risk mitigation and adaptation. They expressed interest in capacity development to strengthen climate stress testing methodologies and recognized the need to improve data collection and its use for risk management and supervision.

D. Crypto Assets

71. Crypto asset activity surged in recent years. 37 centralized crypto exchanges operate in Türkiye with an estimated 15 million accounts of mainly Turkish investors. The average daily trading volume was about US$0.8 billion in 2021, and total crypto holdings amounted to about US$5 billion (0.6 percent of GDP) at end-2021. There was a notable rise in global trading volumes of Tether against TL at times of exchange rate volatility.



Sources: Statista Global Consumer Survey, CryptoCompare, WB and IMF Staff calculations.

72. At present the regulated financial sector plays a limited role in crypto market activity. Banks or the Postal and Telegraph Corporation must be used for on and off ramps to domestic and global crypto exchanges. Banks may not lend for crypto investment purposes, take direct holdings in crypto assets, or provide crypto-related services, such as custody services, but they remain exposed to indirect crypto risks through their customers' exposures. Crypto assets were prohibited for payment purposes in 2021.[27]

73. A regulatory framework for crypto assets is nascent. The Capital Markets Board (CMB) is drafting a law and formulating a regulatory framework for crypto investment platforms with a focus on investor protection. The CBRT is working on a framework for the use of stablecoins for payment.

[27] Regulation on The Disuse of Crypto Assets in Payments (No. 31456).

The Financial Crimes Investigation Board (MASAK) has identified service providers as obliged entities for customer due diligence, suspicious transaction reports, and periodic reporting for AML/CFT purposes. In this context, implementation of the Financial Action Task Force (FATF) Recommendation 15 on virtual asset activities is advised. More broadly, improvements in institutional coordination on the regulatory and supervisory approach, and data collection, would be beneficial.

Authorities' Views

74. The authorities acknowledged the need to address the risks arising from crypto assets. This includes the important ongoing legislative efforts to establish a regulatory framework for crypto platforms and stablecoins for payment use, and implementation of an effective supervision and enforcement regime.

FINANCIAL SECTOR OVERSIGHT

75. Policy normalization is needed to realign fundamental financial incentives, rationalize idiosyncratic regulatory and administrative measures, and refocus on financial stability objectives. Macrofinancial stability will be very difficult to achieve without policy normalization, which involves realigning financial incentives to appropriately price risks and returns in real terms to reflect macroeconomic fundamentals and limit the buildup of financial sector vulnerabilities. At the same time, rationalizing the complicated mosaic of idiosyncratic financial sector policies adopted recently (see Table 2) while ensuring their internal consistency and Basel compatibility would reduce distortions, improve policy clarity and predictability, and help incentivize systemic behavior consistent with macrofinancial stability.

76. Policy normalization should also involve several cross-cutting actions:

- Ensuring operational autonomy of the CBRT, BRSA, IPRSA, and SDIF to allow them to resolve internal contradictions within the current constellation of policy settings and rationalize idiosyncratic regulatory measures.
- Financial stability should take priority over other objectives. Rebalancing toward stability over near-term growth is imperative given the risks that have emerged.
- Increasing resources for institutions to fulfill their mandates effectively, improving their ability to attract and retain talent, ultimately building strong foundations to address future challenges.
- Strengthening coordination across financial regulatory agencies in the areas of systemic risk monitoring, crisis management and preparedness, cyber-resilience, and climate.

Table 2. Republic of Türkiye: Selected Policy Measures, June 2017–2022[1/]

	Macroprudential	Banking Supervision and Regulation	Systemic Liquidity	Other
Early Lira Depreciation: 2017H1-2019H1	• NFC FX borrowing up to $15m subject to FX income test • Capital conservation buffer fully phased in • D-SIB buffers fully phased in • Increased general provisions • Maturity restrictions on consumer loans adjusted, caps on credit card installments (easing and tightening) • LTV limits on housing (energy use) and vehicles introduced • Offshore FX swaps restricted to 25% (wrong-way) of capital	• **Loan refinancing criteria eased** • **Probation for restructured stage 2 loans never classified as NPL lowered to 3m** • **Fixed exchange rate on FX assets in credit risk RWA** • **FX required reserves zero-risk weighted in CAR calculations** • Required reserves fully included in LCR HQLA • **Revision to derivative market valuations in LCR**	• LLW rate raised by 375 bps • One-week repo rate restored as policy rate and symmetric interest rate corridor introduced • One-week repo rate hiked by 1,600 bps cumulatively • TL reserve requirements cut by 300-350 bps; FX reserve requirements cut by 350bp/+250 bps • ROM upper limit cut by 25 bps • CBRT FX swaps introduced • Qatar/China swaps agreed	• State-owned bank recap • Fixed exchange rate for repayments of export rediscount credits • FX surrender requirements for exporters set at 80%
COVID-19 Pandemic: 2019H2-2020H1	• Minimum payment for credit cards lowered, raised cap on credit card installments • LCR allowed to fall below regulatory minimum limit • Offshore FX swaps further restricted to 1-10% of capital	• **Fixed exchange rate on FX assets in RWA reinstated** • **Exclusion of securities' losses from capital/FX net position** • **FX government securities zero-risk weighted in CAR calculations** • **Delayed classification of stage 2 loans and NPLs** • **Grace periods on credit cards** • **Loan collateral revaluation frozen**	• One-week repo rate cut by 1,575 bps cumulatively • Outright purchases of govt bonds to 10% of CBRT assets • Liquidity provided through repo and swap auctions 100-150 bps below policy rate • Primary dealer limits raised • Collateral pool expanded • Qatar swap raised to $15b	• New Asset Ratio to incentivize bank credit • Reserve requirement ratios linked to loan growth rates • State-owned banks recap • CGF limit doubled and extended to households • CBRT precautionary reserves and above-normal profits transferred to the Treasury • Firms' dividend payments limited to 25% of 2019 profits • Financial reporting delays allowed
Policy Normalization: 2020H2-2021H1	• Flexibility on LCR regulatory minimum limit revoked • Tightened maturity restrictions on consumer loans • Offshore FX swaps loosened to 5-30% (right-way) and 10% (wrong-way) of capital	• Grace periods on credit cards revoked • Loan collateral revaluation normalized	• One-week repo rate hiked by 1,075 bps cumulatively • All funding provided through the one-week repo rate • TL reserve requirements increased by 200 bps, • Daily reports info on FX swaps/weekly reports on reserves and FX liquidity • China swap raised to $5.5b	• Asset Ratio revoked • Linking of reserve requirements to loan growth rates revoked
Türkiye's Liraization Strategy: 2021H2-2022H1	• Consumer loan risk weights raised • Maturity caps and LTV ratios on consumer loans lowered • Minimum monthly payments on credit cards increased • Risk weights on TL corporate loans raised to 200% • 500 bps risk weights for NFC engaging in derivatives with offshore counterparts • Differentiated housing LTV ratio	• Delayed classification of stage 2 loans and NPLs phased out • **Fixed exchange rate in RWA set at year-end 2021**	• One-week repo rate cut by 500 bps cumulatively • Export rediscount credit linked to FX surrender requirements • Haircut for non-TL collateral in CBRT operations increased • TL fixed rate securities in collateral pool increased • TL fixed rate securities held as required reserves on FX deposits • Remuneration on TL required reserves reduced to 0% • Korea/UAE swaps agreed	• TL FX-protected deposits introduced/NFC tax exempted • 1.5% fee on FX RR if FX protected deposits <10% / FX RRR raised by 500 bps if FX-protected deposits <5% by September • FX surrender requirements for exporters at 25%, then 40% • Reserve requirement on certain TL commercial loans set at 20% • Lower mortgage rates if 50% of purchase through FX sale • NFC loan ban depending on FX cash position thresholds • State-owned bank recap

1. Bold indicates not Basel compliant. Some measures could constitute capital flow management measures.
Source: Turkish financial sector authorities, IMF and WB staff analysis.

A. Systemic Risk Oversight and Macroprudential Framework

77. Systemic risk oversight falls under the purview of the Financial Stability Committee (FSC), created in 2011. Its original mandate focused on monitoring systemic risks and identifying measures to mitigate them without compromising the independence of the members. In 2019, the FSC was restructured and renamed the Financial Stability and Development Committee. Another restructuring took place in May 2021 when the FSC took its current form.[28]

78. Ambiguity in the language of the FSC's legislative mandate should be clarified, reaffirming that financial stability comes first. By calling for financial stability to ensure support of the financial system for sustainable economic growth and market confidence, the FSC's broadened mandate recognizes possible trade-offs. However, in recent years, the balance of policy actions has tilted toward supporting growth at the expense of systemic risk, which, were it to materialize, would adversely impact medium-term growth.

79. The relaunch of the FSC architecture is welcome, but more is needed, including a framework for transparency and accountability. FSC subgroups have been (re-) established recently, focusing on systemic risk, crisis management, fintech, financial development, and evaluation of the impact of regulations, with all member agencies participating. Coordination mechanisms have been strengthened through a Steering Committee in the Secretariat. Such arrangements should foster the flow of data, information, and technical analysis across subgroups to support the FSC's deliberations. While the FSC has enhanced its communications, publication of planned quarterly FSC reports is recommended.

80. The monitoring of systemic risks has progressed, and efforts to cohere an integrated and overarching view should be further strengthened. The CBRT has continued to improve the heat map used to monitor systemic risk. It should take advantage of its new role as chair of the Systemic Risk Monitoring Group (SRMG) to pull together an integrated picture of risks to financial stability beyond the heat map, including interconnectedness, solvency, liquidity, impact of macroeconomic volatility, corporate and household health, and scanning beyond the regulatory perimeter for systemic risk. Cyber resilience, crypto and climate risk also warrant greater attention from the SRMG.

81. Interlinkages and feedback effects should be considered when policy measures affecting systemic risk are considered. The multiplicity of measures taken recently involves some that act at cross-purposes, limiting their effectiveness, and others that create distortions in price formation. For example, policies that set real rates deeply negative and lower lending rates at SOBs have incentivized greater credit creation, even as other measures have been adopted to constrain this growth by imposing indirect costs on credit provision (e.g., reserve requirements on commercial loans).

[28] The FSC's membership was expanded, now including CBRT, BRSA, SDIF, Ministry of Treasury and Finance (MOTF), CMB, Presidency Strategy and Budget, and IPRSA. The FSC's secretariat is housed at the MOTF.

82. **In the short term, a special area of focus for analysis and contingency planning should be systemic FX liquidity.** Given the risks posed by the strong bank-central bank nexus and low level of CBRT FX reserves, the CBRT should closely monitor developments in systemic FX liquidity, work with the BRSA to ensure that the bank-central bank nexus is integrated into analysis, expand liquidity monitoring tools and revert to calculating more prudent liquidity coverage ratios (see below), and lead contingency planning in this area. This could include reverse stress tests to determine critical tipping points. It is also important to develop a "playbook" during calmer times on how each agency would react during crisis.

83. **Credit growth needs to be restrained in a broad-based way using Basel-compatible tools, alongside rationalization of idiosyncratic measures and realignment of financial incentives.** Very rapid credit growth, a widened credit gap, a current account deficit, increased corporate leverage, and heightened financial volatility are predictors of increased macrofinancial risks. Strong credit growth will also lower capital adequacy ratios in the near term, and if persisting over several years raises concern about credit quality. The approach to restraining and better managing credit growth should involve rationalization of idiosyncratic measures in favor of Basel-compatible policies in conjunction with realigning financial incentives. To increase resilience in the event of adverse shocks, activation of the countercyclical capital buffer (CCyB), with the build-up phased in over time, is recommended. Given their rapid growth and sizeable footprint, SOBs should operate on a commercial basis subject to strengthened corporate governance principles, with particular supervisory attention paid to their liquidity and asset quality (see below).

84. **Selected use of borrower-based measures should be reassessed as policy normalization takes place.** Measures to redirect credit for sectoral growth objectives, for example reserve requirements on loans, should be phased out under policy normalization. Those with a clear macroprudential objective of maintaining financial stability, for example related to mortgage lending in the context of soaring real estate prices, would be appropriate to retain.

Authorities' Views

85. **The authorities agreed that financial stability should be the primary focus of the FSC, indicating that this was already the case.** They pointed to ambiguities in the translation of the legislative mandate which could be clarified. They considered that a healthy financial system that supports sustainable economic growth and market confidence is the natural outcome of a focus on systemic risk. With respect to macroprudential measures, they noted that several borrower-based measures, such as risk weights on retail and commercial loans and loan-to-value ratios for housing, had already been taken, and implementing the CCyB could be considered.

B. Financial Sector Regulation and Supervision

Banking Regulation and Supervision

86. An assessment of the Basel Core Principles (BCP) in the last FSAP found five principles to be materially non-compliant.[29] Shortcomings relating to credit risk and the supervisory approach have deteriorated further in several respects including regulatory dilution and supervisory practices left exposed by resource limitations. FX vulnerability, liquidity risk, information and communication technology (ICT) risk, operational resilience and the impact of COVID-19 related measures have emerged as concerns.

87. The BRSA's effectiveness is significantly impaired by restrictions on its independence, resources, and tensions between its objectives. Legislative changes have hard coded the incursions on BRSA independence. Notably, the Banking Law has been amended to require the BRSA to comply with principles, strategies and policies set down in government plans and programs.[30] Furthermore, the President may now remove public officials for failure to achieve institutional goals, irrespective of other grounds set out in law.[31] Measures taken since 2018 to increase the provision of credit to the economy highlight the conflict between the BRSA's objectives of financial stability and development of the financial sector. In addition to starving supervisors of modern tools, budgetary constraints and the imposition of the civil service pay scales have led to a major outflow of staff and experience that the BRSA finds itself unable to replenish. Restoring the BRSA's budgetary autonomy and subordinating the objective of financial sector development to financial stability are essential.

88. The supervisory approach needs significant strengthening from gatekeeping to enforcement, focusing on enhanced and forward-looking risk assessments. Enhancements to techniques and tools and deepening corporate governance and risk management supervision are key. Fit and proper requirements and assessments are compliance based and need urgent enhancements to bring them in line with risk-based international standards. The annual CAMELS (Capital, Assets, Management, Earnings, Liquidity, Sensitivity to Market Risk) rating process consumes most of the onsite supervisory resources. However, it requires a risk-focused approach that is grounded in key risk assessment criteria. Examinations focus on regulatory breaches and errors. Instead, the focus should be on underlying causes of the issues. Offsite supervisory work needs to be incorporated into the CAMELS ratings to comprehensively capture risks, including clearly reflecting the results of the stress testing framework that has been established. Moreover, the supervisory review process of the Pillar 2 framework needs deepening, challenging banks' assessments. Finally, supervisory enforcement requires improvement. A formal response policy to the CAMELS ratings is needed to operationalize early remedial powers, and enforceability based on

[29] Core principles (CP) on independence, accountability, resourcing and legal protection for supervisors (CP2); supervisory approach (CP8); corporate governance (CP14); credit risk (CP17); and problem assets, provisions and reserves (CP18).

[30] Decree-Law Nº 703/2018.

[31] Decree-Law No. 2018/703.

qualitative requirements, such as corporate governance and risk management guidelines, should be strengthened.

89. Supervision and enforcement activities need enhanced communication and integrated functions. Key supervisory departments—onsite, offsite, enforcement, risk management—appear to function in silos and need formalized, fluid, and effective communications. The lack of the full suite of supervisory inputs into the CAMELS ratings process is indicative of the siloed nature of the BRSA. Effective communication is essential for identification of concerns, timely intervention, and when necessary, escalation in use of BRSA powers.

90. Effective consolidated supervision of banks that are members of mixed-financial and mixed-activity groups requires imposing supplemental standards on their parent entities. Governance, risk management standards, capital and other prudential requirements, should apply at the level of the consolidated mixed-financial group and its holding company, which cannot be directly regulated as per the Banking Law. Banks should be ring fenced, to the extent possible, from the non-financial and contagion risks from the non-financial part of these mixed-activity groups. Enhanced suitability and transparency requirements should also be imposed throughout the ownership chain up to the last significant level of ultimate ownership. Such measures should include extended reporting systems to identify, monitor, and report inter-group transactions above the level of the regulated bank.

91. Prudential regulatory terms and criteria have been eliminated or eased since 2016 at the potential expense of financial stability.[32] This has diluted credit discipline and facilitated untracked problem loan refinancing, which, in addition to COVID-19 measures (revoked with full effect from April 2022), likely resulted in artificially low NPL ratios and provisioning. Strengthening supervision of credit risk management (including enhancing loan classification and restructuring rules) and focusing supervisory assessment in the review of asset quality, including at SOBs with high credit portfolio growth, are warranted. Two new credit guidelines that address some of these issues will complement the current regulatory framework and are expected to enter into force in 2022.

92. Official capital ratios are unlikely to reflect the increase in risk since the last FSAP. For four months in 2018 and since March 2020, Turkish banks have been permitted to use an exchange rate based on the CBRT's average FX buying rates over the previous 252 business days—changed in 2022 to the end-2021 exchange rate. Banks can also exclude mark-to-market losses of available-for-sale securities. In addition, contrary to Basel standards, banks' Turkish FX sovereign exposures are zero risk weighted. The BRSA monitors the capital adequacy impact of the first two measures, which, as of end-2021, increased the consolidated banking system CAR by 280 basis points. There is an urgent need to restore the prudent calculation of the CAR according to international standards.

93. Moderate NPL figures may be misleading and strong supervisory action, supported by legal reforms will be needed for resolution of problem assets. Priority should be given to strengthening the prudential framework and intensifying supervisory efforts including scrutiny of

[32] Regulations on Loan Operations of Banks and on Procedures and Principles for Classification of Loans and Provisions.

banks' asset quality and supervisory enforcement of banks' NPL management practices. Important complementary efforts are also needed, notably: enactment of a new Enforcement and Bankruptcy Code, which is a unique opportunity to modernize the insolvency and creditor rights system; improving out-of-court restructuring; and enhancing the market for distressed assets where more flexibility should be provided to Asset Management Companies.[33] Following implementation of reforms, an independent third-party asset quality review (AQR) would also be helpful in assessing credit risks and restoring confidence to the system.

94. Reported LCRs likely underestimate risks, particularly in FX, and the net stable funding ratio (NSFR) has not been implemented. The LCR calculation has been boosted by regulatory changes to include the totality of CBRT required reserves as Level 1 HQLA; inflows from FX swaps with the CBRT; and revisions to the inclusion of outflows from market valuation changes on derivatives transactions. In addition, although FX receivables from the CBRT due to swaps and required reserves are included in the LCR calculation, which is in line with Basel standards, they may not be readily available given low CBRT FX reserve assets. A range of measures related to the intensification of the supervision of liquidity risk should be adopted, including reverting to conservative liquidity metrics—e.g., a 50 percent haircut for FX required reserves in the LCR; revamping contingency planning for a significant FX shock; and enhancing liquidity risk monitoring.

95. With the banking book representing 90 percent of banks' assets, interest rate risk in the banking book (IRRBB) is a major risk, especially given elevated macrofinancial volatility.[34] The 2011 regulation on IRRBB does not incorporate the 2016 BCBS standard and needs to be updated. The BRSA should also upgrade its supervisory review process of banks' IRRBB management and internal economic capital calculation, challenging banks' assessments.

96. Revisions to the corporate governance framework should be advanced to address shortcomings found in the last BCP assessment. Standards must be applied equally to SOBs to ensure they adopt good risk management and underwriting practices, and avoid creating market or systemic distortions, for example through non-commercial lending rates.

97. The BRSA's approach to ICT risk, covering cyber security and operational risk, is fragmented. See cybersecurity section below.

Authorities' Views

98. The BRSA concurred with the majority of the recommendations and noted that some were already being implemented. In some cases, though, (e.g., shareholding and fit and proper) the authorities considered they have limited scope to act, as many banks are foreign or state-owned. They indicated that outstanding extraordinary measures would be unwound once volatility permitted. The BRSA noted they had a clear understanding of the risks in banks and in the banking system; the supervisory framework works efficiently; and banks are adequately supervised.

[33] See World Bank FSA.

[34] One foreign-owned bank announced it will implement IAS 29, financial reporting in hyperinflationary economies.

99. With respect to liquidity, the authorities downplayed the risk of deposit withdrawals. They considered, among other factors, that banks enjoy high market confidence, and interest rate sensitivity is low. In terms of FX liquidity risk, banks and their clients are more prepared than previously, and the BRSA examines FX liquidity risk closely.

100. The authorities acknowledged that staffing is becoming more challenging.

Insurance and Pension Regulation and Supervision[35]

101. Insurance supervision and regulation in Türkiye has significantly improved. The establishment of IPRSA—a standalone insurance and pension supervisor—has improved the institutional framework for insurance supervision and regulation. Despite progress, IPRSA's practices do not yet meet international standards and the agency should be provided with an objective, in law, to support financial stability. Notable areas for improvement include nomination, appointment, and dismissal procedures for IPRSA's board members, to strengthen clarity and transparency; frequency of on-site inspection; and implementation of the formal Own Risk Solvency Assessment (ORSA) process. A groupwide supervisory framework is also recommended, given the insurance market is typified by financial or conglomerate groups.

102. IPRSA's creation left a vacuum in the design of pension policy and segregated regulatory and supervisory functions between the CMB and IPRSA. The supervisory cycle of entities supervised by IPRSA is not necessarily aligned with those supervised by the CMB. Focusing on removing such fragmentation in supervision, and policy making, creates an opportunity to move towards risk-based supervision.

C. Systemic Liquidity Management

103. The overarching policy framework would benefit substantially from a refocusing on inflation stability and a strengthening of the CBRT's operational autonomy. The monetary policy framework has become opaque due to a multiplicity of instruments and objectives, complicating the monetary transmission mechanism. Liquidity provision has been more oriented towards the key policy rate, but the CBRT has shifted at times between a mid-rate corridor, ceiling, and floor system in its efforts to lean against depreciation pressures, address macroprudential objectives, manage credit flows and restrain dollarization. This system generates uncertainty about the current stance and the future evolution of interest rates, weakening policy predictability and leading to market volatility. A comprehensive review of the policy framework is being conducted with the aim of prioritizing the Lira in all the CBRT's policy tools. This is an opportunity to refocus interest rate policy and liquidity management on achieving the inflation target as the primary objective in the context of greater CBRT operational autonomy, and to provide greater clarity on the operational target.

104. Systemic liquidity management operations have been strengthened in some areas, but there is room for further improvement. Following the simplification of the operational framework

[35] Also see World Bank FSA.

in 2020, CBRT liquidity has mainly been provided through quantity repo auctions with one-week maturity. This was adopted as the main monetary policy operation, and a 300-bps symmetric interest corridor was implemented. However, there is a lack of clarity over which short-term market interest rate the CBRT is using as its operational target, and intervention on the Borsa Istanbul (BIST) Repo and Swap Markets takes place to smooth interest rate volatility.

105. The new TL reference rate is a more robust money market benchmark, but it should exclude the CBRT's transactions. The new benchmark is a broad measure of overnight TL borrowing, collateralized by government securities in the BIST repo market. There has been an early adoption of the TL reference rate by market participants and the transition from TRLIBOR has been orderly. It is a risk-free rate, as it does not include counterparty credit risk, and is transaction based with large daily volumes. Its shortcoming is that it captures CBRT's interventions on the BIST. The CBRT is recommended to cease its interventions on the BIST repo and derivatives markets and remove individual banks' limits on monetary operations to enhance the transmission of the main policy rate.

106. Reserve requirements (RR) in TL and FX are being actively used as prudential tools, and increasingly for liquidity management in place of the policy interest rate. The RR regime has been used to manage credit and indirectly to influence banks' funding structure, to encourage Liraization, and to direct support for certain economic sectors. Among other measures, the CBRT has varied the reserve requirement ratio on deposits converted from FX to TL, changed required reserve ratios on FX and TL deposits, applied a new commission fee for certain levels of non-converted FX deposits, adjusted remuneration rates, terminated the Reserve Option Mechanism (that allowed banks to meet a part of their TL reserves requirements with FX) and in April 2022 applied reserve requirements on some corporate loans. Consequently, a complex constellation has emerged that shrouds the transparency of policy settings and objectives, complicating the policy transmission mechanism and pricing of risk.

107. Given limited FX reserves, the CBRT should restrict its FX interventions to the most extreme cases of exchange rate volatility and build its FX reserves over time to mitigate FX liquidity risks. The level of gross FX reserves is below the recommended 100-150 percent EM ARA metric and the net international reserves position is sharply negative after deducting FX swaps and liabilities. Moreover, the composition of reserves incorporates a higher proportion of gold than previously, as well as FX currencies that are not included in the Special Drawing Right (SDR) basket—these are obtained through bilateral swaps with other central banks, often linked to trade arrangements and not necessarily readily available to be drawn. FX sales suggest that FX liabilities and FX currency swap proceeds could have been utilized for intervention. Funds owed to the banking sector must be clearly segregated and ring fenced so that the CBRT's fiduciary duty is maintained. Further, FX sales to Botas should be scaled back over time to allow for FX market intermediation. The CBRT should consider designing a volatility-based FX intervention rule to dampen excessive FX volatility.

108. The CBRT should finalize its review of the emergency liquidity assistance (ELA) framework. While the CBRT has statutory powers to provide ELA, a comprehensive framework is

still missing. Reforms should include penalty pricing and an expanded range of eligible collateral. Enhanced monitoring for potential ELA usage, as well as contingency planning and regular testing of procedures in coordination with other relevant agencies such as the BRSA and SDIF is also needed. The CBRT must also have processes in place to obtain government indemnity whenever ELA risks exceed the CBRT's own financial capacity. Finally, the CBRT's FX lending facility should be redefined as ELA in FX to reduce potential calls on CBRT's FX reserves and incentivize banks to manage their risks.

109. The CBRT's own risk profile has increased, and appropriate risk mitigation measures are required. Credit risk has increased through scaling up the government securities portfolio and bank refinancing. At the same time, collateral eligibility was broadened to include riskier asset classes, such as asset-backed and mortgage-backed securities. Haircuts were reduced on TL collateral pre-COVID but were raised in mid-2022 on CPI-linked sovereign bonds and the collateral rules for swap transactions adjusted to favor domestic government bonds. Interest rate risks increased with the lengthening of asset duration following the government securities purchase programs. The CBRT should review its collateral framework with a view to recalibrating haircuts. It should mitigate interest rate risks by reducing the duration and size of OMOs and mitigate exchange rate and interest rate risks stemming from FX swaps and liabilities by adjusting the currency composition and duration target of the investment tranches.

Authorities' Views

110. The authorities emphasized that the CBRT was conducting an independent monetary policy with inflation control as an overarching objective while acknowledging that further analysis was needed to assess the transmission mechanism. At the same time, they considered that a lower current account deficit and lower inflation could be achieved through de-dollarization. The authorities preferred not to specify which short-term market interest rate is used as the operational target and considered that interventions on the BIST repo and swap markets have limited effect on TL reference rate calculation.

111. The level of FX reserves was seen as adequate. The authorities focus on a range of metrics, not the ARA alone. They were confident in their capacity to convert gold reserves into FX if needed and considered that an FX intervention rule would remove flexibility. On ring-fencing, they assured that FX required reserve assets were segregated from other foreign assets and not utilized for any other purposes.

112. The authorities recognized the need to improve the ELA framework in line with best practices.

D. Cybersecurity Risks and Resilience

113. Cyber risks are well recognized in Türkiye and National Cybersecurity Strategies have been issued since 2013. Türkiye enjoys a high ranking in the Global Cyber Security Index.[36] Financial sector regulators have tasks set out in the National Cyber Strategy of 2020 – 23 including: (i) implementation of cyber security regulations and audits; (ii) investigation of risks related to producer dependency in IT products used in critical infrastructure sectors; (iii) cyber security exercises; and (iv) information security awareness training for industry employees.

114. Digitalization of the financial sector has gained momentum, expanding the cyber-attack surface and the potential for financial instability. Türkiye's financial sector has expanded its digital footprint, and COVID 19 and consequent work from home arrangements further escalated demand while increasing the challenges for cyber security. Given the pace of digitalization, and the growing number and sophistication of cyberattacks, the need for robust ICT / cyber regulations and effective supervisory arrangements is critical.

115. Despite its broadly sound legal and institutional basis, cybersecurity needs improved regulatory coverage, consistency, and coordination. Cybersecurity regulations are principles-based and outcome-focused and either updated or newly issued in emerging areas like remote digital onboarding of customers and digital banks. BRSA, CBRT and CMB regulations address outsourcing risk and third-party risk management aspects. The BRSA regulations address outsourcing by banks, and service providers to payment systems are under the CBRT's oversight. However, there is scope for improvement by enhancing regulations for non-banks, closing regulatory gaps (e.g., information sharing, cyber maps, stress testing), and removing overlaps. Regulatory coordination will help ensure that the regulated entities are subject to unified and consistent regulations. Türkiye is currently drafting a cybersecurity law, which will further strengthen the legal framework.

116. The FSC has not yet focused on cyber issues. The potentially systemic implications of cyber events indicate that the FSC has a responsibility to understand, identify and cooperatively act against the risks. The FSC's architecture of subgroups, supported by expert panels within Türkiye to flag important issues, are well placed to pursue ICT / cyber issues.

117. Supervision for ICT / cyber risk is heavily dependent on external independent auditors and not integrated into the overall supervisory process. In part, this approach reflects resource constraints at the BRSA. However, the external auditors de facto determine the supervisory priorities, and the BRSA is not building its own specialized capacity. Moreover, supervisory follow up is not integrated into mainstream supervision, exposing the supervisor to the possibility of missing important vulnerabilities. ICT / cyber risks scenarios are not considered while carrying out stress tests and are not incorporated in financial stability analyses. The BRSA Board approves regulations and considers the outcome of the audit reports but setting the supervisory agenda ought to be one of its primary responsibilities.

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[36] A survey published by the International Telecomm Union (ITU) on commitment to cybersecurity.

118. Given the rapidly evolving nature and potential impact of cyber risk, additional areas to enhance effectiveness include:

- Addressing staff and resource constraints that impact cybersecurity preparedness. The number of staff attending to ICT / cyber risks is low, attrition is high, and the proportion of experienced staff is declining at a time when higher risks and new regulations demand more concerted effort.

- Integrating BRSA ICT / cyber risk assessments into the full supervisory process and consider them in the overall enterprise-wide context. Siloed arrangements for assessing ICT / cyber risks must be restructured into a risk-based holistic supervisory process.

- Resuming regular onsite assessment of ICT / cyber risks in banks. The BRSA ended onsite supervision of these risks in 2016 primarily due to staffing constraints. Information system and business process audits are now performed by independent auditors, but this is not an effective permanent substitute for on-site supervision and the current arrangements undermine the process of building institutional memory.

- Leveraging data from operational and cyber resilience developments into offsite supervision. Off-site supervision should work to develop a macro picture / cyber map, identify critical service providers and concentration of services and service providers, and strengthen information sharing arrangements among the banks.

- Improving the frequency and effectiveness of testing arrangements. BRSA has mandated periodic vulnerability and penetration testing by banks. CBRT has mandated regular vulnerability and penetration testing for system operators, and for non-bank PSPs. However, cyber drills and exercises for the sector are infrequent. It is important to prepare the financial sector by conducting more frequent cyber drills and tests collectively. Incident response arrangements vary across regulators and need to be strengthened further.

Authorities' Views

119. The authorities concurred with the importance of further strengthening the cyber preparedness of the financial sector. They highlighted various recent regulatory initiatives and improvements in institutional arrangements. They also acknowledged the need for enhancing the role of the FSC in improving the coordination among regulators and government agencies, strengthening the onsite supervisory efforts, and developing tools to understand the macro-perspective. However, the authorities felt that ICT / cyber risk assessments are already sufficiently integrated with overall supervisory process.

E. Financial Integrity

120. Türkiye was grey listed by the FATF owing to weaknesses in its anti-money laundering/counter terrorist financing (AML/CFT) framework. The FATF's Mutual Evaluation Report (MER) in 2019 noted deficiencies in areas related to technical compliance and effective

implementation.[37] As a result, in October 2021, the FATF placed Türkiye in the list of the jurisdictions with strategic deficiencies (grey list) and provided a comprehensive action plan with timelines.[38]

121. Inclusion on the FATF grey list highlights risks to Türkiye's financial sector. It also raises reputational risks. Continued close monitoring is advised, including over correspondent banking pressures which could materialize, particularly for smaller and medium-sized financial institutions. Efforts to expeditiously address the FATF's action plan in the agreed timeframe is recommended.

122. Progress towards addressing the FATF action plan is being made. This includes improvements to the legal framework, including for targeted financial sanctions for proliferating financing. A high-level National AML/CFT Strategic Plan has been adopted to improve supervision, enforcement, and confiscation efforts. Specialized courts for ML/TF cases have been established, and the authorities have undertaken a risk assessment for legal persons and established a new registry to hold beneficial ownership information. In addition, they are undertaking a comprehensive national risk assessment, the findings of which are expected to feed into several aspects of the AML/CFT framework, including to improve further risk-based supervision. They have also increased resources to support key areas of work, including for MASAK's financial analysis and supervision work.

123. Continued efforts are required with respect to key issues. The authorities should introduce enforceable legal measures and guidance for politically exposed persons (PEPs) and approve the law on crypto assets to ensure full compliance with R.15.[39] Continuing to demonstrate the ability to implement targeted financial sanctions without delay, and to pursue domestic designations for TF, is critical. Continuous monitoring of emerging risks by supervisors and adoption of mitigation measures is needed. Efforts to enhance supervision should be in line with Türkiye's risk profile but not take away resources from other areas (e.g., banking supervision). Comprehensive statistics to demonstrate the effectiveness of financial intelligence, ML/TF investigations and cases is important.

124. Close monitoring, management, and mitigation of emerging risks as a result of the current geo-political context is also warranted. The extraterritorial impact of bilateral sanctions against third countries, cross-border financial flows, and the presence of non-residents in Türkiye's financial sector require close monitoring, while raising financial institutions' awareness of risks arising from possible cross-border regulatory actions. Türkiye's citizenship by investment (CBI) program should be watched for financial integrity risks and supervisory efforts focused on sectors closely associated to the CBI program (e.g., real estate).

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[37] 9 out of the 11 immediate outcomes ratings related to effectiveness were low or moderate.

[38] FATF Jurisdictions under increased monitoring – June 2022: https://www.fatf-gafi.org/publications/high-risk-and-other-monitored-jurisdictions/documents/increased-monitoring-june-2022.html.

[39] The introduction of measures related to PEPs, in line with the FATF's Recommendation 12, was a recommendation of the previous FSAP and is now a requirement under the FATF's action plan.

Authorities' Views

125. The authorities have made a high-level commitment to meet the FATF's action items, with a view to exiting the FATF grey list expeditiously. In general, they were of the view that the grey listing had not had a severe impact on the financial sector to date. They noted that they are stepping up efforts to enhance the effectiveness of the AML/CFT framework.

CRISIS MANAGEMENT AND SAFETY NETS

126. Türkiye has a reasonably clear bank recovery and resolution institutional framework. It covers the SDIF as the resolution authority, BRSA, CBRT and the MOTF, as well as structures to facilitate domestic coordination. The laws applicable to bank recovery and resolution contain many essential provisions, including corrective action powers and several resolution powers. However, shortcomings in the framework also exist, and there remains considerable scope to strengthen many elements.

127. There has been limited progress in aligning the bank resolution and crisis management framework with the Financial Stability Board Key Attributes (FSB KA) and addressing the gaps identified in the last FSAP. Recovery planning requirements for D-SIBs were introduced in 2020 and the BRSA has assessed the first round of submissions by banks, who have started to embed recovery planning into their risk management frameworks. The restructuring of the FSC, including re-establishing a working group on crisis management, is expected to improve inter-agency cooperation and crisis preparedness. The Deposit Guarantee Scheme coverage was increased to 200,000 TL and the scheme remains well funded.[40] Work on reforms to address gaps continues, including proposals for strengthening the Banking Law (BL), and developing, enhancing and amending existing policies covering recovery planning, resolvability assessments, resolution planning, and enhancing the resolution toolkit and reform of resolution financing.

128. Recovery planning could be further improved. Over time, the authorities should consider making recovery plans mandatory for all banks operating in Türkiye, including the subsidiaries of foreign banks. The information exchange between the BRSA and SDIF should be enhanced during the use of early intervention measures (EIMs), and in assessing recovery plans once the necessary amendments have been made to the Banking Law. While the BRSA has reasonably comprehensive statutory powers for EIM, the SDIF should be enabled to start detailed preparations for resolution during EIM. The recovery plans should also be shared with the SDIF for soliciting comments. The BRSA should strengthen its framework for early warning indicators and triggers for various EIMs and recovery options. The BRSA may also benefit from stronger sanctioning powers and from developing procedures for situations where banks are under stress, drawing from the corrective action framework and recovery plans.

[40] As of end-September 2021, the size of the SDIF deposit insurance reserve was TL 80,537 million, and the deposit insurance limit provides full coverage to above 90 percent of natural person depositors. The coverage ratio of the deposit insurance reserve to total insured deposits was about 8 percent. Insurance pay-outs are made in TL.

129. The modalities for placing a bank into resolution, including liquidation, require further clarification. Although the trigger system for declaring a bank failing is relatively well developed, it lacks some important elements, and the non-viability assessment should be set with a forward-looking element to provide for early entry into resolution. The power to decide whether a failing bank should be put into resolution or liquidation should move from BRSA to SDIF as the resolution and liquidation authority (after BRSA decides that the bank is failing or likely to fail (FOLTF)). In parallel, the SDIF should be empowered to undertake resolvability assessments, draft resolution plans, and develop a related policy framework in close cooperation with BRSA. Consideration should be given to empowering the SDIF with the ability to proactively request FOLTF decisions. The SDIF should also have the powers to remove obstacles to bank resolvability keeping in mind that resolution should be a credible option for all failing banks, including SOBs.

130. The resolution toolkit is missing several key tools, such as bridge bank and good-bad asset separation powers. A temporary stay of contractual acceleration, termination and other close-out rights avoiding the termination of large volumes of financial contracts upon entry into resolution should be introduced. Also, existing moratoria powers should be enhanced. Resolution powers are currently centered around the take-over of the failing bank's management and control along with shareholder rights without any prior separation between good and bad assets. Certain tools like a pre-packed transfer of selected assets and liabilities to a purchaser should be available for all banks regardless of their systemic relevance or SDIF shareholder status, while bridge bank power would enable operational continuity of a failed bank's critical functions, on an interim basis, if a buyer cannot immediately be identified. In parallel, the legal framework should provide SDIF with clearly defined statutory resolution objectives and accountabilities.

131. Future changes to the resolution regime should clearly stipulate that in addition to equity holders, creditors should absorb losses. Currently, SDIF funds (combined with government backup funding) are the only available source of resolution funding to stabilize and recapitalize a failed bank, which is not good practice. In line with the FSB KAs, the principle of private loss coverage in accordance with the liquidation hierarchy should be introduced while ensuring that creditors are protected under the "no creditor worse off" safeguard.

132. Improvements to the framework for resolving a systemically important bank and addressing a systemic banking crisis are needed. The most appropriate way to introduce bail-in conversion powers should be assessed. As it is important to ensure that banks bear the costs of their own failures, the SDIF, in consultation with BRSA, should be able to request banks to increase their loss-absorbing capacity and to convert or write down liabilities upon entry into resolution. Open bank bail-in should be applied only to D-SIBs with viable business prospects to restore commercial viability. In this context, the legal framework should contain strong investor protection for retail investors while ensuring sufficient loss absorbing capacity will be built up over time.

133. The FSC should play a leading role in contingency planning and crisis preparedness, and the legal provisions should be amended to make this clearer. The FSC's operating principles should distinguish between its role in normal times and in potential crisis times. The FSC should have responsibility for coordinating the development of contingency plans in each of the member

authorities, which can eventually be integrated into a national plan. The current legal arrangements should be reviewed to ensure effective operational autonomy of the SDIF and BRSA, subject to robust transparency and accountability. As there are currently no substantive cross-border coordination arrangements in place to facilitate cross-border bank recovery and resolution, the authorities need to adequately address all aspects related to cross-border resolution for subsidiaries and branches both as a home and a host country as part of the process of revising the legal framework for crisis management. A major hurdle to cross-border cooperation is the SDIF's lack of powers to share bank-specific information with foreign authorities. A memorandum of understanding in this context is recommended.

Authorities' Views

134. The authorities agreed that work remains to bring the crisis management and bank resolution framework in line with international best standards, particularly the FSB KAs. They noted the introduction of recovery planning for DSIBs, the on-going work to strengthen the relevant laws, and the re-establishment of the crisis management and resolution subgroup within the FSC. While there was a broad agreement on the changes needed to reform the legal framework, the authorities had a more positive view on their early intervention framework and preferred to proceed more cautiously in some areas, notably in discussing limitations on the use of SDIF funds and private loss absorption, including the bail-in option. They also saw less urgency to broaden recovery planning requirements to all banks.

FINANCIAL SECTOR DEVELOPMENT

A. Capital Markets, Financial Inclusion, and Fintech

135. Reforms to support capital market development have been introduced, but challenges arise from the lack of enabling conditions. These include a lack of sound price formation, deeply negative real interest rates, market volatility, frequent and unpredictable regulatory changes, and the dominance of banks and their favorable funding position. As part of the financial development module of the FSAP, the World Bank examined recent developments and policies to deepen capital markets.[41] Important reforms include improving the institutional framework for pension and investment funds; lowering over time the reliance on sovereign FX debt issuance while defining the TL bond benchmark size, reducing fragmentation and lengthening maturities; and streamlining and stabilizing the tax framework for capital markets.

136. Green finance markets are small compared to other countries, with low levels of green debt issuance and limited involvement of local investors. Barriers to scaling up include: (i) limited capacity in the financial sector to integrate climate aspects in operations; (ii) a lack of transparency of climate risks and opportunities; and (iii) limited incentives and guidance to stimulate green finance. Development would benefit from a fully-fledged national climate finance strategy, a comprehensive climate information architecture (green taxonomy, which should be aligned with the

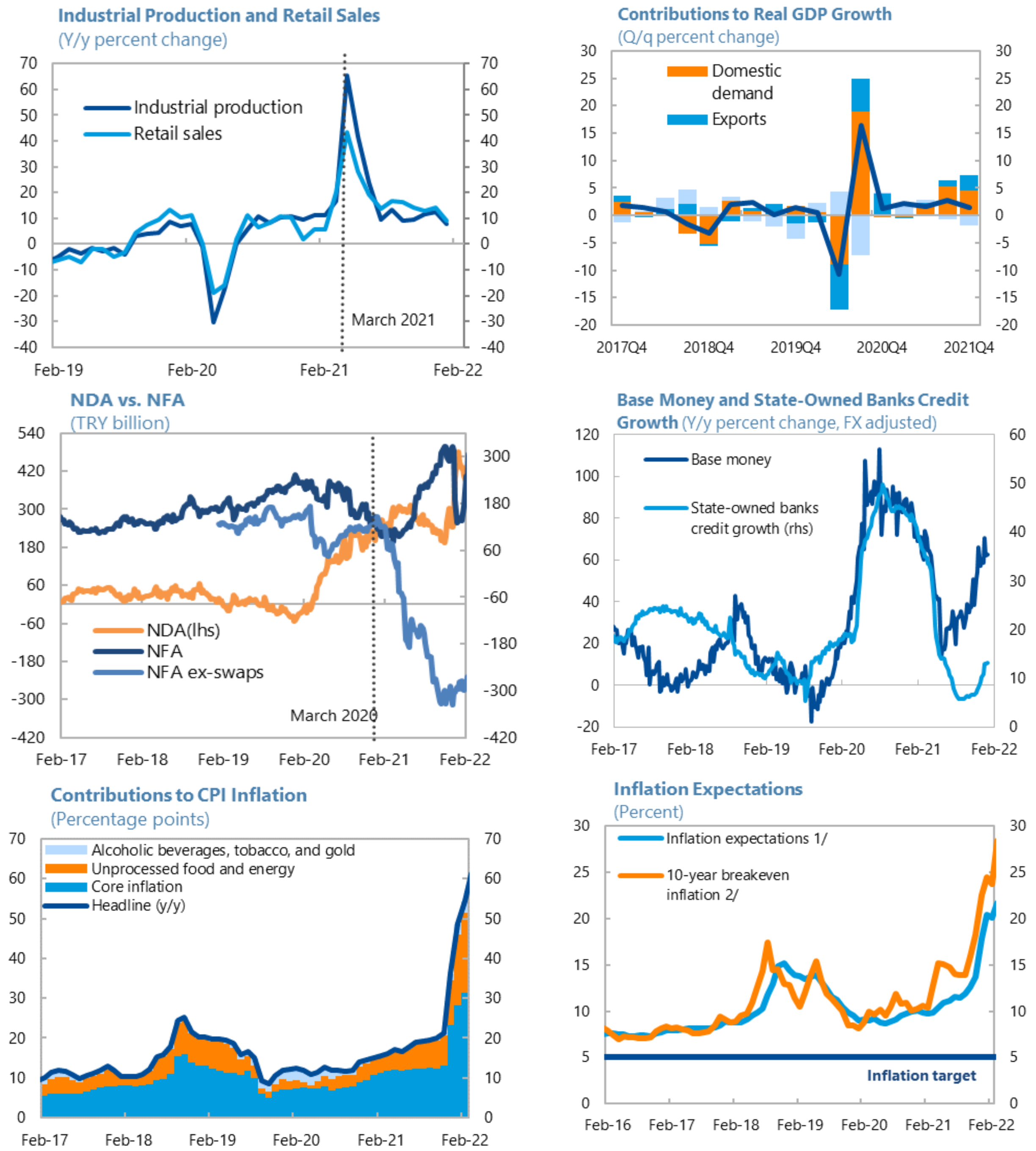
[41] See World Bank FSA.

EU for maximum utility), and the creation of incentives for the issuance of green bonds and investor participation.

137. Increased digitization can further contribute to improvements in financial inclusion and efficiency.[42] As of 2021, 72 percent of adults in Türkiye had an account and 16 percent had a mobile money account. However, the financing gap for micro, small and medium enterprises remain significant and women and the bottom 40 percent by income had significantly lower levels of financial inclusion. The authorities recognize that fintech can play an important role to promote financial inclusion and efficiency and have embarked on various initiatives to create a safe, enabling environment. In particular, fast-paced fintech developments call for a robust supervisory and monitoring framework. The CBRT is studying the potential risks and benefits of a Central Bank Digital Currency (CBDC).

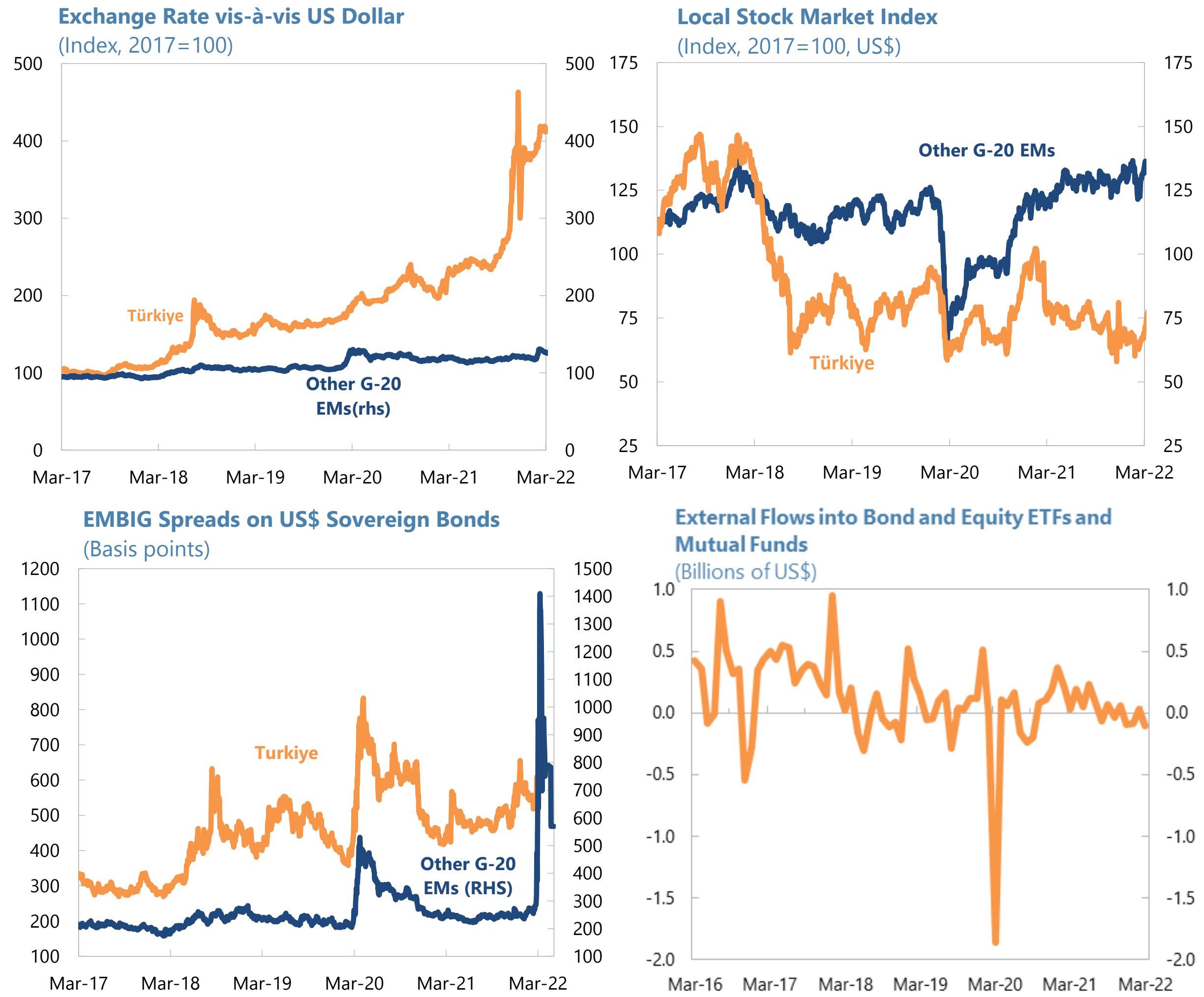
[42] See World Bank FSA.

Figure 2. Recent Economic Developments



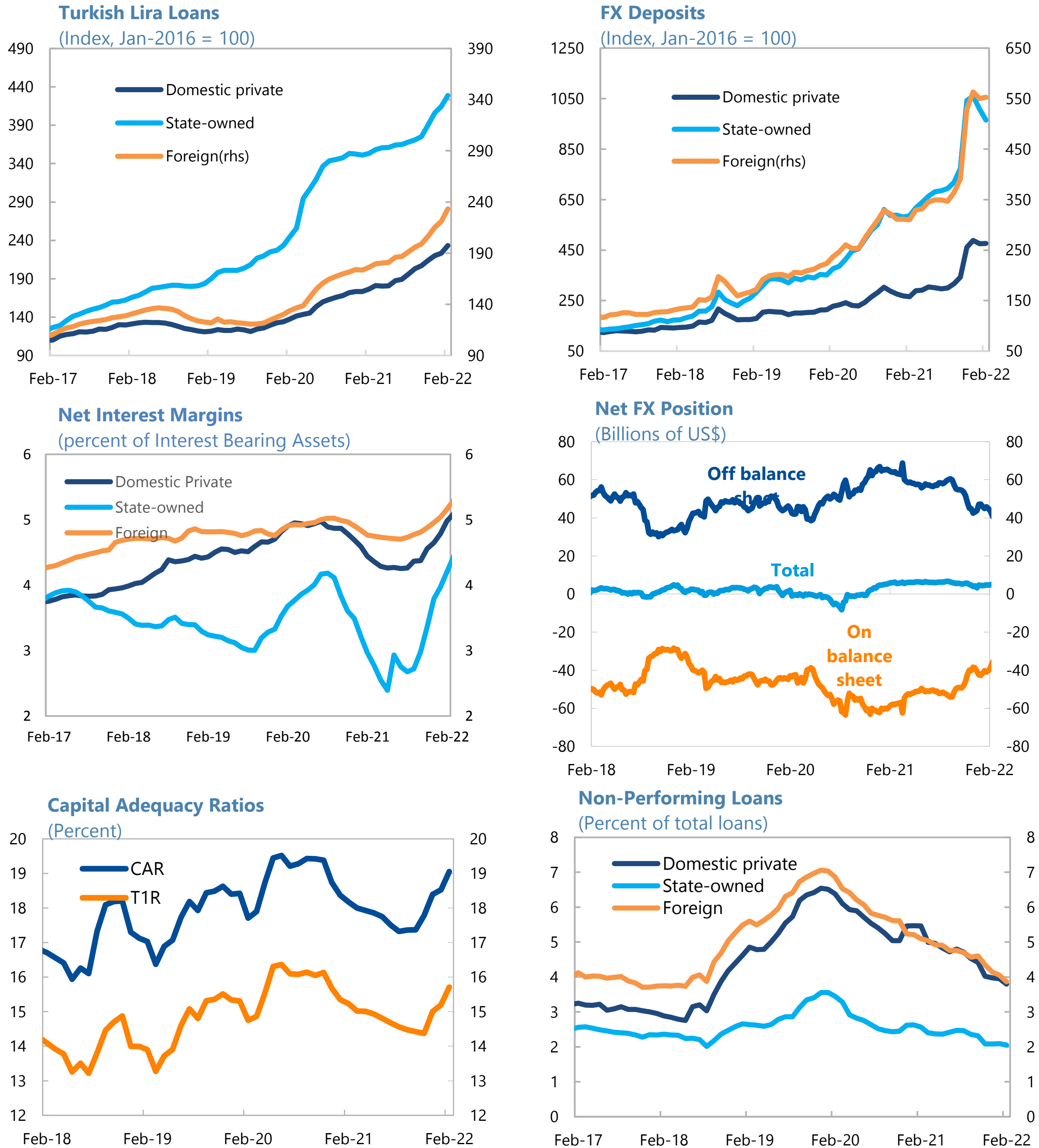
Sources: Bloomberg Financial Markets L.P.; CBRT; European Commission; TurkStat; and IMF staff calculations.
1/ Average of 12-month ahead and 24-month ahead, end-period inflation expectations
2/ Difference between the yield on a nominal fixed-rate bond and the real yield on an inflation-linked bond.

Figure 3. Financial Markets



Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff calculations.
Notes: Average for other G-20 emerging markets covers Brazil, Mexico, India, Indonesia, Russia, and South Africa.

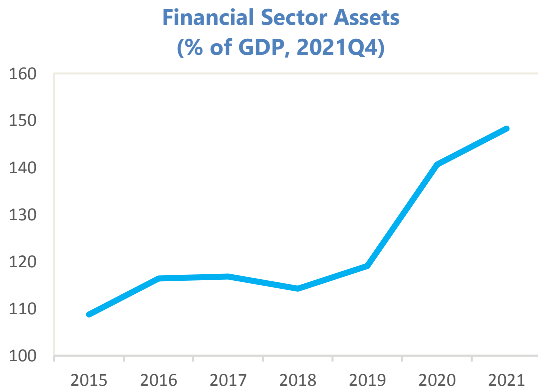
Figure 4. Financial Sector I

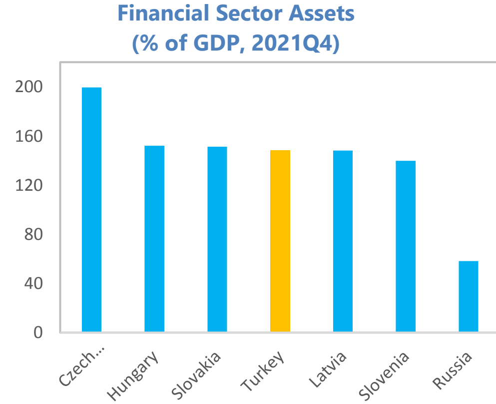


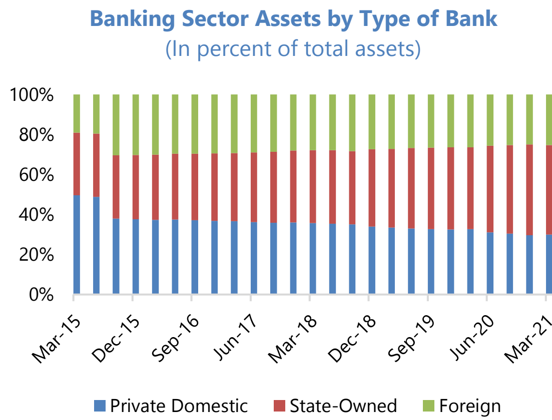
Notes: Monthly EOP NSA. CAR= Regulatory Capital/RWA. T1R= T1 Capital/ RW

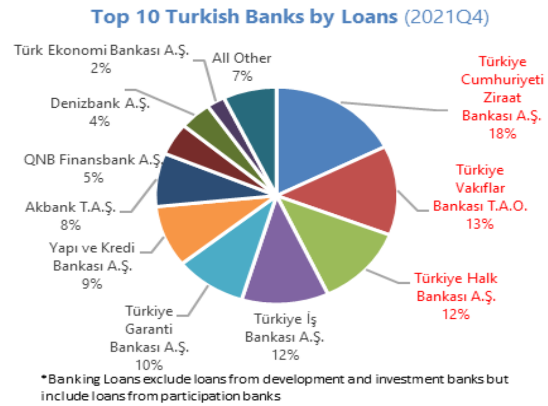
Sources: BRSA; CBRT; and IMF staff calculations.

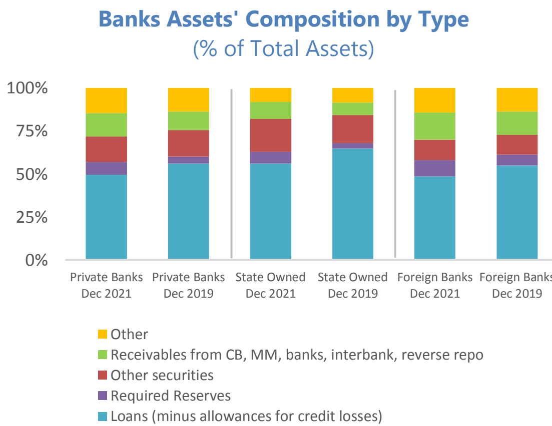
Figure 5. Financial Sector II

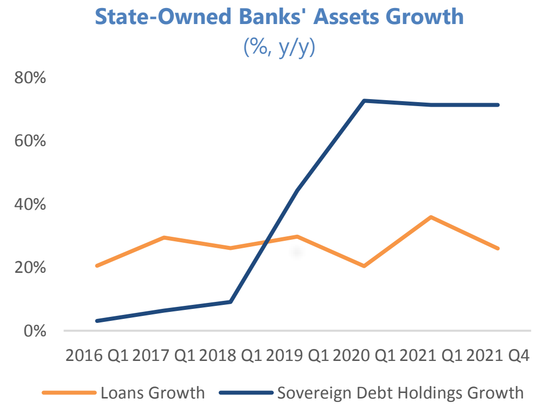






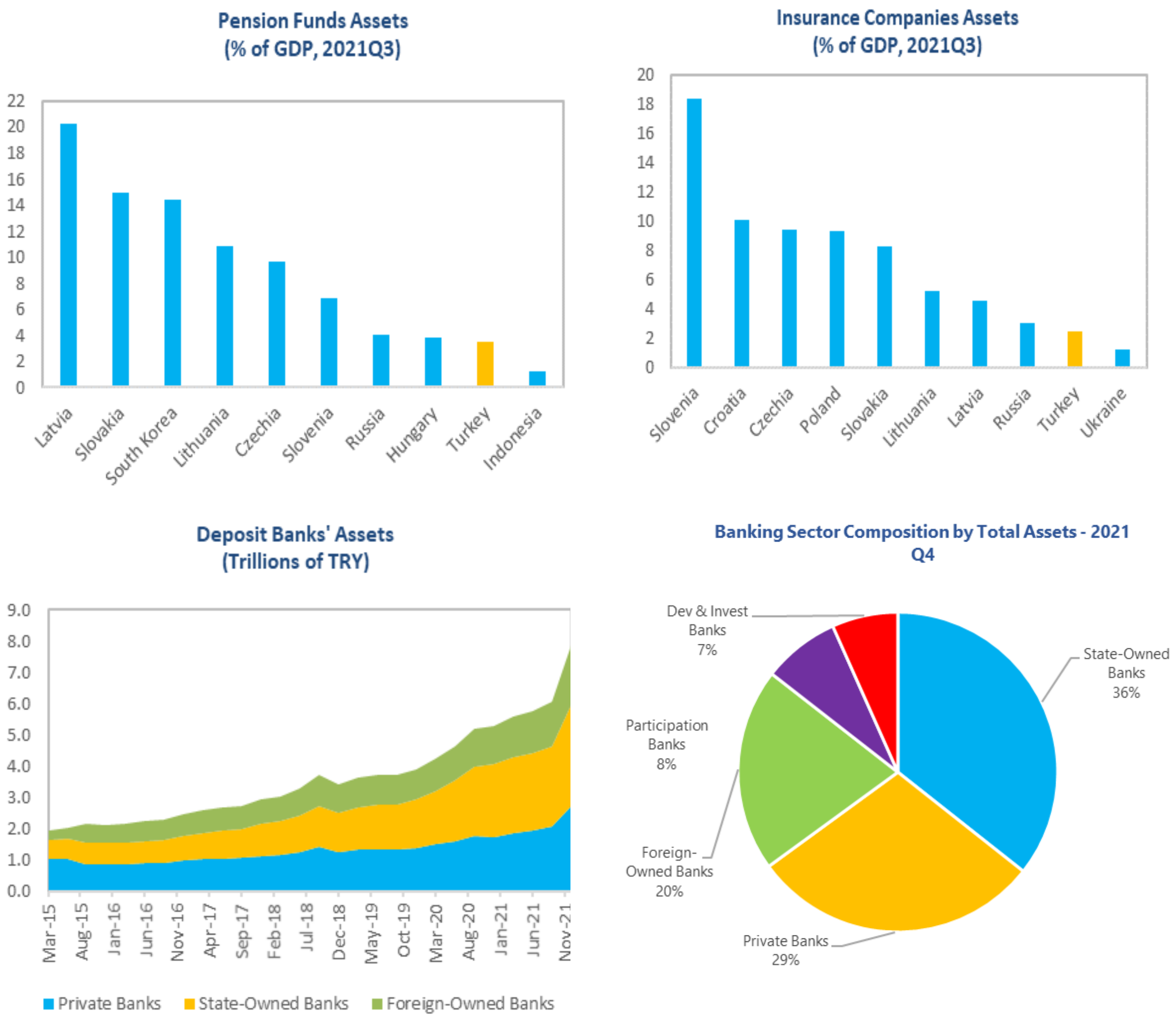






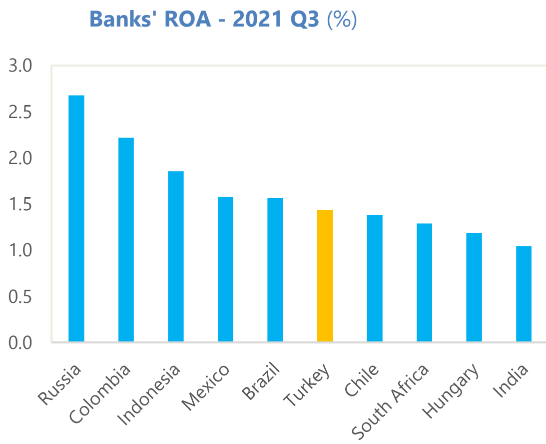
Sources: CBRT; Haver Analytics; and IMF staff calculations.

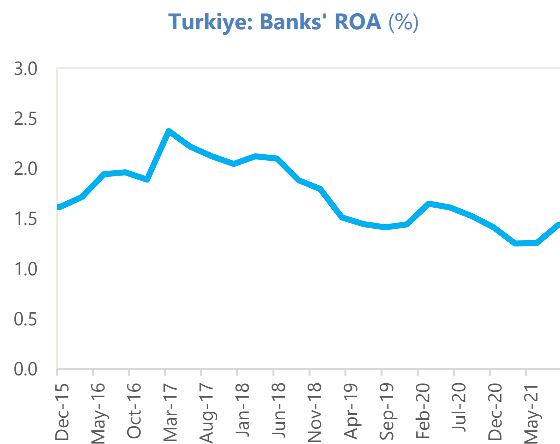
Figure 6. Financial Sector III

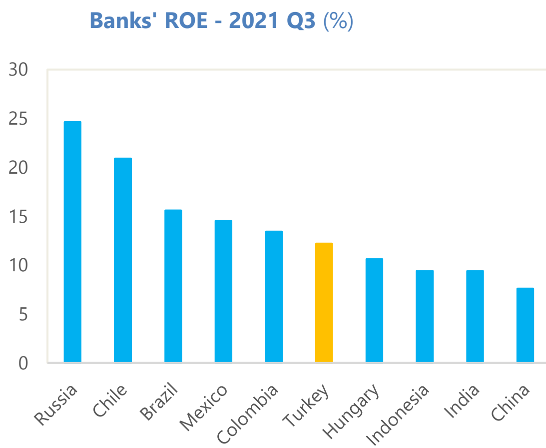


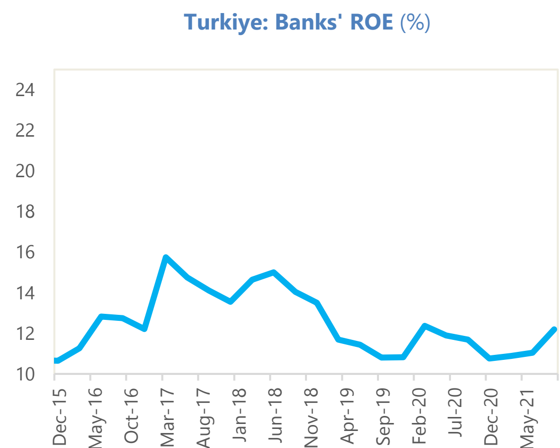
Sources: CBRT; Haver Analytics; and IMF staff calculations.

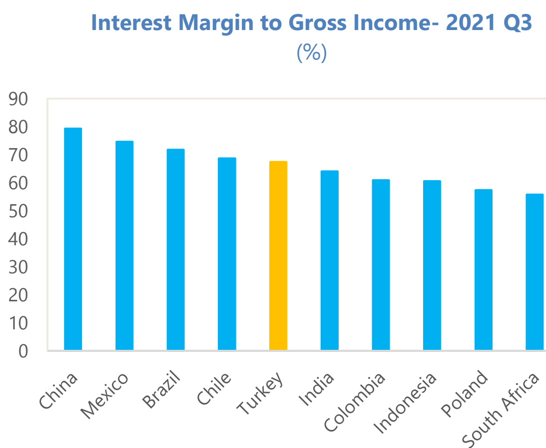
Figure 7. Banks' Profitability

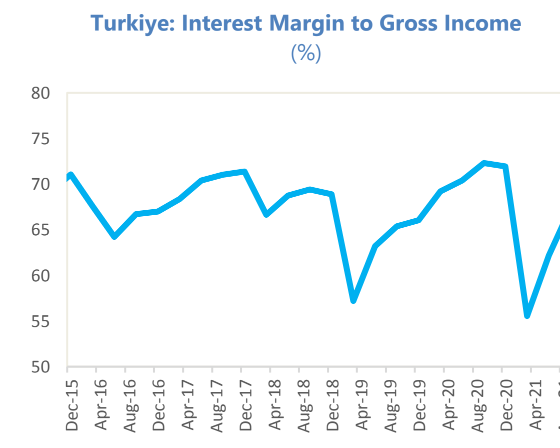






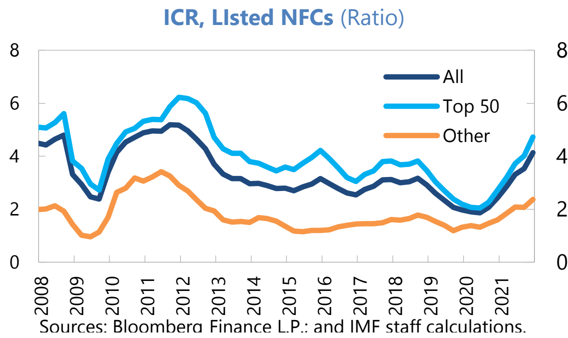


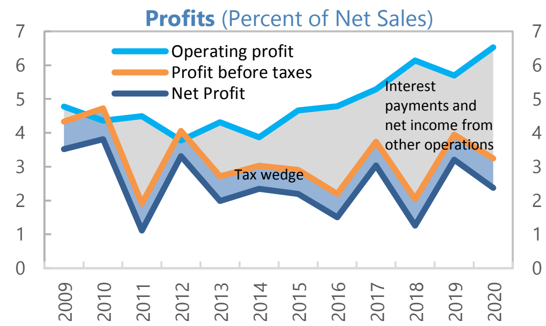


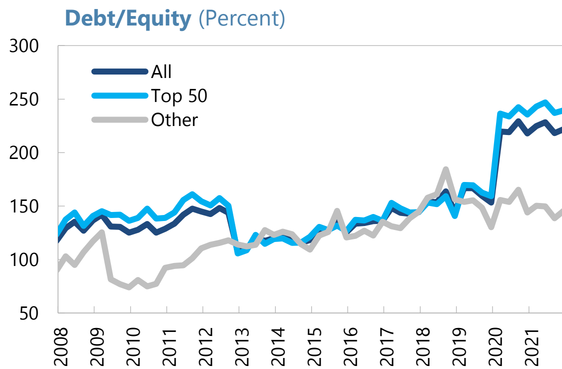


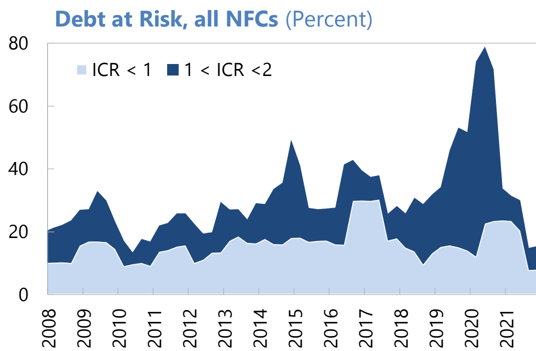
Source: HAVER. FSI, IMF Staff Calculations.

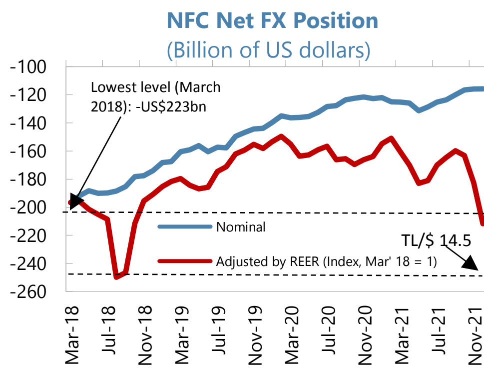
Figure 8. Non-Financial Corporate Sector

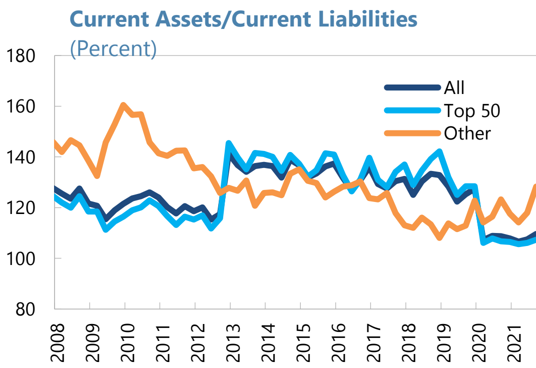






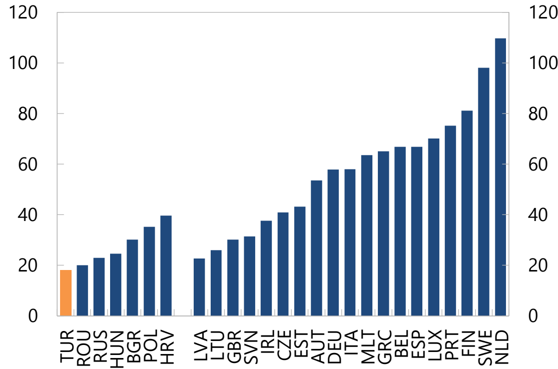


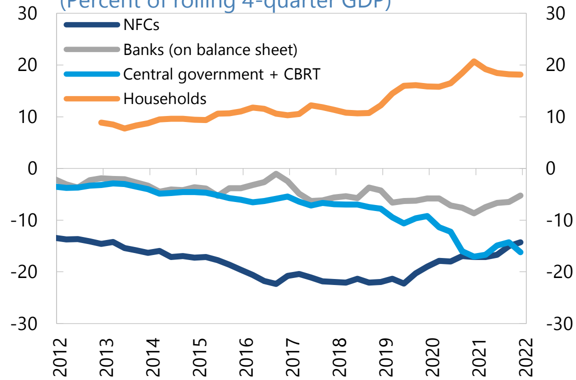


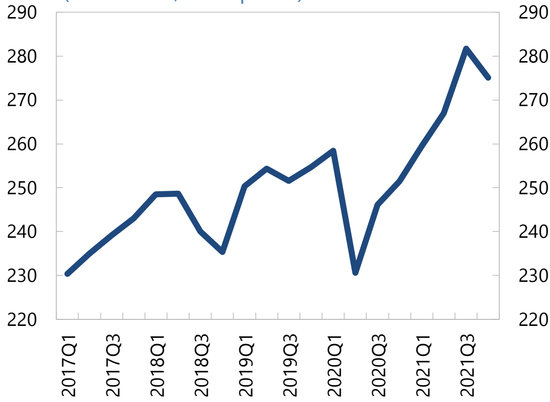


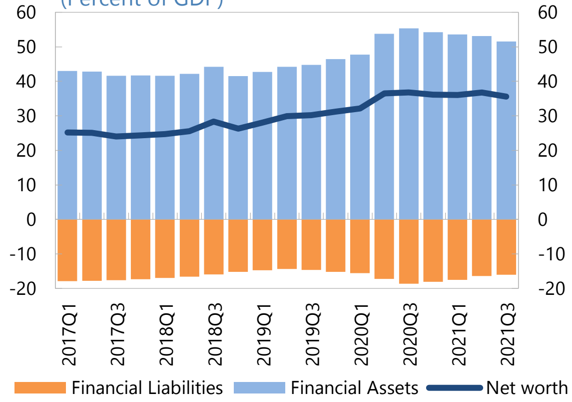
Sources: CBRT; Bloomberg LP; IMF staff calculations.

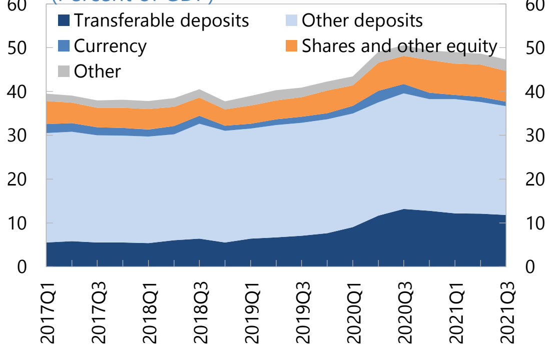
Figure 9. Household Balance Sheets

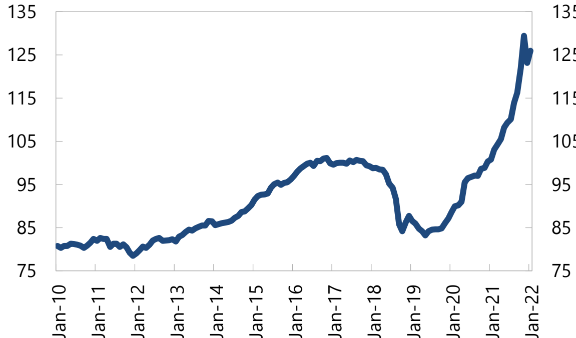






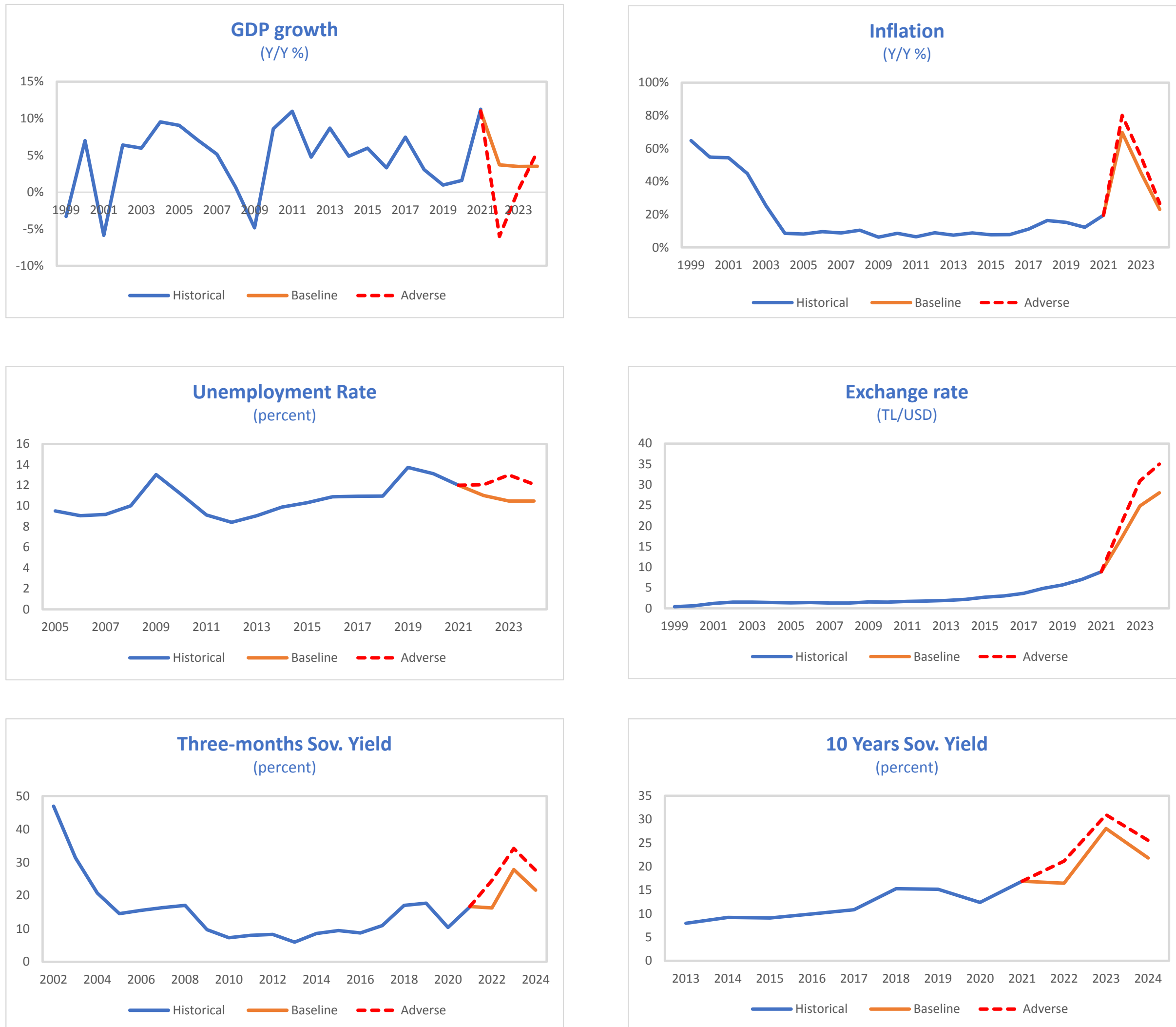






Sources: CBRT; Haver Analytics; and IMF staff calculations.

Figure 10. Solvency Stress-Test Scenarios

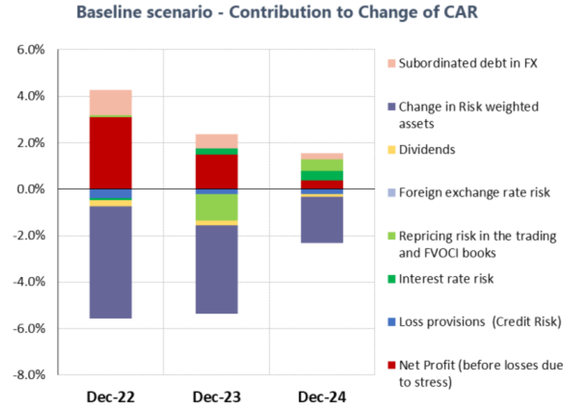


Sources: IMF Staff calculations.

Figure 11. Banking Sector Solvency Stress Test

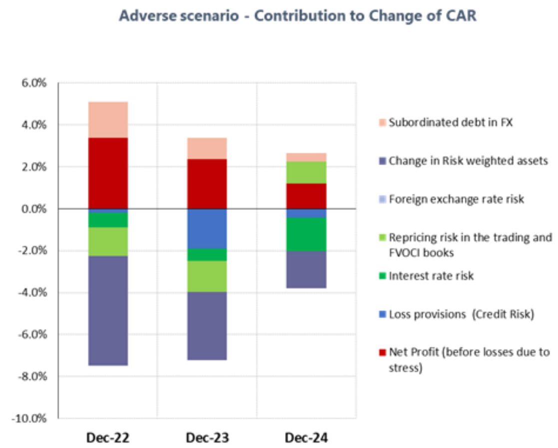
Under the baseline scenario, aggregate banking system CAR would gradually decline reaching close to the regulatory minimum, driven by increase in risk weighted assets, the impact of higher interest rates on banks' short-term funding, as well as mark-to-market losses on sovereign debt exposures as interest rates rise.

Baseline scenario	2021	2022	2023	2024
CAR	13.6%	12.4%	9.3%	8.5%
Number of banks with CAR below 8%		0	3	4
Credit growth		71.0%	37.6%	24.3%
Dividends		10%	10%	10%



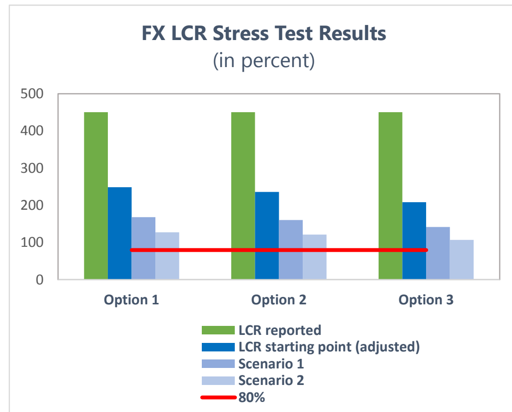
Under the adverse scenario, aggregate banking system CAR would decline below the regulatory minimum in 2023 and 2024, driven by increase in risk-weighted assets and decline in income due to loss provisions (credit risk), compression of lending spreads (interest rate risk), and mark-to-market losses on sovereign debt exposures (repricing risks in the trading and FVOCI books).

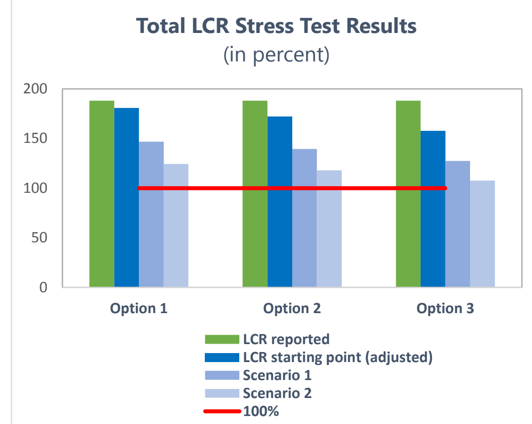
Adverse scenario	2021	2022	2023	2024
CAR	13.6%	11.3%	7.3%	6.3%
Number of banks with CAR below 8%		0	3	6
Credit growth		63.2%	42.4%	29.9%
Dividends		0%	0%	0%



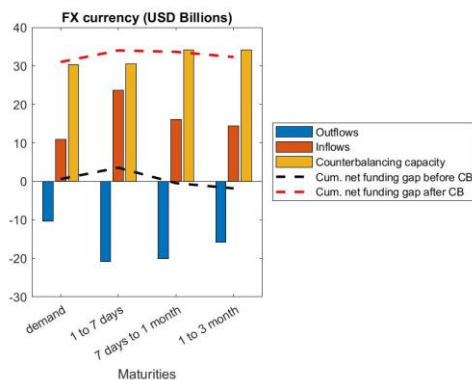
Sources: IMF staff calculations.

Figure 12. Banking Sector Liquidity Stress Test

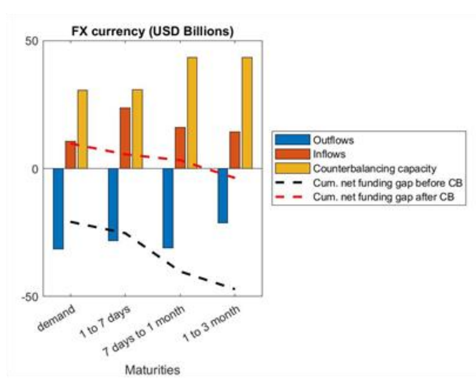




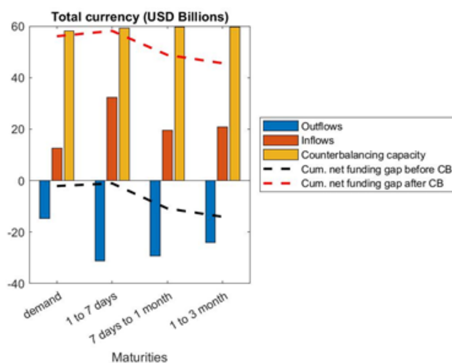
FX Cash-flow-based Stress Testing - Scenario 1



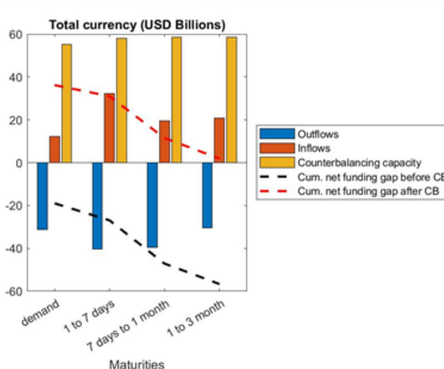
FX Cash-flow-based Stress Testing - Scenario 3



Total Cash-flow-based Stress Testing - Scenario 1

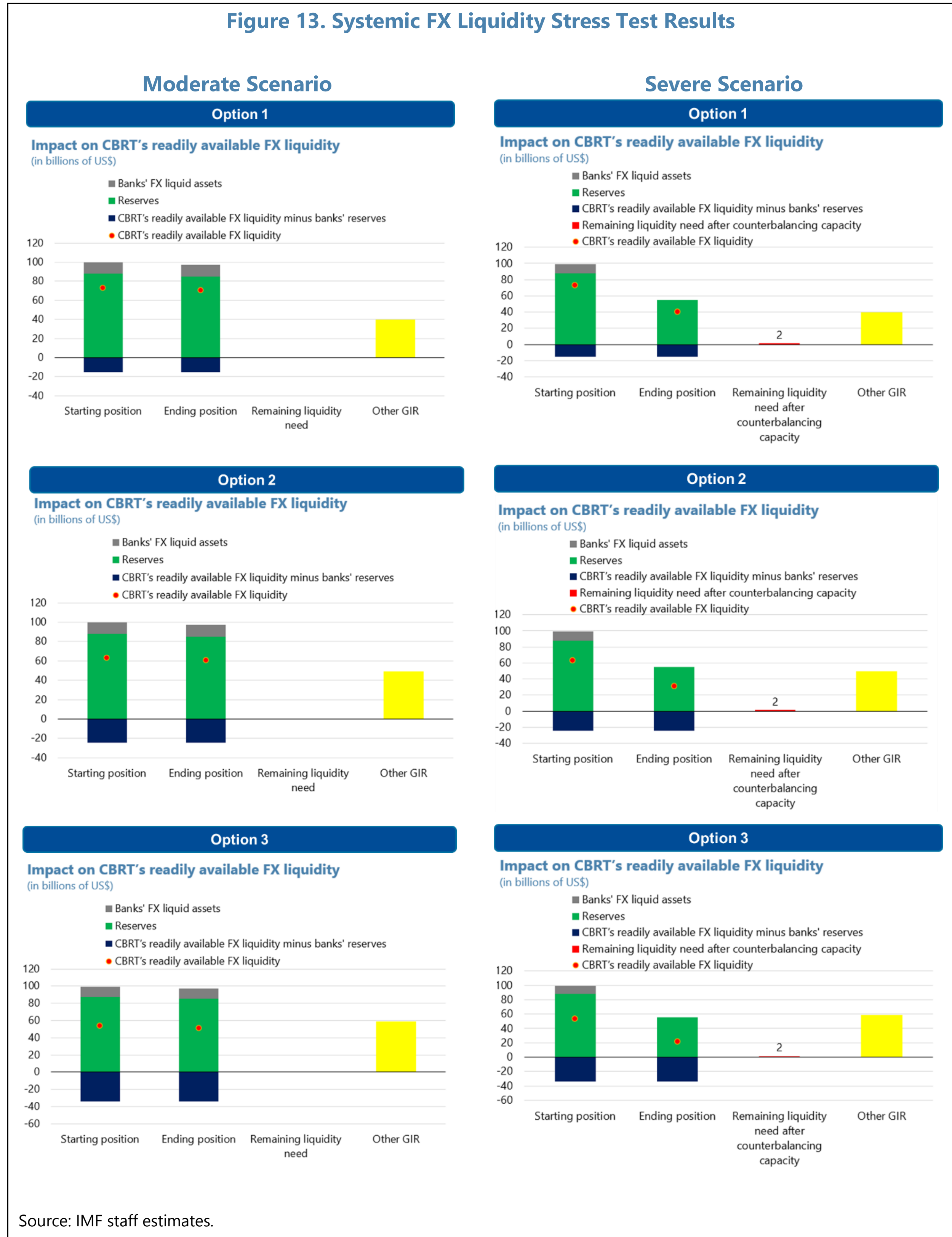


Total Cash-flow-based Stress Testing - Scenario 3



Sources: IMF staff calculations. The cash-flow based stress testing analysis has been based on bank-level data on cash inflows, outflows and counterbalancing capacity (CB) for different maturities (demand, 1 to 7 days, 7 to 30 days, and 1 to three months) and currencies (total and FX). First, the difference between cash-inflows and cash-outflows in the stress scenario at each maturity has been computed, the so-called net-funding gap. The sum across maturities is the cumulative net funding gap. Then the counterbalancing capacity was computed, which is defined as the sum of cash inflows banks can generate under stress from their unencumbered assets at reasonable prices after taking into account required reserves flows. The cumulative net funding gap after counterbalancing capacity is the counterbalancing capacity minus the cumulative net funding gap. In short, it is the liquidity left at the disposal of the bank at the end of the time horizon after stress.

Figure 13. Systemic FX Liquidity Stress Test Results



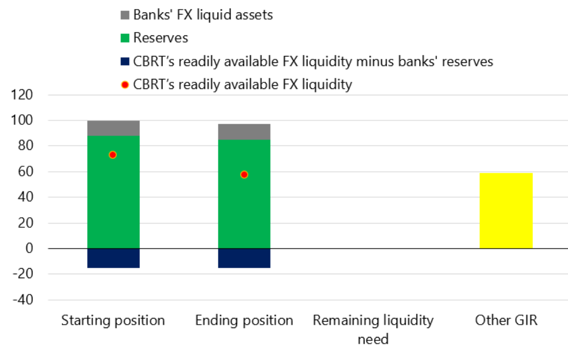
Source: IMF staff estimates.

Figure 14. Sensitivity Analysis Capital Flight Outside of Bank Deposits

Moderate scenario

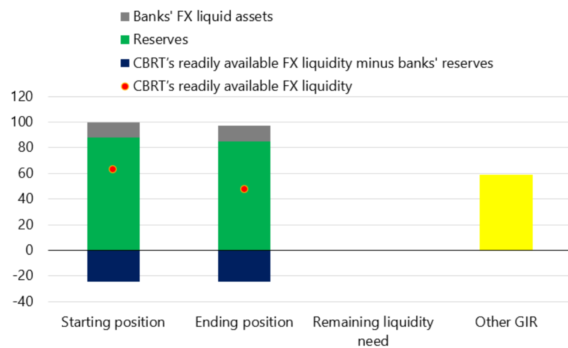
Impact on CBRT's readily available FX liquidity

(in billions of US$)



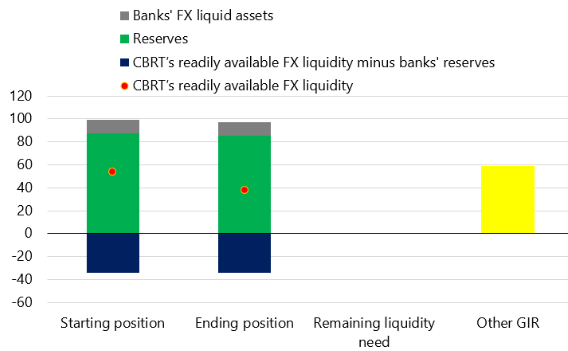
Impact on CBRT's readily available FX liquidity

(in billions of US$)



Impact on CBRT's readily available FX liquidity

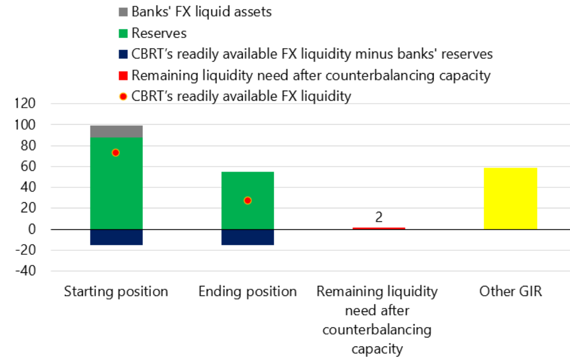
(in billions of US$)



Severe scenario

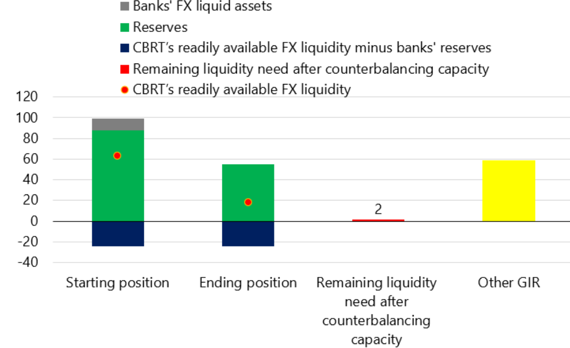
Impact on CBRT's readily available FX liquidity

(in billions of US$)



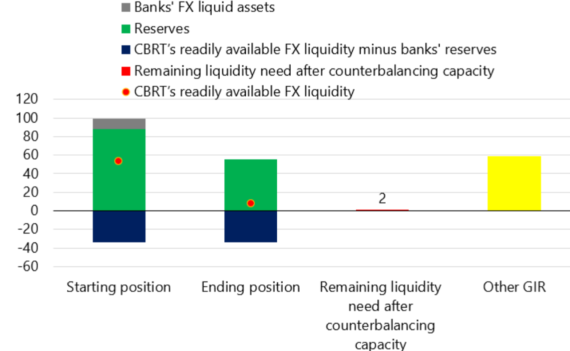
Impact on CBRT's readily available FX liquidity

(in billions of US$)



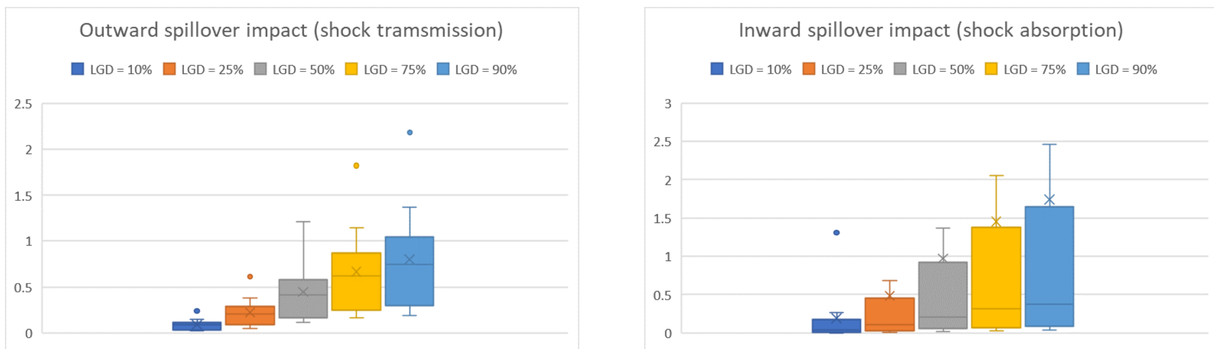
Impact on CBRT's readily available FX liquidity

(in billions of US$)



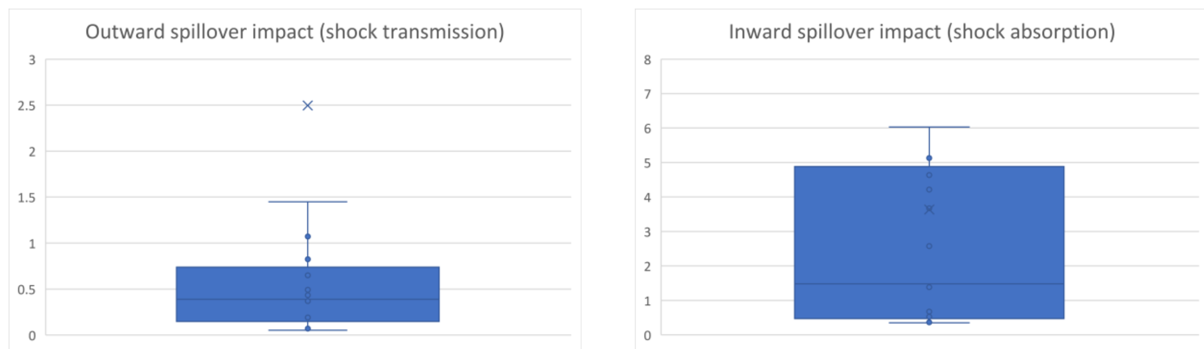
Source: IMF staff estimate

Figure 15. Domestic Contagion



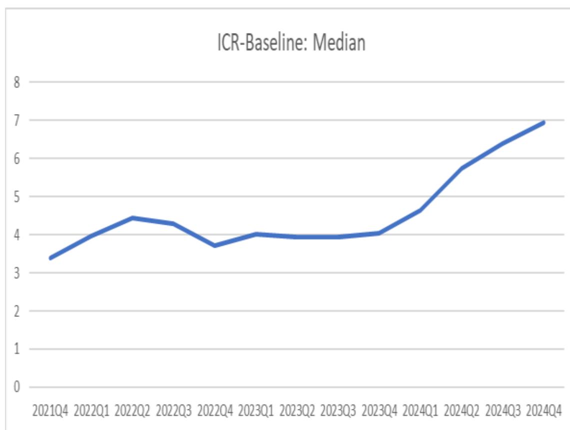
Sources: Supervisory data; IMF staff estimates.

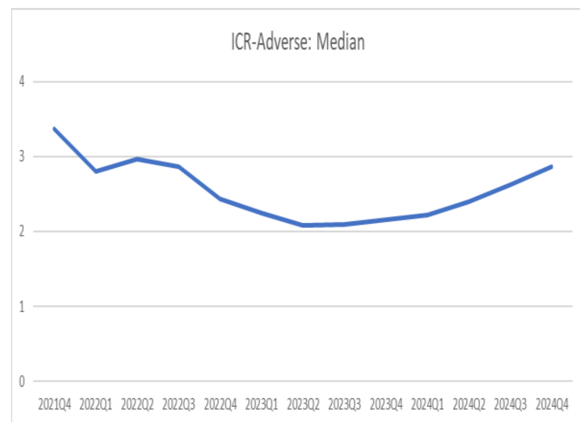
Figure 16. Cross-border Contagion

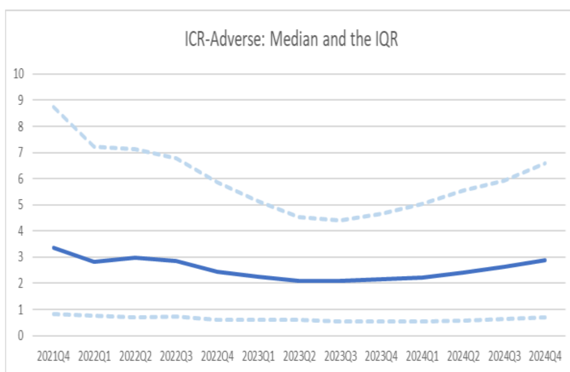


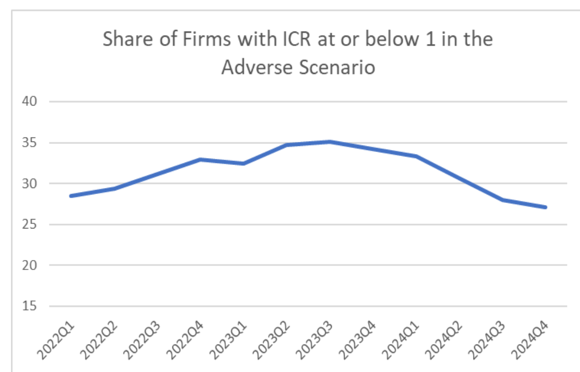
Sources: Supervisory data; IMF staff estimates.

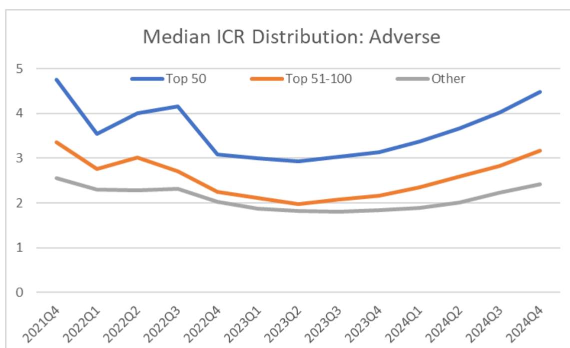
Figure 17. Corporate Sector Stress Test Results

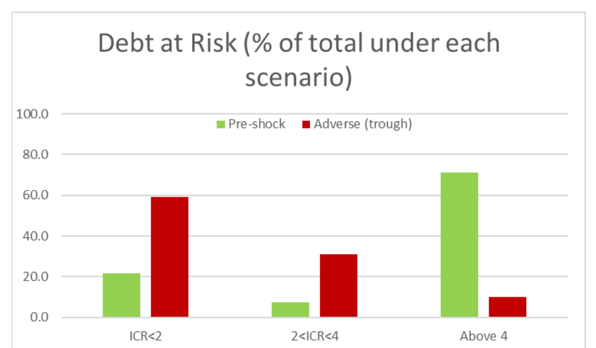












Sources: IMF staff estimates.

Table 3. Republic of Türkiye: Selected Economic Indicators, 2018–27

Population (2021): 84.7 million
Per capita GDP (2021): US$9,522
Life expectancy (2019): 77.7 years
Gini index (2019): 41.9
Quota: SDR 4,658.6 million

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Prelim.			Proj.			
Real sector					*(Percent)*					
Real GDP growth rate	3.0	0.9	1.8	11.0	4.0	3.5	3.5	3.3	3.3	3.3
Final domestic demand	1.1	-2.1	4.1	10.9	6.1	1.8	3.8	3.8	4.2	4.5
Private consumption	0.6	1.5	3.2	15.1	8.6	0.6	5.0	4.4	5.2	5.4
Public consumption	6.5	4.1	2.2	2.1	3.2	8.1	1.3	1.8	2.3	2.6
Investment	-0.2	-12.4	7.2	6.4	1.7	1.6	2.0	3.3	2.6	3.0
Exports	8.8	4.6	-14.8	24.9	7.4	11.8	9.3	7.8	5.4	4.8
Imports	-6.2	-5.4	7.6	2.0	1.7	2.1	7.9	8.2	7.0	7.7
Contributions to real GDP growth 1/										
Private consumption	0.3	0.8	1.8	8.6	4.8	0.4	2.8	2.5	2.9	3.1
Public consumption	0.9	0.6	0.3	0.3	0.4	1.1	0.2	0.2	0.3	0.3
Investment (incl. inventories)	-2.4	-3.7	6.7	-4.4	-3.1	-2.1	0.0	0.8	0.8	1.1
Net exports	4.1	3.1	-7.1	6.5	2.0	4.2	0.5	-0.2	-0.7	-1.3
GDP deflator growth rate	17.0	14.0	15.1	30.7	74.0	49.9	25.1	17.2	15.9	15.3
Nominal GDP growth rate	19.9	14.9	16.9	41.7	78.0	53.4	28.7	20.5	19.2	18.6
Inflation (period-average)	16.3	15.2	12.3	19.6	69.8	45.3	23.1	16.8	15.2	15.0
Inflation (end-year)	20.3	11.8	14.6	36.1	67.3	34.1	20.8	15.9	15.0	15.0
Unemployment rate	10.9	13.7	13.1	12.0	11.0	10.5	10.5	10.5	10.5	10.5
Output gap (percent of potential GDP) 1/	1.1	-1.8	-4.2	1.6	1.2	0.8	0.4	0.0	0.0	0.0
					(Percent of GDP)					
Fiscal sector										
Nonfinancial public sector										
Primary balance	-2.4	-3.0	-3.2	-2.2	-4.0	-3.8	-2.7	-2.7	-2.7	-2.7
Overall balance	-3.9	-5.0	-5.1	-3.9	-6.4	-7.1	-6.5	-6.6	-7.0	-6.9
General government gross debt (EU definition)	30.1	32.6	39.7	41.8	42.1	42.2	43.1	44.6	46.4	47.1
External sector										
Current account balance	-2.8	0.7	-4.9	-1.7	-6.5	-3.0	-1.6	-1.1	-1.0	-1.5
Gross international reserves (billions of US dollars)	93.0	105.7	93.3	111.2	86.0	83.0	79.0	77.0	75.0	73.0
Ratio to ARA Metric for emerging markets (percent)	77.3	88.9	77.5	...	...	...	...	...	...	...
Gross financing requirement	24.6	19.4	25.4	22.3	26.7	26.4	24.4	21.5	19.4	17.7
Gross external debt 2/	54.7	54.7	60.1	55.5	63.1	64.0	56.4	50.8	45.3	41.6
Net external debt	35.7	33.2	40.2	34.1	43.4	45.6	41.4	38.3	34.9	41.6
Net international investment position	-43.1	-40.8	-52.1	-31.1	-38.5	-40.4	-37.0	-34.1	-31.4	-29.8
Short-term external debt (by remaining maturity)	19.6	19.4	23.0	19.1	24.2	26.0	22.9	20.6	18.0	16.6
REER (CPI-based, 2003=100)	77.1	75.1	67.3	...	...	...	...	...	...	...
Monetary conditions					*(Percent)*					
Real average cost of CBRT funding to banks	1.4	5.4	-1.7	...	...	...	...	...	...	...
Nominal growth of M2 broad money	18.4	27.3	33.9	...	...	...	...	...	...	...
Memorandum items					-5.5					
GDP (billions of U.S. dollars)	780	761	720	806	762	786	895	1006	1129	1252
GDP (billions of Turkish lira)	3,759	4,318	5,047	7,149	12,729	19,531	25,128	30,289	36,096	42,811
Real effective exchange rate (year-on-year percent change)	-14.4	-2.7	-10.3	...	...	...	...	...	...	...
GDP per capita US$	9,508	9,146	8,610	9,522	8,892	9,072	10,216	11,355	12,605	13,846
Population (million)	82.0	83.2	83.6	84.7	85.7	86.7	87.6	88.6	89.5	90.5

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

1/ Staff estimates.

2/ The external debt ratio is calculated by dividing external debt in US$ by staff-estimated GDP in US$. GDP in US$ is calculated as GDP in TL divided by the annual average exchange rate.

Table 4. Republic of Türkiye: Financial Soundness Indicators, 2012–20

(In percent, unless otherwise indicated)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Capital Adequacy									
CAR	18	15	16	16	16	17	17	18	19
T1R	15	13	14	13	13	14	14	15	16
RWA / Assets	80	84	83	83	82	76	77	77	67
Asset Quality									
NPLs / Gross Loans	3	3	3	3	3	3	4	5	4
Provisions / Gross NPLs	75	76	74	75	77	79	68	65	75
Profitability									
Total Int. Income / Int. Bearing Assets (av) 1/ 2/	9	8	8	8	8	9	11	11	8
Cost / Income (Efficiency) 3/	73	71	74	76	72	73	77	78	-
ROAA 1/ 4/	2	2	1	1	2	2	1	1	1
ROAE 1/ 4/	16	14	12	11	14	16	15	11	11
Funding and Liquidity									
Loan-to-Deposit ratio	103	111	118	119	119	123	118	103	104
Loan-to-Deposit ratio (TL)	113	127	133	142	134	148	138	130	-
Loan-to-Deposit ratio (FX)	82	84	92	89	99	90	96	78	-
Non-Core / Core Liabilities 5/	44	52	55	56	56	57	57	47	51
Non-Core / Core Liabilities (TL) 5/	26	29	30	32	29	32	33	28	-
Non-Core / Core Liabilities (FX) 5/	91	103	113	101	106	101	94	71	-
Leverage Ratio 1/ 6/	5	5	6	5	5	5	5	6	5
Liquid Assets / Assets 7/	26	24	23	22	21	23	21	23	25
Assets / Liabilities (3 months, int. sensitive)	82	79	75	74	76	73	78	71	72
FX Risk									
FX Assets / FX Liabilities (on-balance sheet) 6/	94	91	91	91	94	88	91	88	86
NOP / Regulatory Capital	2	-1	-2	1	-1	1	3	0	4
NOP before hedging / Regulatory Capital	-14	-29	-28	-30	-22	-43	-34	-41	-58
Balance Sheet				*(Percent of GDP)*					
Total Assets	87	95	97	100	104	104	103	104	122
o/w Gross Loans	50	57	60	63	66	67	64	61	71
Liabilities	75	84	86	89	93	93	92	93	110
o/w Deposits	49	52	51	53	55	55	54	59	69
Shareholders' Equity	12	11	11	11	11	11	11	11	12
Off-Balance Sheet				*(Percent of GDP)*					
o/w Commitments	109	89	83	88	94	103	95	93	100
o/w Contingencies	15	18	19	20	21	21	21	19	20
Miscellaneous									
Deposit Interest Rate (Percent) 8/	8	8	9	11	10	13	23	10	16
Loan Interest Rate (Percent) 9/	12	13	13	16	15	18	32	15	22

Sources: BRSA data; and IMF staff calculations.
1/ Current year data are annualized using 12-month rolling sums.
2/ Net of NPL provisions.
3/ Other non-interest income added to expenses when <0.
4/ Net income as a share of average assets or equity over last 12 months.
5/ Core liabilities include deposits and shareholders' equity.
6/ Proxied by T1 Capital over last 2 months average balance sheet assets and average off-balance sheets exposures (> 3 percent).
7/ Liquid assets as reported by the BRSA in their liquidity position table.
8/ On TRY only, excluding sight and interbank.
9/ Consumer Loans (Personal+Vehicles+Housing).

Table 5. Republic of Türkiye: Risk Assessment Matrix (mid-2022)

<table>
<tr><th rowspan="2">Risk</th><th colspan="2">Overall Level of Concern</th></tr>
<tr><th>Relative Likelihood</th><th>Expected Impact if Materialized</th></tr>
<tr><td>Russia's invasion of Ukraine leads to escalation of sanctions and other disruptions.

Sanctions on Russia are broadened to include oil, gas, and food sectors. Russia is disconnected almost completely from the global financial system and large parts of the trading system. This is combined with Russian countersanctions and secondary sanctions on countries and companies that continue business with Russia.</td><td>High</td><td>Medium to High
• Higher commodity prices, increasing pressure on inflation.
• Decline in tourism from Russia and Ukraine leading to a decline in tourism-related revenues.
• Increase in refugee migration and associated economic costs.</td></tr>
<tr><td>COVID-19 pandemic outbreaks.

The disease proves harder to eradicate (e.g., due to new virus strains, delays in the vaccination program, short effectiveness of vaccines or widespread unwillingness to take them) leading to uncontrolled COVID-19 local outbreaks requiring costly containment efforts and prompting persistent behavioral changes rendering many activities unviable.</td><td>Medium</td><td>Medium to High
• Sharp economic slowdown and structural changes leading to permanent damage to potential output.
• Lower market confidence raises risk premia, exacerbates the slowdown and long-term scarring of the economy.
• Higher inflation, increased dollarization, and a deterioration in the current account position increase pressure on the lira and give rise to renewed foreign exchange sales, and in turn to a further decline in reserves from already-low levels.
• Persistent flattening or contraction of consumption and investment activities impairs private sector financial health, leading to reassessment of asset values and sizable formation of NPLs, in particular for the tourism and trade sectors.
• A protracted slowdown of real estate activities and market demand translates to broad-based deterioration of prices in the commercial real estate market, propagating to banks loan book with significant exposures.</td></tr>
<tr><td>Sharp rise in global risk and term premia exposes financial vulnerabilities.

A reassessment of market fundamentals (e.g., in response to</td><td>Medium</td><td>Medium to High
• Rising U.S. interest rates and a global flight to safety lead to capital outflows, exchange-rate pressures and pass-through to inflation if not curbed by monetary policy tightening. International reserves could decline.</td></tr>
</table>

Table 5. Risk Assessment Matrix (Concluded)		
adverse COVID-19 developments) and/or a de-anchoring of inflation expectations in the U.S. leads to faster-than-expected U.S. interest rate increases, a widespread risk-off event with higher risk and term premia, and capital outflows.		• Credit spreads rise, resulting in higher funding costs and a deterioration in financial conditions of corporate borrowers, particularly for leveraged firms and those operating in unviable activities. • Exchange rate depreciation would increase pressure on public finances, due to contingent fiscal liabilities including the FX-protected deposits scheme. • Higher borrowing costs for government may result in a deteriorated fiscal path, higher sovereign risk premia, and devaluation of sovereign securities held by banks. Banks face eroding asset quality and liquidity pressures including in the event of deposit withdrawals.
Global geopolitical tensions Intensified geopolitical tensions, security risks, and conflicts cause economic and political disruptions, disorderly migration, production reshoring, a decline in global trade, and lower investor confidence. Associated supply chain disruptions and commodity price shocks give rise to inflationary pressures.	**High**	**Medium to High** • Decline in tourism-related revenues. • Pressure on inflation due to rising energy and food prices. • Deterioration of current account and exchange rate pressure. • Pressure on households and corporate finances.
Disorderly macrofinancial cycle. Changes in sentiment or weaker investor confidence could give rise to higher sovereign and corporate credit spreads, capital outflows, exchange rate depreciation and reserve depletion.	**High**	**Medium to High** • Wider credit spreads lead to higher sovereign and corporate funding costs, pressuring the fiscal outlook and corporate balance sheets. • Currency pressure results in increased FX funding costs for NFCs, and possible inflation pressure and reserve depletion. • FX deposit withdrawals could occur and contribute to FX liquidity pressure. • Increased solvency and liquidity pressure on banks leads to deleveraging which can in turn further slow economic activities.

Appendix I. Stress Testing Approach

Domain	Top-down stress test approach by the FSAP Team
Banking sector: Solvency Stress Test	
Institutional perimeter	• The 10 largest Turkish banks (four state-owned deposits bank and six private banks), to cover at least 80 percent of banking system assets.
Methodology and risk drivers	• Scenario-conditional forecasts of various drivers underlying headline capitalization metrics were combined, including credit risk (through loan loss provisions under IFRS9), interest rate risk (through interest income in the banking book, interest expense for deposits and wholesale funding, mark-to-market revaluation of bond trading portfolios), and foreign exchange-rate risk (by looking at the impact of exchange rate shocks on banks' net open positions). • Dynamic balance sheet approach: gross exposures (loans and debt securities, excluding CPI linked securities) as well as deposits are assumed to grow in line with nominal GDP growth for all banks. • The hurdle rate adopted is the minimum regulatory requirement for total capital adequacy ratio of 8 percent for all banks. Capital buffers are not included in the hurdle rate.[1]
Scenarios	• Baseline scenario aligned with preliminary July IMF WEO. Bespoke adverse scenario addressing the most relevant risks and vulnerabilities confronting the financial system, including aspects of the COVID-19 pandemic, sharp rise in global risk premia, exchange rate depreciation, FIs' funding cost pressure, etc. • 3-year horizon.
Forbearance measures and counterfactual analysis	• Exclusion of the impact of forbearance measures (FX rate fixation for credit RWA, mark-to-market losses for fair value through other comprehensive income (FVOCI) securities exclusion from capital and loan classification flexibility) from bank-level starting points. • Risk weights on sovereign debt securities in FX, and FX required reserves and receivables from the CBRT were increased to 100 percent, in line with Basel. • Counterfactual analysis on restructured loans.
Banking Sector: Liquidity Stress Test	
Institutional perimeter	• The largest 10 Turkish banks (four state-owned deposits bank and six private banks), to cover around 80 percent of banking system assets
Methodology and scenarios	• A cash flow-based liquidity stress test (LST) and a Basel III-Liquidity Coverage Ratio (LCR) test were conducted to assess banks' ability to cover net cash outflows using their counterbalancing capacity. • Scenario's analysis to cover risks from: (i) asset price falls, (ii) run on retail deposits, (iii) run on wholesale funding, (iv) foreign and domestic investors different behavior, (v) run on FX deposits, (vi) scarce access to FX funding, for example via swaps with the CBRT. • Bank-level LCRs as of end-2021 adjusted to: (i) cap the aggregate banking sector's FX reserves held at CBRT counted as HQLA to the CBRT's readily available FX liquidity; (ii) impose 35 percent haircut on Türkiye sovereign debt in FX; (iii) remove FX inflows (as well as TL outflows) from swaps with the CBRT. • Account for different currencies: Turkish Lira and FX.

[1] Banks'capital buffers include a capital conservation buffer and a countercyclical capital buffer, and the eight D-SIBs are also subject to a systemic risk buffer.

Domain		Top-down stress test approach by the FSAP Team
Corporate Sector Stress Test		
Institutional Parameters	Institutions included	• All publicly listed nonfinancial firms (over 300 firms covering ≈25 percent of the market share). Access to unlisted large and medium firms was not granted by the CBRT's statistics department.
	Data	• Data on publicly listed firms sourced from commercial data sources (Mainly from FINNET and S&P Capital IQ). • Data availability on FX assets and liabilities, maturity structure of FX debt, on-and-off balance sheet FX hedges was discussed with the CBRT during the first mission. Granular information on FX exposures (apart from FX assets, liabilities) is currently not in a form suitable for stress testing purposes.
Methodology and risk drivers	Methodology	• Scenario-based forecasts of various income statement and balance sheet line items. Similar to bank solvency stress tests, NFC stress tests project firms' net income, viability, and debt service capacity under baseline and adverse scenarios. Firms profit and loss items are linked to macrofinancial variables through regression analyses and forward-looking projections were derived using scenario variables spanning through the stress testing horizon. • Calibration of interest rate shocks, FX shocks, credit shocks • Risks absorbers/hedging will be proxied through exports revenue, FX assets, off-balance sheet hedges such as derivatives
Scenarios	Number of scenarios	• Baseline, and Adverse scenarios in line with the bank solvency stress testing
	Horizon	• Three-year horizon in line with the bank solvency stress testing

Reporting Format for Results	Output presentation	• Median results:
		  • Impact on viability (ICR) ratios
		  • Debt-at-Risk measure
		  • FX risks

Interconnectedness Analyses and Systemic FX Liquidity Stress Test		
Institutional Parameters	Institutions included	• Exposure based bilateral domestic interconnectedness include bilateral exposures between Turkish banks (same sample as in bank ST) • Exposure based bilateral cross-border interconnectedness between Turkish banking system and other large banking systems • Systemic FX liquidity stress testing performed at domestic sector level
Data		• Bilateral on-balance sheet and off-balance sheet exposures as of end-2021 for the domestic bank interconnectedness/contagion was provided by the BRSA. • Confidential and publicly available BIS bilateral locational and consolidated exposures vis-à-vis other banking systems were used for the cross-border interconnectedness/contagion analysis. • Systemic FX liquidity stress tests utilized supervisory data provided by the BRSA on contractual cashflows, BRSA's granular derivatives exposure by counterparty and maturity, and publicly available data coming from authorities.

Channels of risk propagation	Methodology	• Contagion analyses (both domestic and cross-border) were performed based on Espinosa-Vega and Sole (2010), which allows default cascade simulations at different loss given default (LGD) rates (LGDs ranging from 10, 25, 50, 75, to 90 were used). • Systemic FX liquidity stress test uses two rounds of effects at a stress test horizon of 1-month. In the first round, the scenarios are in line with cashflow-based bank liquidity stress test. The second round includes additional impact that could incur due to corporate vulnerabilities resulting in liquidity gaps (estimated through the NFC stress tests), as well as additional funding needs of other sectors (e.g., Gov) if external funding is constrained. Through a separate sensitivity analysis, the impact of capital flight outside of the domestic banking systems was also assessed.
Reporting format for results		• Contagion analyses show systemic-wide capital shortfalls (with min, max, median without identifying individual institutions or jurisdictions). • Interconnectedness analysis is assessed by illustrative network maps. • Systemic FX liquidity stress tests report the impact of moderate-to-large outflows and capital flight on CBRT's readily available FX liquidity (though bar charts).

Appendix II. Implementation of 2016 FSAP Recommendations—Assessment[1]

Recommendations	Timeframe	Status
Banking and Financial Stability		
Enhance modelling capabilities in the BRSA (TN)	MT	No progress.
Data and information gaps need to be closed (TN)	MT	Limited progress, but not with respect to the corporate sector.
Macroprudential Policy		
Strengthen FSC's governance and powers, provide explicit financial stability objective to all members, and limit CoM role (#31).	ST	Partly done. Not all FSC members have explicit financial stability objectives; those without still do not, and those that do have seen other objectives take prominence. Role of Council of Ministers is now with the President and is limited to extraordinary measures to address systemic crises, but the law is vaguely defined. A fixed meeting calendar has been established. The FSC secretariat and SRAG secretariats were combined for a period, but this was found impractical.
Strengthen transparency (including publishing an Annual Report) (#31).	ST	Partly done; quarterly report to the public called for in FSC law. But no annual report or regular reporting to Parliament planned.
Develop procedures for improved systemic risk assessment and coordination of macroprudential policies: agree to table policy proposals for ex ante FSC discussion and request formal responses to recommendations (#31).	ST/MT	Partly done. Heat map under further development, with contributions from member agencies. Structural dimension assessed to some extent. Stress tests conducted regularly with coordination on scenarios. However, assessment not yet well integrated and holistic, and scope of monitoring beyond the regulatory perimeter could be further improved. Policy proposals can be tabled by any member; some have been discussed ex ante and others not. Formal responses to recommendations not required; follow up is informal and systematic.
Strengthen macroprudential measures to lower foreign exchange risk in the economy (#35)	I	Done. Measures taken in 2018 to limit FX borrowing by non-financial corporates. Banks' wholesale FX financing has declined, partly due to lower FX lending, and to increased household dollar deposits.
Base choice of policy tools on integrated assessment of systemic risk and cost-benefit analysis of alternative options (#36).	ST	Not done. Ex-ante impact studies conducted, but not clear if systemic risk lens used. Working Group established for ex-post assessment of impact of chosen policies. Many unorthodox measures affecting systemic risk were taken, some as substitutes for monetary policy action.
Systemic Liquidity Management		
Orient liquidity provision towards a single key policy rate (#38).	I	Partially Implemented. Since the simplification of the operational framework and implementation of a mid-rate corridor system in November 2020, liquidity has been more oriented towards the one-week repo rate which is now considered as the main monetary

[1] Paragraph numbers refer to the FSSA from the 2016 FSAP.

Recommendations	Timeframe	Status
		policy instrument; however, the central bank is still pursuing multiple objectives through its liquidity management.
Increase net reserves such that gross reserves are within the range of 100-150 percent of the Assessment of Reserves Adequacy (ARA) metric (#39).	MT	No progress. Reserves are still below the range of the ARA metric.
Improve ELA capacity; redefine CBRT FX lending facility as ELA and increase conditionality (#40).	ST	No progress.
Financial Sector Oversight and Regulation		
Banking		
Revise legislation to further strengthen BRSA independence (#21).	MT	No action taken. The issues identified in 2016 regarding independence and accountability are now more exacerbated, and that the BRSA resources are under serious stress.
Deepen and broaden the risk assessment nature of banking inspections and follow up (#22).	MT	Some broadening of methodology, but majority of detailed recommendations from the BCP assessment have been or appear to have been left untouched. As resources are exceptionally constrained, special inspections have been discontinued and issues are being tracked on a slower cycle than before, the status of bank inspections appears less robust than at the last FSAP. Also, on-site inspectors dedicate up to 40 per cent of their time to conduct inspections at the request of other national authorities in detriment of the main responsibilities and mandate of the BRSA.
Strengthen corporate governance rules and enforcement (#21).	MT	Partial achievement. Progress has been made with respect to a guideline on corporate governance that is awaiting public consultation. This will meet a number of required elements, including a bank's board to have collective sound knowledge of the bank's material activities; requiring the majority of the board to be composed of non-executive members and expanding the minimum number of independent directors on the audit committee; separating risk management responsibilities from the audit committee; requiring banks to establish risk management committees; and requiring CROs to oversee risk management activities. However, there is a need to significantly enhance the fit and proper assessment of bank managers (administrators) to ensure the experience, education, and reputation criteria are properly assessed and enforced.

Recommendations	Timeframe	Status
Evaluate and revise the definition of credit classifications and strengthen enforcement (#24).	ST	Partial achievement. Indications of material loosening of credit standards were identified, but new guidelines on credit risk are due to be enacted from July 2022.
Insurance Supervision		
Improve independence, governance and accountability of supervisor and resources for internal control functions.	ST/MT	Partially achieved. The IPRSA as a standalone insurance supervisor was established in line with the recommendation made in the previous FSAP. Regulation around risk management and internal controls was also amended to strengthen resources for key internal control functions, which requires insurance companies to establish compliance, risk management, actuarial and internal audit units. Yet, ORSA is not formally implemented. Moreover, transparency in the nomination, appointment and early dismissal of the insurance supervisor's board members need to be further improved.
Integrate offsite, onsite and enforcement activities, develop risk-based approach and group wide supervision.	MT	Partially achieved. The IPRSA's unified structure allows for the integration of supervisory activities (both onsite and offsite) and enforcement actions although the full integration appears to be constrained by decreased technical capacity of the authority, which was caused by its organizational restructuring. While the planned implementation of IFRS 17 is expected to strengthen the risk-based approach, little progress was made on group wide supervision.
Strengthen corporate governance rules and enforcement.	ST	Partially achieved. Alongside the requirement for insurance companies to establish key internal control functions, they must create an audit committee, which is composed of independent board directors and responsible for overseeing those internal control functions, separately from senior management. Nonetheless, the importance of separating the management function of the company from the supervisory function of the board of directors does not appear to be fully understood by insurance companies.
Crisis management and Resolution		
Strengthen recovery and resolution planning and enhance resolution powers by: (i) Strengthening the Banking Law; (ii) Developing guidance (#43).	MT	The progress on strengthening the recovery and resolution planning framework has been fairly limited, consisting of a new recovery planning requirement for the D-SIBs. No enhancement of resolution powers and resolution financing.
Strengthen domestic and cross-border coordination arrangements (#45, #47).	ST	No action taken on cross-border coordination and work on-going in strengthening domestic coordination.
Financial Integrity		

Recommendations	Timeframe	Status
Determine reason for low money laundering (ML) conviction rates and plan to address them (#50).	MT	Partly done. Authorities are taking steps to improve the ML conviction rate, including by adopting a national strategy to strengthen enforcement and judicial processes. Undertaking complex ML investigations and prosecution is a requirement under the FATF's action plan for Türkiye.
Introduce customer due diligence requirements for politically exposed persons (#50).	ST	No Progress. Authorities have not yet introduced legal provisions related to customer due diligence requirements for politically exposed persons and were rated non-compliant on this issue in the FATF AML/CFT assessment. This is a requirement under the FATF's action plan for Türkiye.
Ensure compliance with requirements of the United Nations Security Council Resolution (UNSCRs), and strengthen border controls on currency transportation (#50)	MT	Partly done. Authorities have introduced a new law (Law no.7265) to implement targeted financial sanctions. Powers and processes are in place to manage cash movement and bearer negotiable instruments cross-borders, but authorities need to demonstrate results, including by effectively pursuing cases in court.
Broadening Markets and Services		
Developing/Deepening Capital Markets		
Support and promote BIST overnight repo futures.	ST	Done. The BIST created a new reference rate – TLREF – and the BIST launched interest rate futures with TLREF as underlying in August 2019.