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INDONESIA

FINANCIAL SECTOR ASSESSMENT PROGRAM

FINANCIAL SYSTEM STABILITY ASSESSMENT

August 2024

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

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International Monetary Fund
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FINANCIAL SYSTEM STABILITY ASSESSMENT

July 3, 2024

KEY ISSUES

Context: The financial system appears to be broadly resilient, has strong capital and liquidity buffers but remains relatively small and dominated by banks, especially few state-owned banks. Household and corporate indebtedness and public debt are low. The macroprudential policy framework features both financial stability and development objectives. The recently passed Financial Sector Omnibus Law (FSOL) will make notable reforms to the financial sector.

Findings: The increase in banks' holdings of government bonds and loans to state-owned enterprises has tightened the "sovereign-bank nexus," but banks appear to be resilient. Credit risk tends to be higher in pandemic-hit industries and highly leveraged corporations. Non-financial corporations' (NFCs) FX exposures have moderated, and associated systemic risks appear contained. Systemic risk identification and analysis is broad and mostly sufficient, although there are data gaps related to households, corporates, and non-bank financial institutions (NBFIs). As a major exporter of coal and given the presence of carbon intensive firms, Indonesia's financial sector is exposed to transition risks from climate change. The authorities have made substantial progress in enhancing banking sector oversight. The financial safety net and crisis management framework for banks has improved. The FSOL will demand the authorities to implement new reforms, while gaps in capacity, supervisory intensity, and coordination exist.

Policy advice: The mission recommends strengthening loan quality recognition by banks and risk assessment of small banks. Corporate and banks FX liquidity analysis could be integrated to identify systemic FX risks which can inform the setting of micro- and macroprudential policy instruments. The macroprudential policy (MPP) framework should clearly prioritize financial stability while development goals should be managed with a distinct set of measures. As NBFIs grow in significance, the systemic risk framework should be extended, and new policy instruments introduced to cover NBFIs too. The authorities should enhance supervisory effectiveness by continuing to improve the risk assessment methodology, better integrating certain supervisory activities and intensifying scrutiny in assessing corporate governance and risk management practices. Strengthening independence of the supervisor and providing clarity on primary supervisory objectives is important. Indonesia's resolution framework should be more closely aligned to the FSB Key Attributes, including regarding the bail-in tool, and should cover financial conglomerates in the framework. Authorities should not delay resolution of weak banks by providing liquidity assistance from the deposit insurance fund.

Approved By
May Khamis and Rupa Duttagupta

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Indonesia in October 2023 and March 2024. The FSAP findings were discussed with the authorities during the Article IV consultation mission in June 2024.

- The team was led by Ranjit Singh, IMF, and Ilias Skamnelos, World Bank, and included Mindaugas Leika (IMF deputy mission chief), Francesco Strobbe (World Bank deputy mission chief), Xiaodan Ding, Aldona Jociene, Jan Nolte, Ashique Habib, Felix Suntheim, Brandon Tan, Lu Zhang, Francisco Figueroa (all IMF Staff) and Rhiannon Sowerbutts, Simon Gray, Nurul Izza Idris (external experts), Martijn Regelink, Ou Nie, Michaela Dolk, Fiona Stewart, Matija Laco, Patrick Dougherty, Fredesvinda Fatima Montes, Ahmed Faragallah, Maria Teresa Chimienti, Danita Pattemore (all World Bank staff), Christopher Wilson and Malcolm Rodgers (WB external experts). Andrea Herrera, Sukham Lertprasert, and Magally Bernal provided editorial assistance (IMF staff).

- The mission met with the Minister of Finance, Governor of Bank Indonesia (BI), Chairman of the Financial Services Authority (OJK), Chairman of Deposit Insurer and Resolution Authority (LPS), and other senior officials at the Ministry of Finance (MoF), BI, OJK, LPS, and other agencies, as well as representatives from private and state-owned financial institutions, and other stakeholders. The team would like to thank the authorities for their warm hospitality, excellent cooperation, and fruitful discussions.

- 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.

- Indonesia is deemed by the Fund to have a systemically important financial sector according to SM/10/235 (9/16/2010), 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 Ranjit Singh and Mindaugas Leika with contributions from the Indonesia FSAP team.

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Glossary

AC	Amortized Cost
AEs	Advanced Economies
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
AT1	Additional Tier 1
BCBS	Basel Committee on Banking Supervision
BCP	Basel Core Principles for Effective Banking Supervision
BI	Bank Indonesia (the Central Bank)
BIS	Bank for International Settlements
BoC	Board of Commissioners
BoD	Board of Directors
BPPU	Blueprint for Money Market Development
CAR	Capital Adequacy Ratio
CBC	Counterbalancing Capacity
CCPs	Central Counterparties
CcyB	Countercyclical Capital Buffer
CET1	Core Equity Tier 1
CMG	Crisis Management Group
COVID	Coronavirus Disease
DAR	Detailed Assessment Report
DIS	Deposit Insurance System
D-SIBs	Domestic Systemically Important Banks
DSTI	Debt-Service-to-Income
ELA	Emergency Liquidity Assistance
EM	Emerging Market
FATF	Financial Action Task Force
FMI	Financial Market Infrastructure
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSI	Financial Soundness Indicator
FSOL	Financial Sector Omnibus Law
FX	Foreign Exchange
GDP	Gross Domestic Product
G-SIB	Global Systemically Important Bank
HQLA	High Quality Liquid Assets
ICR	Interest Coverage Ratio
IEA	International Energy Agency
IFRS	International Financial Reporting Standard
IMF	International Monetary Fund
JETP	Indonesia Just Energy Transition Partnership (JETP)
KBMI	Kelompok Bank Berdasarkan Modal Inti (Bank Grouping based on Core Capital)

KSSK	Financial System Stability Committee
LCR	Liquidity Coverage Ratio
LPS	The Deposit Insurer and Resolution Authority
LTV	Loan-to-Value
MCM	Monetary and Capital Markets Department, IMF
MER	Mutual Evaluation Report
MPP	Macroprudential Policy
MSMEs	Micro-, Small- and Medium-Sized Enterprises
MoF	Ministry of Finance
MoU	Memorandum of Understanding
NBFI	Nonbank Financial Institution
NDC	Nationally Determined Contribution
NFC	Non-financial Corporations
NGFS	Network for Greening the Financial System
NIM	Net Interest Margin
NPL	Non-performing Loans
NSFR	Net Stable Funding Ratio
OJK	Otoritas Jasa Keuangan, (the Financial Services Authority)
OMO	Open Market Operations
PD	Probability of Default
RAM	Risk Assessment Matrix
RoA	Return on Assets
RoE	Return on Equity
RWA	Risk Weighted Asset
SME	Small and Medium Size Enterprise
SOB	State-owned Bank
SOE	State-owned Enterprise
SteM	Stress Test Matrix
ST	Stress Test
TD	Top-down
TLAC	Total Loss Absorbing Capacity
WB	World Bank
WEO	World Economic Outlook

EXECUTIVE SUMMARY

The Indonesian financial system is dominated by well capitalized banks but remains relatively small. The financial system weathered well the series of global shocks and tighter financial conditions: capital buffers and liquidity coverage ratios remained well above the regulatory minima, and banks are highly profitable. State-owned banks play an important role in the banking system, while NBFIs have been growing rapidly but remain a small segment of the financial system.

Despite favorable macro-financial conditions, the financial system is exposed to multiple structural and cyclical risks. Cyclical risks, considering robust credit growth, are moderate, but credit risk is higher in pandemic-hit industries and highly leveraged corporations. Small banks have lower profitability with higher funding and operational costs. Structural risks to the financial system arise from an increase in banks' holdings of government bonds and loans to State-Owned Enterprises (SOEs), which has tightened the "sovereign-bank-nexus." Some of these loans are already restructured. Indonesia's financial sector is also exposed to climate transition risks and is vulnerable to a range of climate-related natural disasters.

The results of bank solvency stress tests suggest that the overall banking sector is resilient to adverse macroeconomic shocks, although there are tail risks for small banks. Under an adverse stagflation scenario, capital losses were mostly driven by credit risk, followed by market and interest rate risks. To address residual credit risks, authorities need to collect and analyze additional data on Micro-, Small- and Medium-Sized Enterprises (MSMEs) and require banks to recognize Non-performing Loans (NPLs) on a timely and full basis and more intensely scrutinize restructured loans.

The overall liquidity position of banks is sound, but foreign exchange (FX) liquidity risks need to be closely monitored, and Liquidity Coverage Ratios (LCR) should be made mandatory for all banks. While all banks have enough liquidity to cover severe outflows, the liquidity stress test identified several bank-specific risks. First, some small and medium banks with higher reliance on wholesale and uninsured funding will face more challenges in meeting requirements. Second, the results signal FX liquidity shortfalls, albeit manageable at 0.7 percent of total assets. Third, there are funding concentration risks in small regional banks, driven by large interbank deposits and large funding from other banks and public entities. Finally, a combined corporate and bank FX liquidity stress test, focusing on a subset of the largest publicly listed corporates, indicate that banks have adequate FX liquid assets to cover severe FX debt rollover shocks for corporates. To mitigate liquidity risks, authorities should remove LCR exceptions for small banks and integrate corporate solvency and banks' FX liquidity analysis to monitor salient FX risks.

The FSOL clarifies macroprudential policy (MPP) and improves policy synergies between the authorities in terms of data sharing and objectives. BI and OJK's systemic risk identification and analysis is broad and mostly sufficient, although there are data gaps related to households, corporates, and NBFIs. BI's MPP toolkit is very extensive and has the key tools needed to manage the current profile of macro-financial risks. MPP pursues a three-pronged strategy: (i) balanced and sustainable intermediation; (ii) financial system resilience; and (iii) promoting inclusive and green financing. Clarifying that safeguarding financial stability is prioritized, and explicitly distinguishing

the tools which support financial system resilience would strengthen effectiveness, further enhance the clarity of communication, and facilitate decision making. As the credit gap continues to close, gradually shifting towards a more neutral MPP stance would help to contain the build-up of macro-financial risks. It is important to develop a framework for understanding and reducing systemic risk from NBFIs and their interconnections with the banking sector.

The BCP assessment shows that the authorities have made substantial progress in enhancing banking sector oversight and achieved good baseline supervision, although several areas for improvement remain. Since the last FSAP, the authorities have implemented the Basel III post-crisis reforms, enhanced the institutional set-up and regulatory framework by implementing the FSOL, and deployed innovative technologies for supervision. The authorities should enhance supervisory effectiveness by continuing to improve the risk assessment methodology, better integrating certain supervisory activities and intensifying scrutiny in assessing corporate governance and risk management practices. Strengthening the independence of the supervisor and providing clarity on primary supervisory objectives is important.

The financial safety net and crisis management framework for banks has improved but more needs to be done. This has been attained through the provisions in the FSOL and the authorities' operationalization efforts. However, additional improvements are needed. The resolution framework should be further aligned with the Financial Stability Board's (FSB) Key Attributes, including with regard to the bail-in tool, and financial conglomerates should be included in the crisis management and resolution framework. Authorities should not be providing liquidity assistance from the deposit insurance fund and thereby potentially delaying the resolution of weak banks.

Systemic liquidity analysis shows a structural surplus of liquidity with the frequency and maturity range of BI's interactions with banks leading to relatively easy management of liquidity by banks. The effort to develop and deepen financial markets is welcome but can only succeed if BI reduces the scale of its interactions with the market. Consideration should be given to the potential needs of the NBFI sector as it grows in importance and may become systemically important. A smooth transition during the introduction of the primary dealer (PD) system in the money markets is important.

Climate risk analysis highlights potential vulnerabilities from climate-related physical and transition risks. To better monitor these risks, the authorities should further develop internal capacity and models for climate risk analysis, offer more detailed methodological guidance to financial institutions, improve data collection, and improve collaboration among government agencies on climate risk analyses.

Authorities made significant progress in addressing gaps in capital markets, insurance sector, market infrastructure regulation and supervision, but broadening and deepening financial markets and services is a multidimensional problem requiring concerted policy efforts. The legal and regulatory framework for insurance, capital markets, pension fund supervision and regulation are closely aligned with international standards. However, there are gaps which remain. In particular:

- Time to market for securities issuance requires action, primarily by improving the effectiveness of the prospectus due diligence process.
- OJK has made considerable progress in updating the insurance sector regulatory and supervisory framework and must continue its efforts.
- The financial sector is in the early stages of addressing climate-related financial risks, with the related supervisory agenda quickly gaining momentum. Authorities should also strengthen the strategy, governance, and capacity for climate finance.
- Elements of the financial market infrastructure (FMI) assessed demonstrate a high level of observance of international principles, with some areas for improvement.
- The credit infrastructure does not fulfill its full potential, requiring concerted action, such as a national credit reporting system strategy and improved oversight framework.
- Capital markets remain shallow, with systemic policy-level reforms necessary to support the accumulation of pension assets and long-term local currency financing.
- Role of the state is significant and can be refined for impact, such as clarifying the objective of state ownership to help SOBs navigate tensions between stability and development objectives.

Table 1. Indonesia: 2024 FSAP Key Recommendations			
	Key Recommendations	**Authorities**	**Time[1]**
	Systemic Risk Analysis		
1.	Implement LCR and Net Stable Funding Ratio (NSFR) across all banks. Integrate FX liquidity analysis of non-financial firms and banks to strengthen FX liquidity risk analysis and inform relevant micro and macroprudential instruments (¶ 19).	BI, OJK	ST
2.	Require banks to recognize NPLs in a timely and full basis; increase intensity in scrutiny of restructured loans and use multiple benchmarks to capture problem loans properly and promptly in top-down stress tests (ST) (¶14).	BI, OJK	MT
	Macroprudential Policies		
3.	Clarify that financial resilience takes priority as the macroprudential policy goal. To the extent possible under the FSOL, separate the inclusive financing ratio and the liquidity incentives from the macroprudential tool kit and highlight the safeguards on these measures (¶ 37, 38).	BI	ST
4.	Prepare to shift towards a more neutral macroprudential stance. Consider an overall strategy which may include preemptive building of resilience (such as a positive cycle-neutral rate counter cyclical capital buffer (CCyB) (¶ 35, 39).	BI	ST
5.	Continue to strengthen the framework for the whole system and, in the future, address gaps in the macroprudential toolkit such as tools for NBFIs (¶ 33).	OJK, BI, LPS, MoF	LT
	Financial Sector Regulation and Supervision		
6.	Explicitly protect the OJK and its staff against the costs of defending their actions/omissions made while discharging their duties in good faith. Clearly state that the OJK's primary objective is to promote the safety and soundness of financial institutions and the financial sector and strengthen the level of independence of OJK (¶ 42).	OJK, MoF	ST
7.	Align the use of profit and loss sharing Shariah contract with the intended purposes and substance of the financial instrument (¶ 44).	OJK	ST
8.	Prioritize and strengthen on-site examination processes for comprehensive evaluations of corporate governance, risk management, transactions with related parties and country and transfer risk and continue building capacity, skills, and innovative technologies to conduct more effective supervision (¶ 40).	OJK	MT
9.	Enhance the supervisory framework by i) improving risk methodology and its application; ii) better integrating certain supervisory activities (ICAAP, D-SIBs, stress testing, and recovery plans); and iii) requiring banks to report information regarding non-financial and unregulated entities within the broader group structure (¶ 40, 41).	OJK	MT
	Climate Risk: Analysis, Regulation and Supervision		
10.	Further develop internal capacity and models for climate risk analysis, offer methodological guidance to FIs, improve data collection for analysis of transition and physical risk (¶ 31).	BI; OJK	MT
11.	Improve collaboration on climate risk analyses among government agencies, including between BI and OJK, research institutions, and the private sector (¶ 31).	BI; OJK	LT

Table 1. Indonesia: 2024 FSAP Key Recommendations (Concluded)

	Key Recommendations	Authorities	Time[1]
	Financial Integrity		
12.	Improve national AML/CFT/CPF regime by taking a more robust approach on imposing sanctions for non-compliance issues identified to ensure they are fully dissuasive and maintaining accurate information on the ultimate beneficial owner of legal persons (¶ 46,47).	OJK	ST
	Systemic Liquidity Management		
13.	Reduce the frequency and breadth of interactions with the market in both rupiah and FX to achieve market development goals (¶ 51).	BI	MT
14.	Consider how to address growing NBFI sector before it becomes systemically important (and review approach to CCP in particular) (¶ 49).	BI	MT
	Crisis Management and Financial Safety Net		
15.	LPS should not provide liquidity for banks under recovery and should be used only to recapitalize banks in a resolution as a last resort and subject to safeguards (¶ 51).	LPS	ST
16.	Include financial conglomerates in the resolution framework and enhance the overall compliance of the framework with the FSB Key Attributes, including by providing for the bail-in tool outside a Bank Recovery Program (¶ 52).	MoF	MT
17.	Follow best practices in terms of safeguards for BI when purchasing bonds in a primary market during a crisis (¶ 52).	BI/MoF	MT
	Financial Development Issues		
18.	Complete the regulatory and oversight framework for FMIs, Credit Infrastructure consistent with FSOL, and establish appropriate cooperative oversight arrangements between BI and OJK (¶ 56, 57).	BI, OJK	ST
19.	Define objectives of state ownership of banks, improve MSME credit insurance pricing (¶ 59).	MoF, OJK	MT
20.	Gradually remove the requirement for minimum government bond holdings by institutional investors (¶ 58).	OJK, MoF	MT

[1] ST: short term (1–2 years), MT: medium term (3–5 years); LT: long term (more than five years). Parenthesis contains agency responsible and FSSA paragraph number.

MACROFINANCIAL SETTING

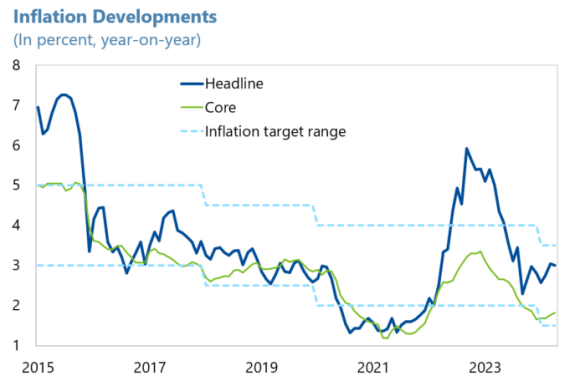
A. Macrofinancial Developments

1. The FSAP took place against a backdrop of robust economic growth (Figure 1). Real GDP growth in 2023 was 5.0 percent, driven by resilient private consumption and investment. The 2022 surge in inflation abated by end-2023, with both headline and core inflation—at 3.0 and 1.8 percent respectively in April 2024—within BI's target band. Growth is expected to remain strong, at 5.0 percent in 2024, and at 5.1 percent in 2025 and into the medium term.

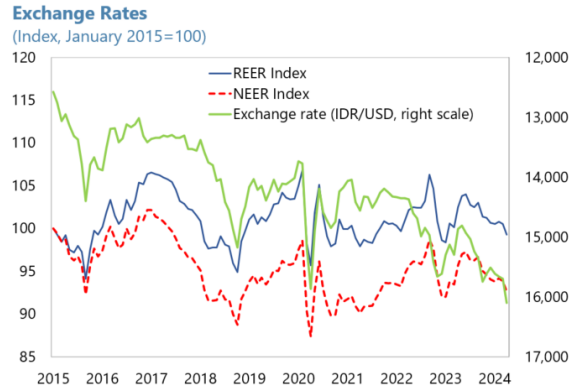
Figure 1. Indonesia: Macroeconomic Developments

The economy continues to grow strongly...

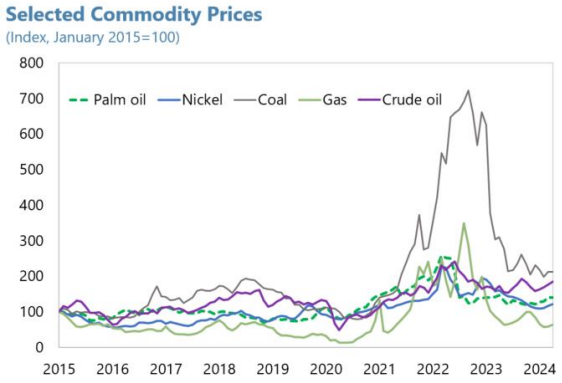
...while inflation has stabilized within BI's target band.



The exchange rate has periodically come under pressure amid geopolitical and Advanced Economies (AEs) monetary policy uncertainties...



...while commodity prices moderated from recent peaks.



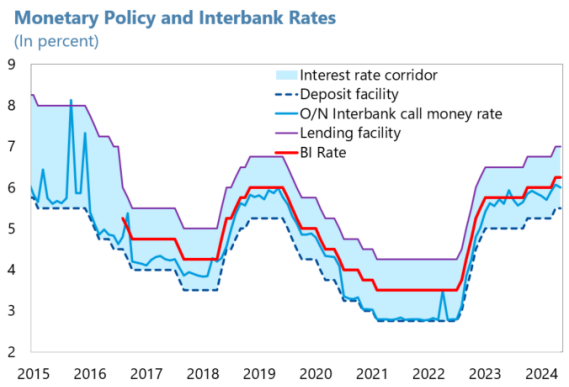
Sources: Badan Pusat Statistik, Haver Analytics, IMF Information Notice System, IMF Commodity Prices Database, and IMF staff estimates.

2. As Indonesia navigates a challenging external environment, policies have brought down inflation while maintaining credit growth to support the economy (Figure 2). After pausing its rate hiking cycle in January 2023 (225 bps between August 2022-January 2023), BI undertook two 25 bps rate hikes in October 2023 and April 2024. These off-cycle rate hikes were intended to contain depreciation pressures on the rupiah transmitting to inflation—with external

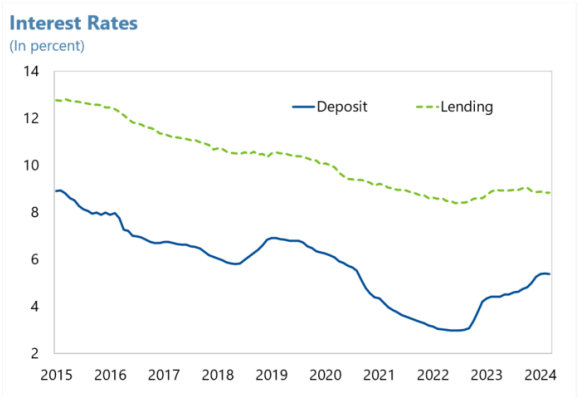
pressures in both instances coming from US monetary policy uncertainty and global dollar strength, along with geopolitical tensions. With the policy rate above the neutral rate, and in a context of a still negative but closing credit gap and contained financial risks, macroprudential policies have been kept accommodative, with liquidity and credit incentives helping to support credit. Credit growth has returned to pre-pandemic rates, even as the policy tightening has led to modest increases in lending rates. BI ended Operation Twist in the second half of 2023, which consisted of selling short- to medium-term government securities to raise their yields and make them more attractive to foreign investors, while buying longer-maturity securities to flatten the yield curve. It has adopted a pro-market open market operations (OMO) framework, using the Bank Indonesia Rupiah Securities (introduced in 2023) to pursue money market deepening and the transmission of monetary policy, and to attract capital flows.

Figure 2. Indonesia: Credit Developments

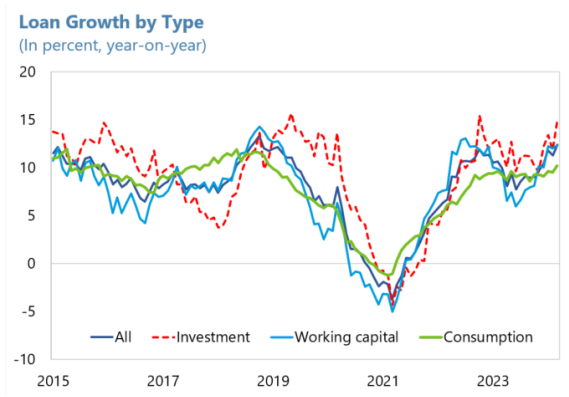
BI has significantly raised the monetary policy rate since late 2022...



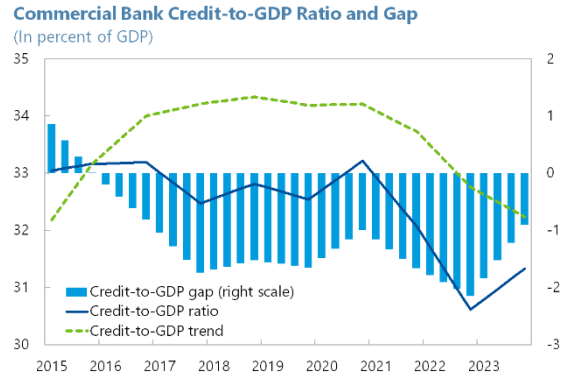
...which led to moderate increases in lending rates.



Credit growth has returned to pre-pandemic rates.



The credit gap remains negative but is closing.



Sources: CEIC Co. Ltd.; and IMF staff estimates.

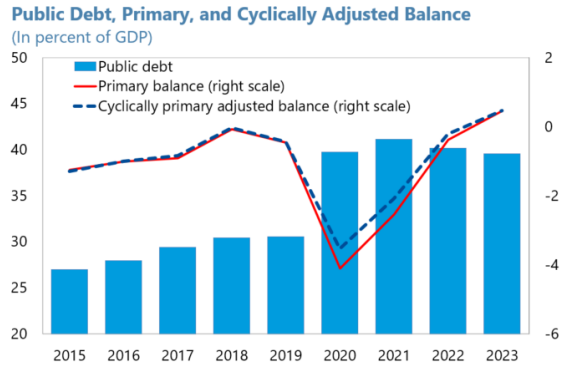
Sources: CEIC Data Co. Ltd, International Financial Statistics, and Bank of International Settlements.

3. Household debt to GDP remains low although recovering from the pandemic-era decline, and unemployment has fallen. However, with muted income growth and a persistent rise in informality post-pandemic, a severe shock leading to a rise in unemployment could undermine households' capacity to repay debts.

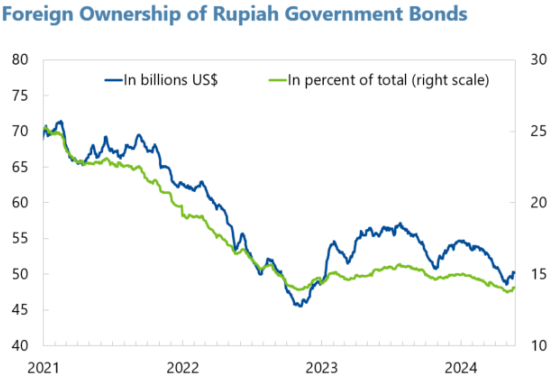
4. Public debt also remains low (Figure 3), reflecting the commitment to preserving strong fiscal buffers, while the investor base for government debt has shifted towards domestic sectors. In 2023, Indonesia posted its first primary budget surplus in over a decade. Risks to debt sustainability are well contained, with public debt of 39.6 percent of GDP in 2023—already low compared to peers. The share of non-resident holdings of government debt fell sharply from about 38.6 percent at end-2019 to about 14.4 percent at end-2022 and has remained at subdued levels since then. This has reduced roll-over risks but has also tightened the sovereign-bank nexus. The sharp increase in banks' exposure in early 2020 was subsequently partly offset by BI's purchases under a set of burden-sharing arrangements during the pandemic, and more recently by a pickup in nonbanks' holdings, reflecting, inter alia, the recent rise in yields. However, banks remain the largest holder of government debt.

Figure 3. Indonesia: Public Debt and Sovereign Bond Yields

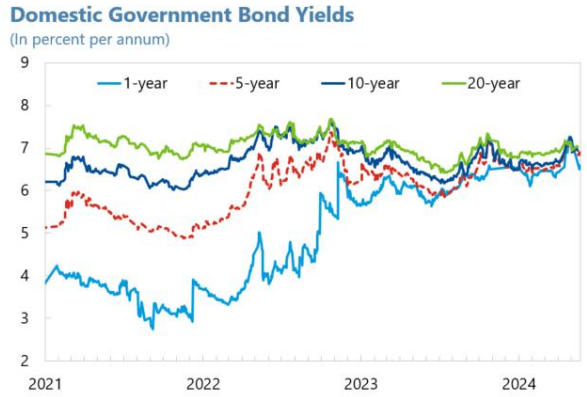
Indonesia's public debt remains relatively low...



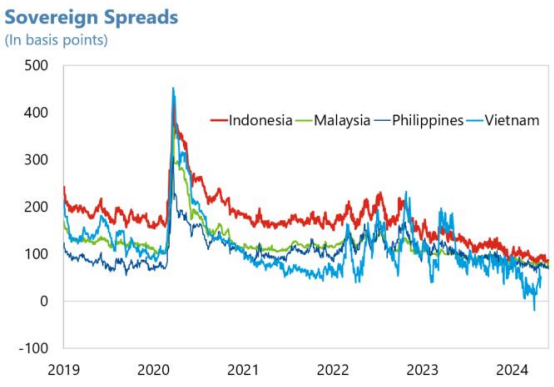
...but the foreign ownership of local government bonds has significantly declined since 2020.



The government yield curve has flattened, partly due to BI's Operation Twist and subsequently its new short-term instrument.



Indonesia's sovereign spread has stabilized, together with those in the region.



Sources: Bloomberg L.P., CEIC Data Co. Ltd, JP Morgan, Indonesian authorities, and IMF staff calculations.

5. The authorities are gradually pursuing an ambitious de-carbonization agenda, requiring careful management of transition risks. During the energy transition phase, coal is expected to remain an important source of energy, including as further expansions in off-grid

generation are underway to meet the needs of down streaming operations in remote locations. The banking sector's exposure to such investments could pose transition risks.

6. Near-term risks to the outlook appear broadly balanced. Upside risks include stronger-than-anticipated growth in China, which could prop up Indonesian export growth; faster-than-expected disinflation in AEs leading to more frontloaded and/or deeper rate cuts by central banks would likely support a risk-on sentiment and help the growth momentum.

7. [1] Downside risks include persistent commodity price volatility due to supply and/or demand disruptions (e.g., linked to conflicts or trade restrictions) or an abrupt global slowdown or recession in Indonesia's key trading partners (China, the US). Slower-than-envisaged AEs' disinflation momentum resulting in higher-for-longer global interest rates, or a systemic financial instability episode (causing spikes in interest rates, risk premia, and asset repricing) could trigger capital outflows and disorderly market conditions. On the domestic side, a weakening of long-standing sound macro-fiscal frameworks could hamper policy credibility. Although a tail risk, a renewed pandemic, and the resulting health crisis and containment measures, would lead to a sharp reduction in consumption and investment, tighten financial conditions, and scar medium term potential output. Extreme climate events could disrupt infrastructure and supply chains, threatening growth, and financial stability.

B. Financial Sector Structure, Interconnectedness and Development

8. The financial system is relatively small (72 percent of GDP) and dominated by banks (Figure 4) but is less leveraged and highly profitable compared to peer countries (Figure 5). The credit-to-GDP ratio reached 31.4 percent by the end of 2023, yet it is still well below peer countries in the region. The size of the financial system reflects low financial inclusion, informality, and high cost of provision of services in rural areas. While the number of banks is high, most of them are small rural lenders. The top 10 banks, including four state-owned banks that constitute 43 percent of the banking sector, hold 66 percent of total bank assets. Nonbank financial institutions, such as insurance and finance companies, investment funds, and pension funds remain relatively small. FinTech lending companies are still a small portion of the financial system but exhibit significant growth (assets rising by 51 percent in 2022).

9. Domestic contagion risks are limited but require close monitoring. NBFIs have limited lending exposures with domestic banks but have significant investment in banks in the form of deposits and stocks (at around 14 percent of total NBFI investment). Finance companies generally rely on funding from banks. There are also forms of indirect contagion through large holdings of common assets such as sovereign and corporate securities by banks and NBFIs, with larger duration risk for NBFIs than banks.

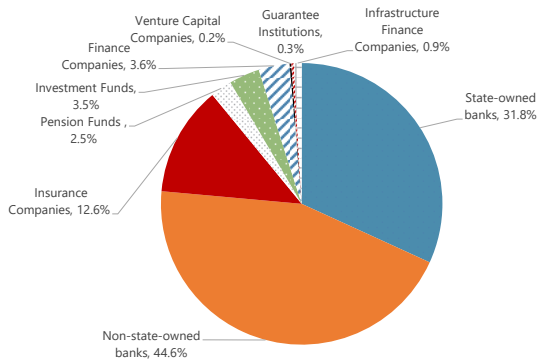
10. The cross-border exposure of Indonesian banks is limited but has increased slightly since the 2017 FSAP. Direct inward spillovers from global banks are limited. Based on the Bank for International Settlement (BIS) data (locational banking statistics as of end-2022), the top exposures

[1] See the World Economic Outlook of January and April 2024.

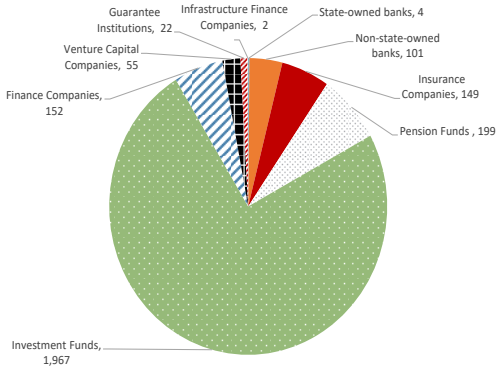
of Indonesian banks include the United States, Singapore, Japan, China, South Korea, Hong Kong, and Malaysia.

Figure 4. Indonesia: Financial Sector Structure

Financial Sector: Assets

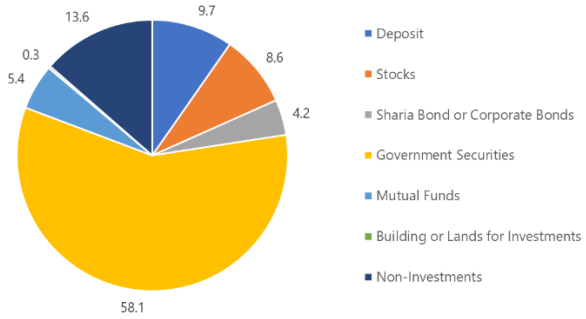


Financial Sector – Number of Institutions



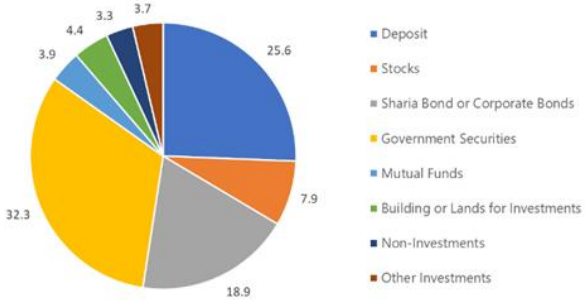
Insurance Sector: Composition of Assets

(In percent)



Pension Funds: Composition of Assets

(In percent)



Sources: BI, OJK, and IMF Staff.

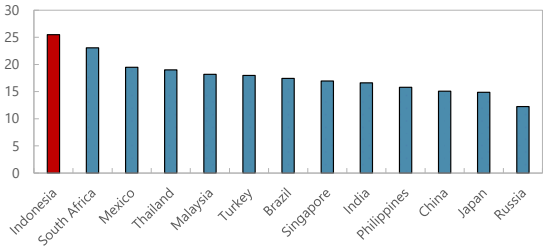
Note: Statistics above exclude rural banks, which stand at around 1410 banks and 1.7 percent of the total banking sector assets. Data as of 2023.

Figure 5. Indonesia: Banking Sector Against Peer Countries

(2023 or latest available)

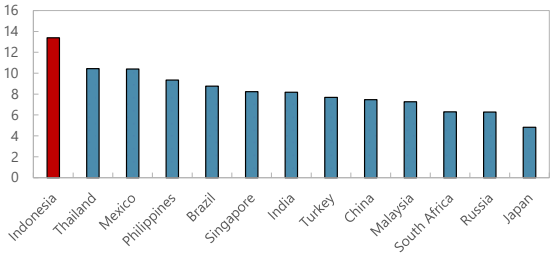
Regulatory Capital Ratio

(In percent)



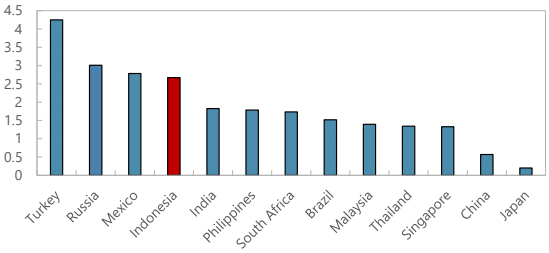
Tier 1 Capital to Assets

(In percent)



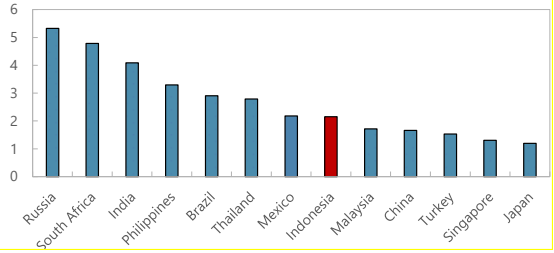
Return on Assets

(In percent)



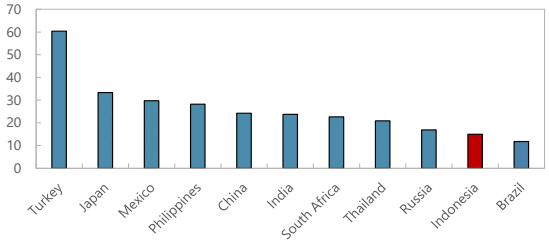
NPL Ratio

(In percent)



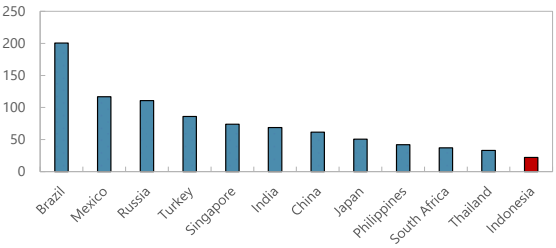
Liquid Assets to Total Assets

(In percent)



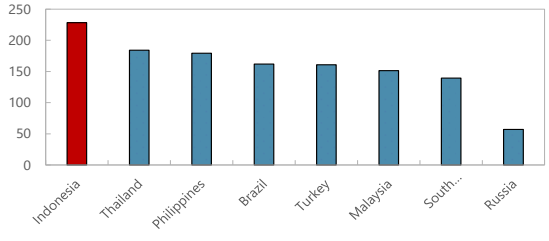
Liquid Assets to Short-Term Liabilities

(In percent)



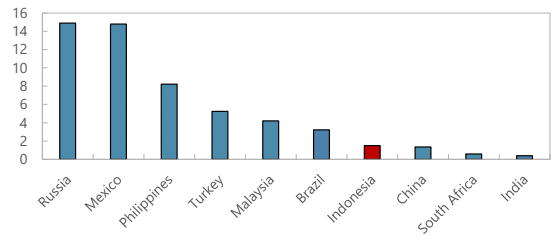
Liquidity Coverage Ratio

(In percent)



Net Open Position in Foreign Exchange to Capital

(In percent)



Sources: FSI, OJK and IMF Staff.
Note: Liquid assets exclude central bank required reserves and include only cash and deposits.

11. Foreign investors also stand out as large asset holders of nonfinancial corporates, mostly through direct investment in the capital markets, as well as significant holders of sovereign bonds. Large holders of government bonds include nonbank financial institutions, banks, and BI (Figure 6). Given the presence of financial conglomerates in the local market, cross-sectoral linkage is an important source of contagion.

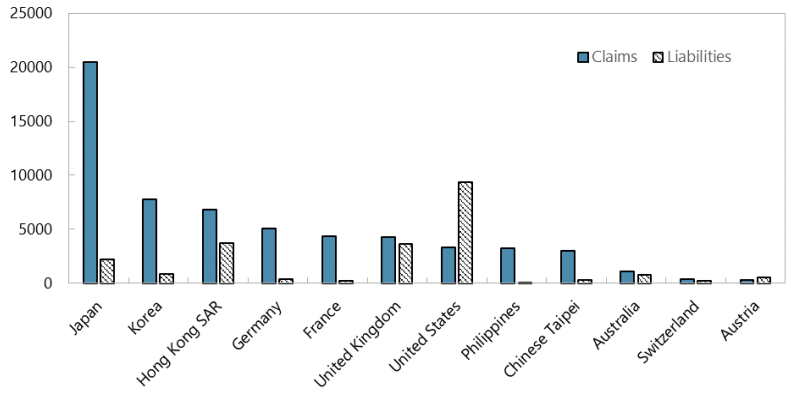
Figure 6. Indonesia: Interconnectedness and Contagion

Sectoral Balance Sheet Matrix

(2022, Percent of GDP)

	Government		Central Bank		Other Depository Corporations		Other Financial Corporations		Nonfinancial Corporations		Households		External	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Government			8	4	9	2	1	0.005	9	-	-	-	17	0.2
Central Bank	4	8			11	0.1	0.01	-	-	-	5	-	1	13
Oth. Dep. Corp.	2	9	0.1	11	2	3	4	2	15	17	33	17	3	2
Oth. Fin Corp.	0.005	1	-	0.01	2	4	2	2	1	3	5	2	0.5	0.4
Nonfinancial Corp.	-	9	-	-	17	15	3	1					36	22
Households	-	-	0.1	5	17	33	2	5						
External	0.2	17	13	1	2	3	0.4	0.5	22	36				

Foreign Banks' Cross-border Positions on Residents of Indonesia (2023Q2, All sector, Mil USD)



Sources: Bank for International Settlements, and Bank Indonesia.

Financial System Interconnectedness

Sources: IMF BSA database, BI, OJK and IMF staff.
Note: The diagram represents bilateral exposures of the Indonesian financial system. The size of the nodes reflects log total claims. The thickness of the edges represents the share of claims in percent of the system-wide total claims.

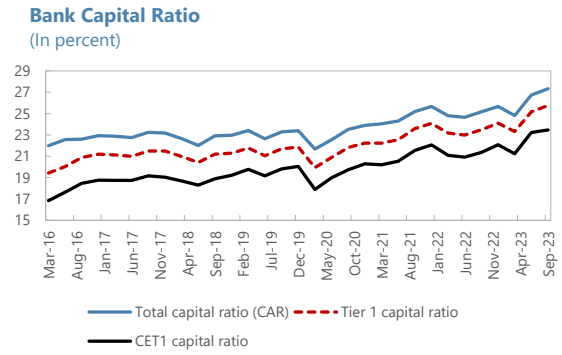
12. The banking sector's profitability and capital buffers are high, asset quality ratios have not deteriorated due to loan forbearance measures, yet small banks[2] are more vulnerable (Figure 7). Declining numbers of loans at risk,[3] sustained high interest margins, and low funding costs improved banks' profitability which is returning to pre-pandemic levels. The interest income is mostly driven by banks' loans, followed by interest earnings from safe assets, i.e., deposit placements in BI and investments in government bonds, despite lending rates steadily declining in the last two decades. Small banks are structurally less profitable due to high funding costs and operating expenses, especially local rural lenders, and therefore require higher capital buffers. RWAs density has declined since 2017 and is now aligned with regional peers at around 62 percent.

[2] Small banks are defined as those classified under the KBMI1 and KBMI2 groups. KBMI1 denotes banks with a core capital of up to IDR 6 trillion; KBMI2 denotes banks with a core capital of between IDR 6 trillion to IDR 14 trillion; KBMI3 denotes banks with a core capital of between IDR 14 trillion to IDR 70 trillion and KBMI4 denotes banks with a core capital of more than IDR 70 trillion. Out of four banks in KBMI4, three are state-owned banks. Banks can also be classified based on ownership, into state-owned banks, regional banks, private banks and foreign branches.

[3] Loans at risk are defined as the sum of NPLs, restructured loans and special mention loans.

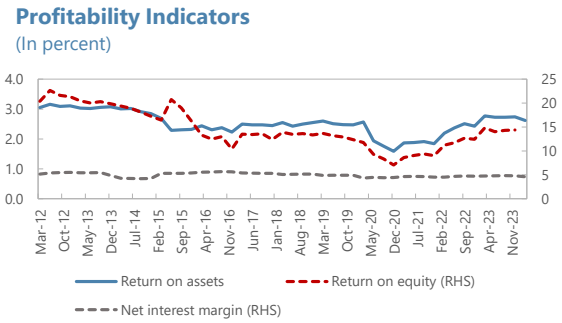
Figure 7. Indonesia: Banking Sector Developments

Capitalization ratio appears to be high…

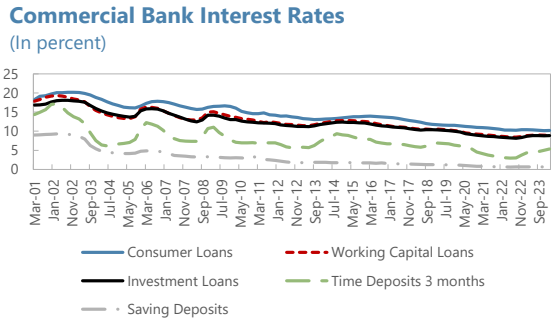


…and the leverage ratio is declining.

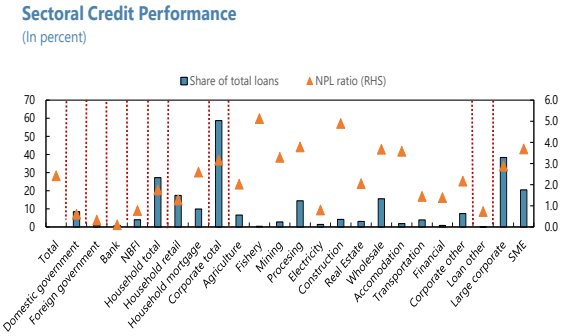
Profitability returned to pre-pandemic levels and interest margins remained stable with a slight decline in 2024 due to a pickup in deposit rates…



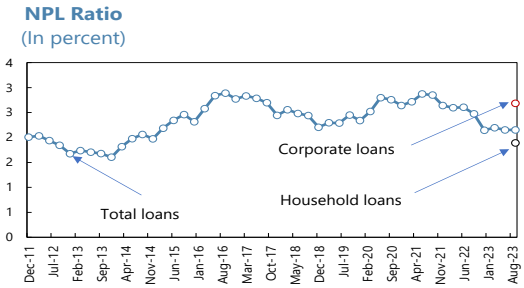
…while lending rates have been steadily declining in the last two decades with a moderate pickup in 2024.



Asset quality reflects a higher pandemic impact in the tourism and construction sectors…



…but the overall NPL ratio has improved since the pandemic and remains close to the historic average.

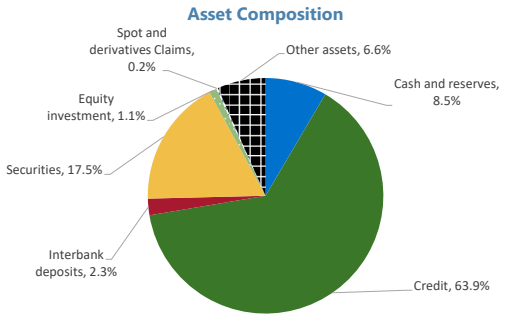


Sources: Bank Indonesia, OJK, and IMF staff.

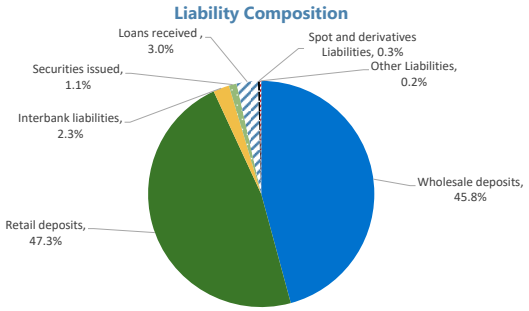
13. Banks have ample liquidity and FX exposures appear to be contained (Figure 8). LCR and NSFR ratios remained above minimum requirement, but banks' liquid asset ratios have declined in 2022, driven by the recovery of loan growth and a higher minimum reserve requirement ratio. The level of dollarization is relatively low (around 17/18 percent of asset/liabilities), and FX net open positions stand at 1.5 percent of banks' capital.

Figure 8. Indonesia: Banking Sector Funding and Liquidity

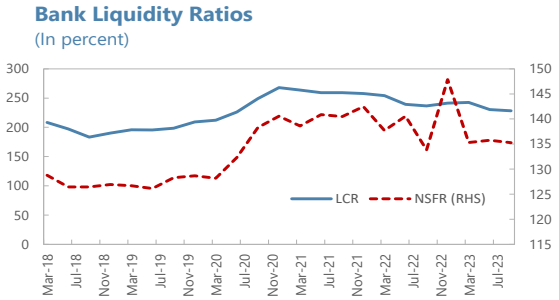
Structure of assets.



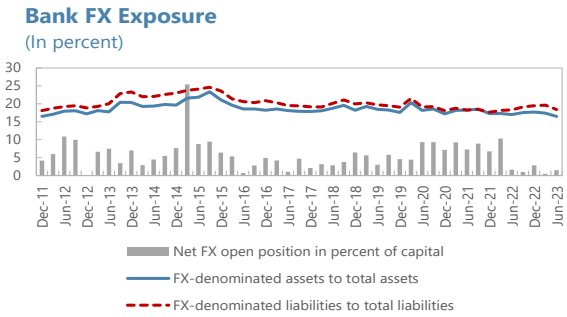
Structure of liabilities.



Liquidity ratios (LCR, NSFR).



FX mismatch.



Sources: Bank Indonesia, OJK, and IMF Staff.

ASSESSMENT OF VULNERABILITIES

A. Financial Sector Vulnerabilities and Risks

14. The key vulnerabilities to the financial sector in Indonesia arise from:

- **Shocks affecting debt repayment capacity of NFCs, including their FX exposures (Figure 9).** The corporate sector has been recovering from the pandemic, but pockets of vulnerability remain. While the corporate sector's external debt has moderated over the past decade, their external and FX debt remains a significant proportion of their total debt, estimated at 37 percent and 51 percent in 2022.[4, 5] SOE construction firms have seen an increase in leverage and a sharp decline in ICR over the past decade, reflecting their role in a public investment push, and a limited number of SOEs are in default. As discussed in the 2024 Indonesia Article IV Staff Report,

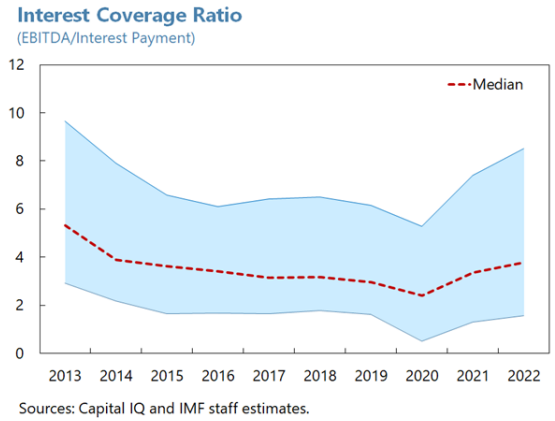
[4] Estimates shared by BI.

[5] To mitigate potential adverse impact stemming from short-term shocks in FX markets, BI implemented prudential regulations on NFCs' offshore borrowings by requiring firms to maintain a minimum hedging of 25 percent of the negative balance between FX assets and FX liabilities with a maturity period of up to 3 months and between 3–6 month from the end of quarter, and a liquidity ratio of at least 70 percent of FX assets to FX liabilities that shall mature within 3 months from the end of quarter.

while the share of listed firms which are zombies have declined recently, it remains above pre-pandemic levels and above regional peers.[6]

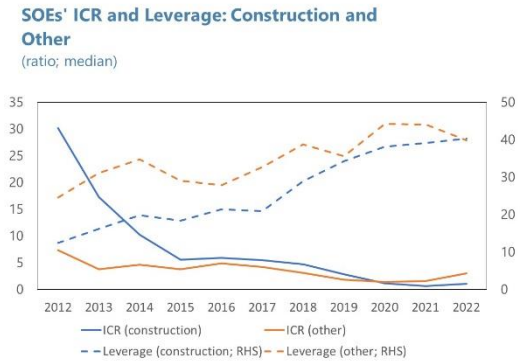
Figure 9. Indonesia: Corporate Sector Developments

Interest coverage ratios (ICR) have improved.

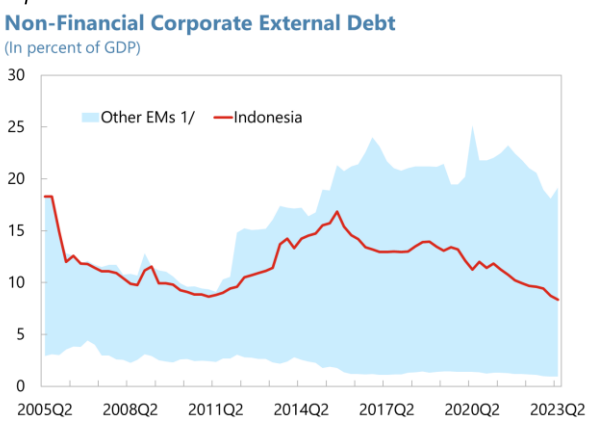


Sources: Capital IQ and IMF staff estimates.

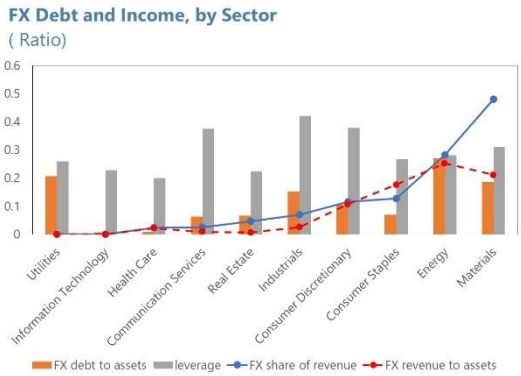
For construction SOEs, leverage has risen and ICRs have fallen.



Corporate external debt to GDP has declined…



…while external borrowers tend to have natural hedges.



Sources: Capital IQ, IMF, Systemic Risk Tracker, and IMF staff calculations.
[1] Argentina, Brazil, China, India, Malaysia, Mexico, Philippines, Russia, South Africa, Thailand, and Turkey.

- **Banks' exposure to corporates, large SOEs and MSMEs is high.** Bank lending to large corporates and MSMEs is at about 40 percent and 20 percent of total loans, respectively. MSME and SOE loans also account for a high share of restructured loans, at about 25 and 17 percent of total corporate loans. COVID-sensitive and structurally weak sectors, such as the construction, accommodation, processing, and wholesale industry, also carry higher NPL ratios.

[6] The definition of zombie firms follows Albuquerque and Iyer (2023), and is based on three balance sheet indicators that aim to capture firms likely in financial distress and persistently unprofitable: (i) ICR below one; (ii) leverage ratio above the median firm in their industry; and (iii) negative real sales growth. To qualify as a zombie firm, the three criteria have to be met for at least 2 consecutive years.

- **Forbearance measures may have delayed NPL recognition.**[7] This underscores the importance of a timely and full recognition of NPLs and intensified scrutiny on restructured loans. Scrutiny could be further strengthened by the expiration of the OJK's forbearance program in March 2024 and a well-defined bank forbearance policy aligned with the concept of borrowers' viability going forward. Such efforts will also limit the risks of zombie firms persisting, which may otherwise hamper macroeconomic performance (2024 Indonesia Article IV staff report).

- **Structurally weaker small banks, given their higher funding costs and lower portfolio diversification.** There are notable variations of capital and profitability across banks depending on their size and business model. This is reflected in wider distribution with fatter tails in various capital, NPL and profitability indicators for these groups (Figure 10).

- **Tighter sovereign—bank nexus.** The increase in banks' holdings of government bonds has tightened the nexus between the sovereign and banks (Figure 11). To reduce the impact of rising interest rates on mark-to-market losses, banks rebalanced their portfolio by shifting the portion held in fair value to amortized cost (43 percent of debt securities). The average duration of sovereign debt securities held by banks is around 3.5 years and those for corporate securities is around 2.4 years. Concentrated bank lending to state-owned companies further intensifies the sovereign- bank nexus. Banks' exposure to SOE loans is high at 7 percent of total loans, and is higher for state-owned banks at 8 percent. Importantly, 40 percent of the top 20 corporate loans of the state-owned banks are granted to SOEs, suggesting concentrated SOE lending.

- **Indonesia is exposed to climate change physical and transition risks.** Indonesia is vulnerable to natural disasters, such as floods, droughts, tropical cyclones, and landslides (Figure 12, panel 1), having experienced almost 300 climate-related natural disasters over the past 3 decades—affecting more than 16 million people (Figure 12, panel 2). With global temperatures rising, the severity of such events is expected to rise. Indonesia is also exposed to risks from the transition toward a carbon-neutral economy. Primary energy supply is heavily dominated by fossil fuels with coal alone fueling more than 50 percent of electricity generation. Indonesia is also a major exporter of fossil fuels—according to the US Energy Information Administration (EIA)[8] it was the world's largest exporter of coal and the seventh-largest exporter of liquefied natural gas in 2020 (Figure 12, panel 3). Transition risks could in turn affect Indonesia's banking system, which is heavily exposed to carbon intensive firms (Figure 12, panel 4).

[7] The pandemic-era forbearance measures were removed at end-March 2024.

[8] https://www.eia.gov/international/overview/country/IDN.

Figure 10. Indonesia: Bank Variation by Size and Ownership

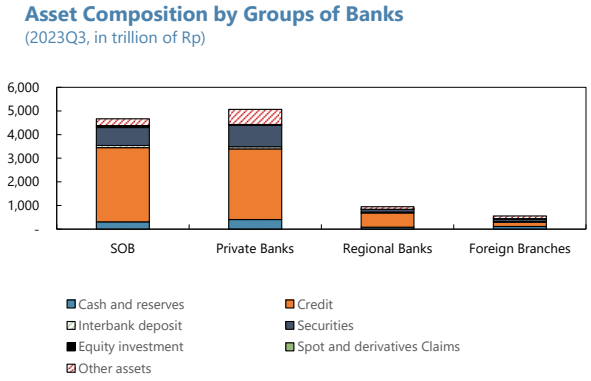
(In percent)

Sources: Bank Indonesia, OJK, and IMF staff.

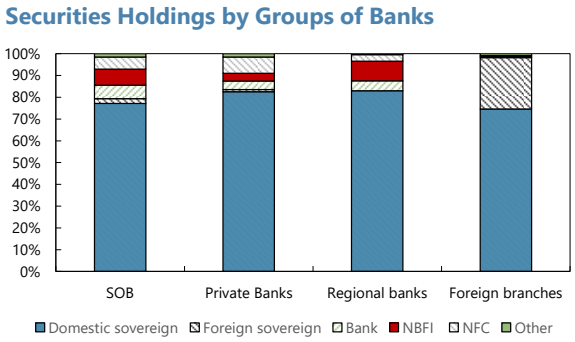
Note: KBMI1 denotes banks with a core capital of up to IDR 6 trillion; KBMI2 denotes banks with a core capital of between IDR 6 trillion to IDR 14 trillion; KBMI3 denotes banks with a core capital of between IDR 14 trillion to IDR 70 trillion and KBMI4 denotes banks with a core capital of more than IDR 70 trillion. Out of four banks in KBMI4, three are state-owned banks.

Figure 11. Indonesia: Bank-Sovereign Nexus

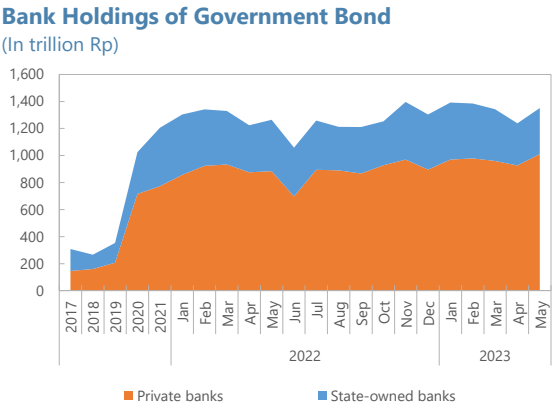
Composition of liquid assets by groups of banks (private/State owned).



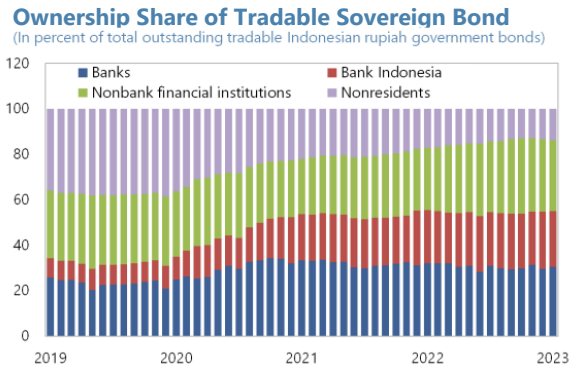
Sovereign exposure by groups of banks.



Bank holdings of government bond over time.



Ownership structure of sovereign securities.

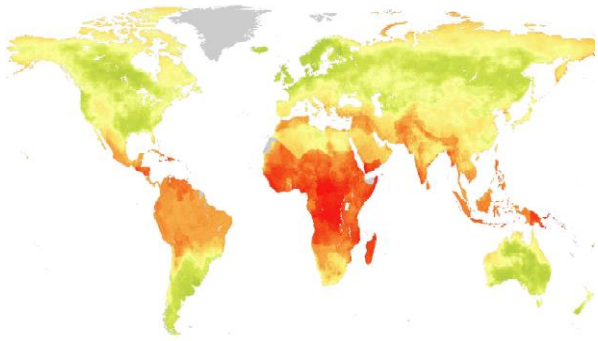


Sources: Bank Indonesia, OJK, and IMF staff.

Figure 12. Indonesia: Physical and Transition Risks

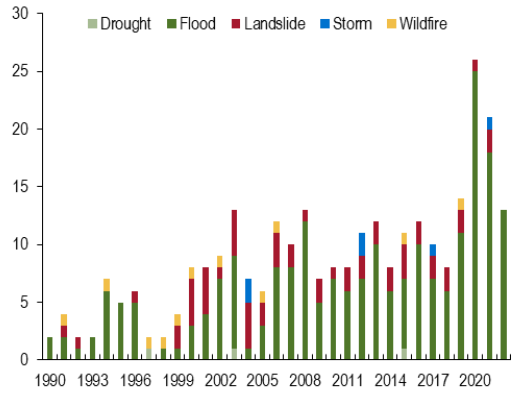
Overall vulnerabilities from climate change physical risks for Indonesia are high…

Climate Change Vulnerability, 2023Q3
(Index)



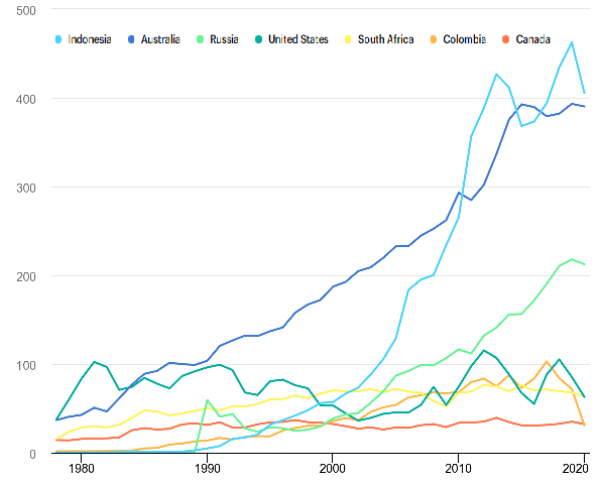
…and the number of climate related natural disasters.

Climate Related Natural Disasters, 1990-2022
(Number)



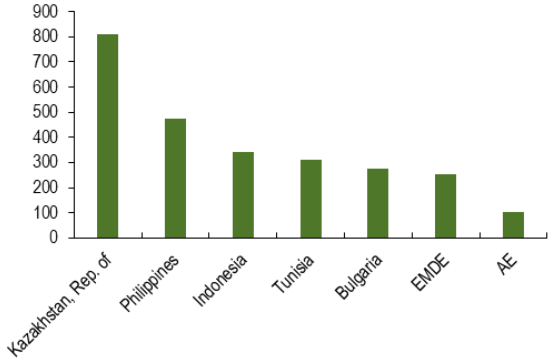
Indonesia is one of the world's largest exporters of coal, exposing it to changes in international climate policies…

Total Coal Exports by Country, 1978-2020
(Mt)



…with Indonesia's banking system already heavily exposed to loans to firms with high carbon emissions.

Emission Intensity of Bank Loans by Country, 2018
(Tons CO2/Million $US)

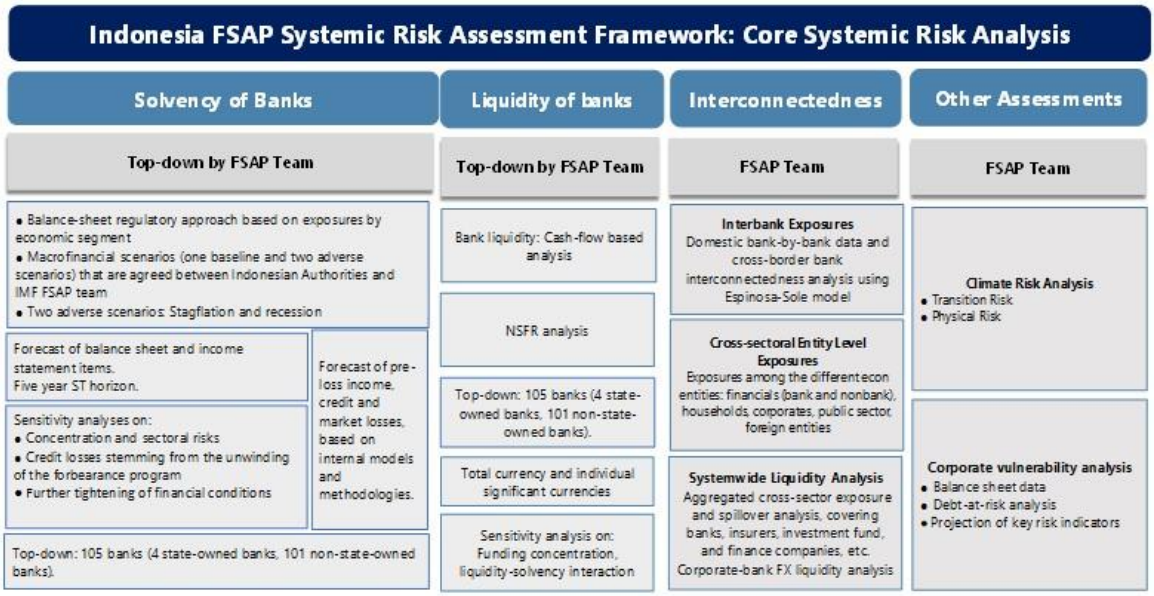


Sources: EM-DAT, IEA, IMF Climate Change Dashboard, Verisk Maplecroft, and IMF staff calculations.
Note: Panel 1 shows the Verisk Maplecroft Climate Change Vulnerability Index which evaluates the susceptibility of human populations to the impacts of climate extremes and changes in climate over the next three decades. The index score is presented on a scale of 0-10 were 0 represents highest risk and 10 represents lowest risk. The risk categories in the map are: extreme (red, score 0-2.5), high (orange, score 2.5-5), medium (yellow, score 5-7.5), low (green, score 7.5–10)

B. Risk Analysis Framework and Macrofinancial Scenarios

15. The FSAP assessed systemic risk in Indonesia using several scenarios and a comprehensive set of quantitative tools (Figure 13). Using supervisory and commercial data, the FSAP performed banking sector solvency, liquidity, interconnectedness, corporate sector solvency and system-wide liquidity analysis. Contagion analysis explored risk transmission channels among banks and between nonbanks and banks. Climate risk assessment was done jointly with the World Bank.

Figure 13. Indonesia: Approaches to Systemic Risk Analysis



Source: IMF staff.

16. Scenarios featured severe realizations of key risks. The baseline scenario follows the October 2023 WEO projection (Figure 14). The two adverse scenarios[9] are complementary as the stagflation scenario entails a structural change of the domestic economy whereas the recessionary scenario features a transitory and cyclical shock with a quicker rebound:

- The stagflation scenario entails a resurgence of COVID-like lockdown in the first year compounded by the escalation of geopolitical tensions with resulting disruptions in trade, remittances, FDI and financial flows, leading to persistently high inflation, lower global demand, and a decline in commodity prices. Monetary policy responds by tightening, which reduces domestic consumption and asset prices, raising firms' cost of funding and unemployment rate.

[9] The stress scenarios are hypothetical simulations of severe conditions, not representing forecasts. These scenarios typically assume no policy beyond adjustments to the policy rate, to assess the system's vulnerability to various shocks. The severity in terms of impact on a real GDP growth of the stagflation (recessionary) scenarios is closely aligned with a 5 percent Growth-at-Risk estimate, implying 15 (14) percent or 2.6 (2.4) standard deviation shock to real GDP growth relative to the baseline, and 6 (5) percent decline relative to the starting point over a two-year horizon.

- The recessionary scenario features a global, synchronized recession triggered by both global and idiosyncratic risk factors leading to systemic financial instability with sharp swings in risk premia, a fall in domestic demand and asset prices, and rising unemployment rate. Monetary policy responds by relaxing policy rates. (See also the Risk Assessment Matrix in Table 5.)

Figure 14. Indonesia: Macroeconomic Scenarios

(In percent unless otherwise noted)

Stagflation and Recessionary Scenario

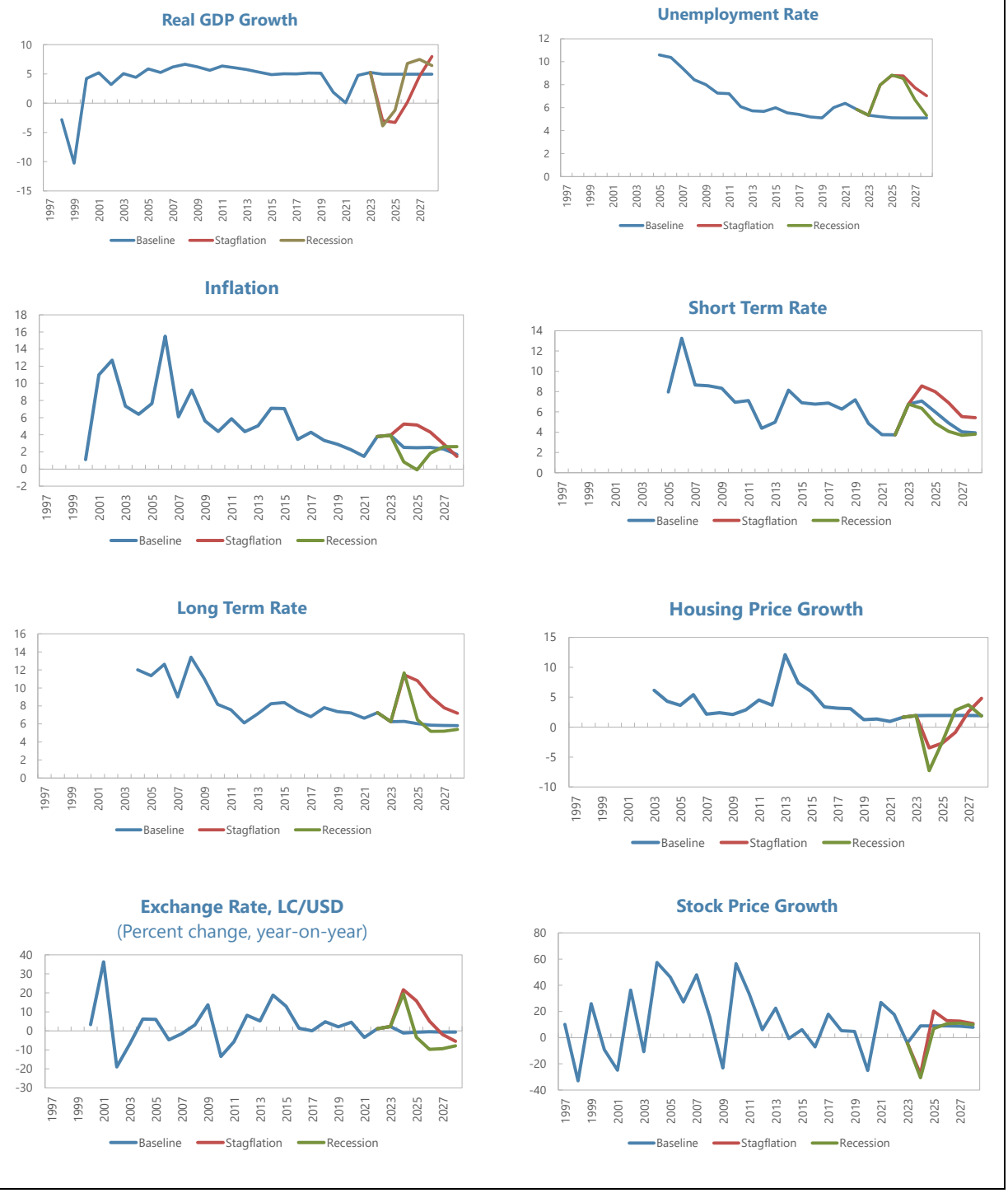
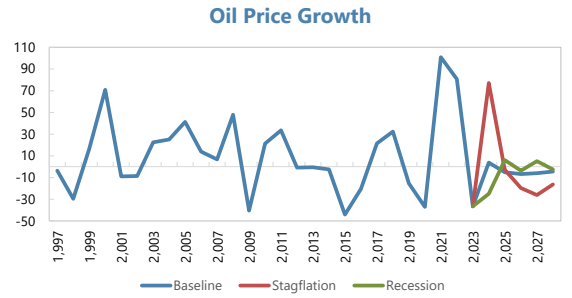
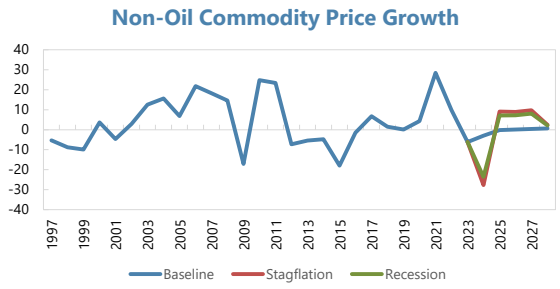


Figure 14. Indonesia: Macroeconomic Scenarios (Concluded)





Source: IMF staff.

C. Results of Risk Analysis

Banking Sector Risk Analysis

17. Results of the scenario-based bank solvency stress test confirms the sector's resilience to severe macroeconomic shocks, while revealing a higher impact on small banks (Figure 15). In the baseline scenario banks maintain strong capital positions. Large state-owned banks outperform small banks with strong capital accumulation supported by high profitability. Small banks[10] are affected by lower interest margins and higher operating cost, initial effect from credit[11] and market losses and an increase in RWAs due to balance sheet growth. Under the stagflation scenario, the fully loaded CET1 ratio[12] declined by about 5 percentage points. The capital impact under the recession scenario appears to be more benign as CET1 ratios decline on average by 2.6 percentage points. Under both adverse scenarios, only a small number of banks (9 in the stagflation scenario and 6 in the recession scenario), fall below the CET1 hurdle rates,[13] with the asset share ranging from 2.9 to 7.4 percent of total banking system assets, and capital shortfall from 0.2 to 0.3 percent of GDP.[14] The capital declines under the adverse scenarios are mostly driven by credit losses, followed by market and interest rate risks, and RWAs due to rising credit risks.

[10] There are some small banks that already had negative profits and high cost to income structure at the starting point of the stress test which contributed to additional losses across all scenarios.

[11] The exercises identified gap between the actual impairment and the estimated impairment based on NPL flows via the back-testing approach, hence the team made a starting point adjustment by allocating the gap into each portfolio based on their NPL share for each bank, constantly over the 5-year horizon. See technical note on systemic risk analysis for further details.

[12] Defined as capital ratios in absence of transitional arrangements.

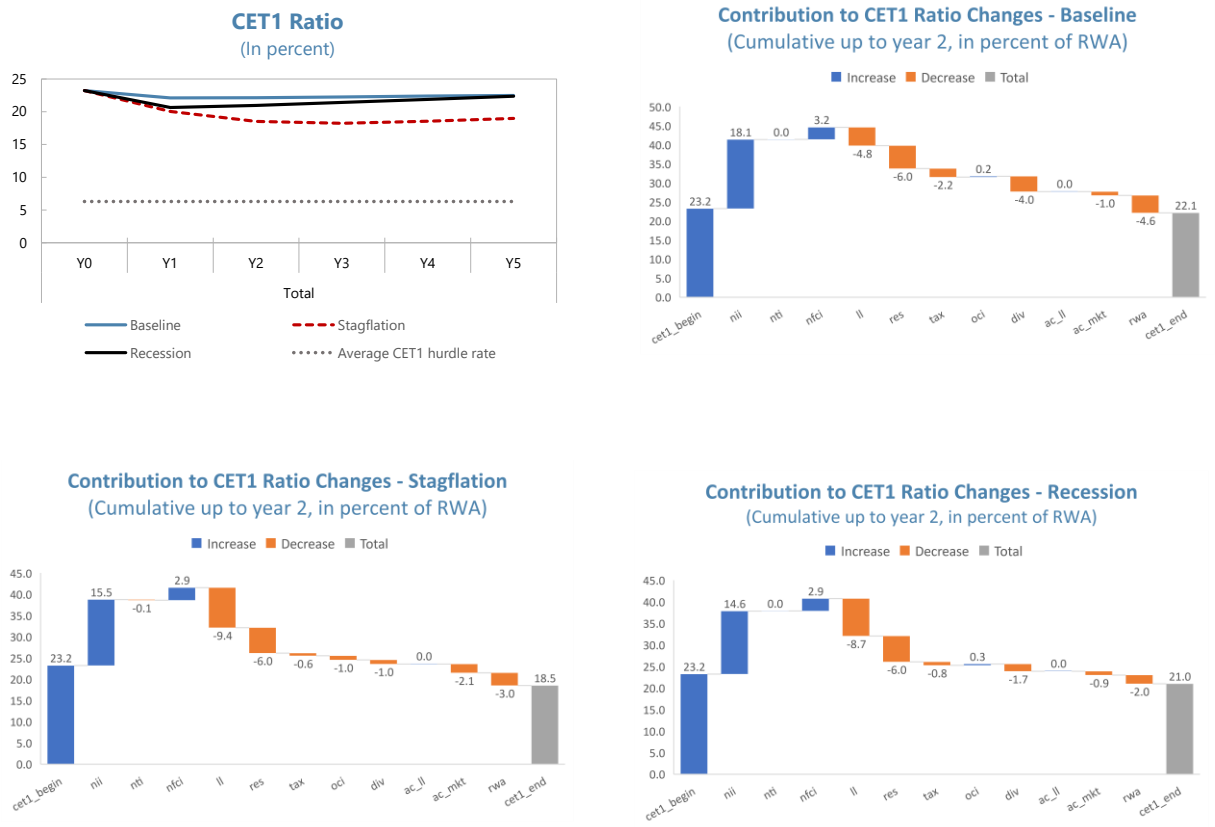
[13] CET1 hurdle rates are bank specific and composed of minimum CET1 ratio (4.5), plus capital conservation buffer, bank specific D-SIB buffer and Pillar II surcharge. Banks are allowed to use capital conservation buffer under stress.

[14] The scenario-based stress test considers a full repricing of the securities booked under the Amortized Cost category. Without such effect, the aggregated CET1 ratio under the adverse scenario would be improved by about 120 and 30 basis points in the first year and over the five-year horizon, respectively, without significant changes in the number of failing banks.

18. Sensitivity tests reveal that (Figure 16):

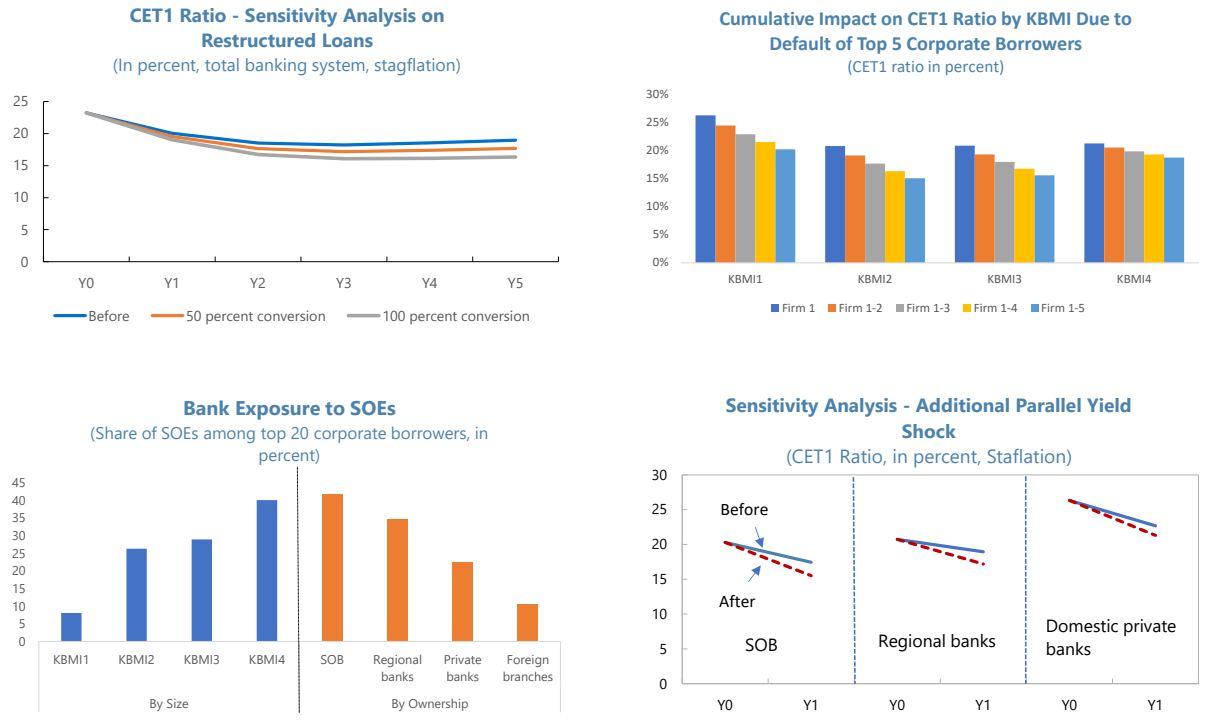
- The impact on CET1 capital ratios of a potential credit deterioration of the restructured loans is so far broadly contained but warrants close monitoring as the OJK's forbearance measure unwinds.
- Banks are resilient under the simultaneous default of the top five corporate loans, however large exposures to state-owned companies appear to be higher for state-owned banks.
- A 400-basis point parallel upward shift of interest rates on top of the stagflation scenario leads to an additional capital depletion of about 1.7 percentage points.

Figure 15. Indonesia: Results for the Solvency Risk Stress Tests



Source: IMF staff.
Note: Foreign branches are not subject to capital ratio requirement and thus excluded in the results. nii = net interest income, nti = net trading income, nfci = net fees and commission income, ll = loan impairment, res = residual, oci = other comprehensive income, div = dividend, ac_ll = credit impairment for AC securities, ac_mkt = fairvalue impact on AC securities, rwa = risk-weighted assets.

Figure 16. Indonesia: Results from Sensitivity Test Analysis



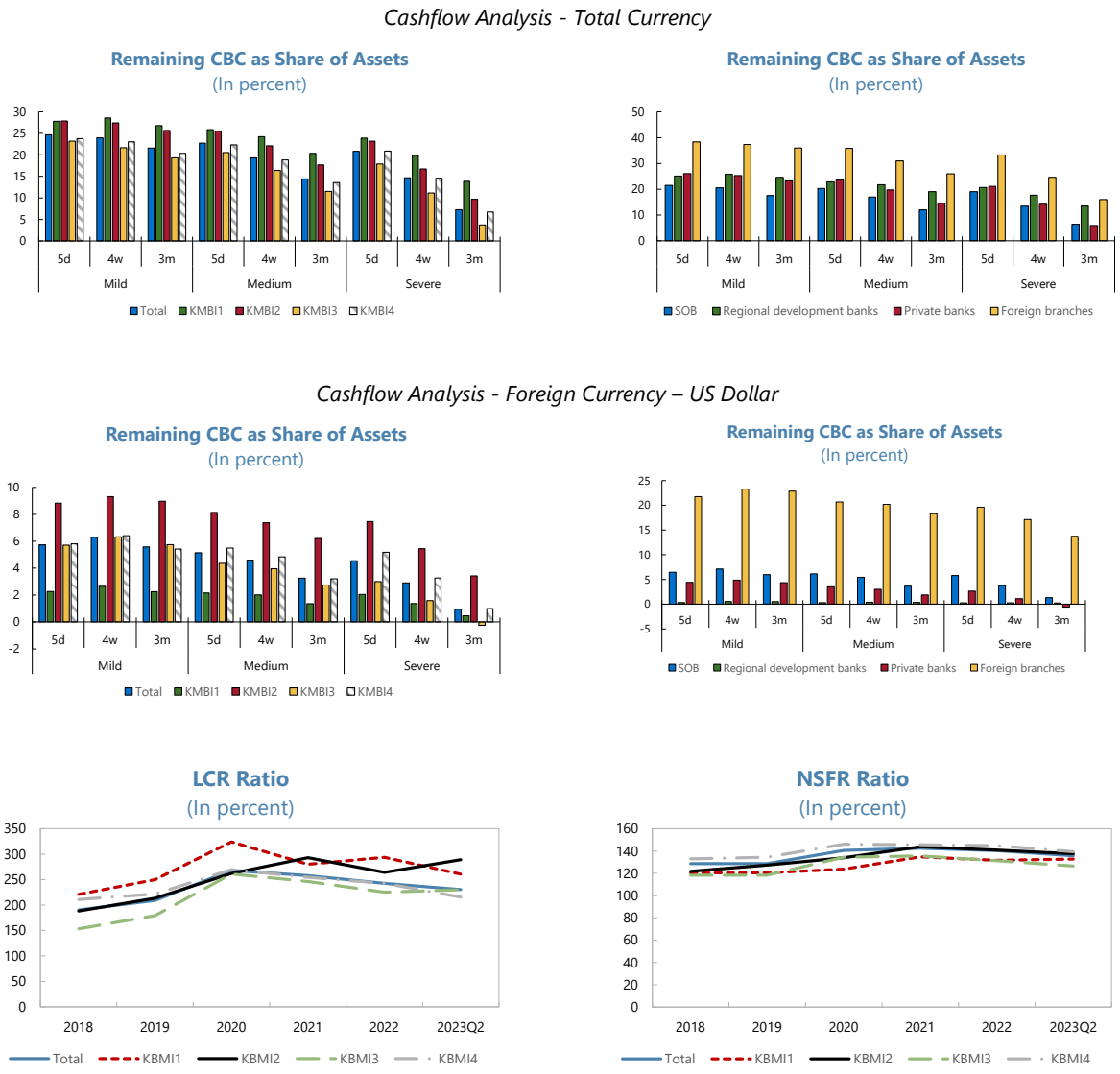
Sources: OJK and IMF staff.

19. Banking sector liquidity risks remain low due to high LCR and NSFR ratios, however funding concentration in small banks appears to be significant (Figure 17). While systemwide LCR and NSFR ratios are high, they are not collected and monitored for small banks, which are not subject to these requirements. Funding concentration varies across banking groups, with regional banks more exposed to large funding withdrawals from financial corporations and public entities.

20. Cashflow liquidity analysis confirms overall resilience of the banking system to severe liquidity shocks over the short-term horizon. At the individual bank level, the share of assets of banks experiencing liquidity shortfalls appears to be small at only 0.2 percent of total assets up to 30 days. The banks with negative counterbalancing capacity are mostly small- and medium-sized banks. The size of the liquidity shortfall relative to total assets is also small at only around 0.3 percent.

21. Outflows are mainly driven by wholesale deposits from corporates, banks, and NBFI entities, and more so in the uninsured segments. For total currency, deposits from corporate entities and NBFIs contribute to about 6 and 4 percentage points of the changes in the CBCs as a share of total assets, followed by undrawn credit lines and retail deposit at 3.5 and 2.2 percents, respectively (Figure 18). Uninsured deposits, subject to a higher outflow rate, contribute to about 9 percentage points of the CBC changes across all deposit types, higher than insured deposits at about 1.3 percentage point.

Figure 17. Indonesia: Result for the Liquidity Risk Analysis



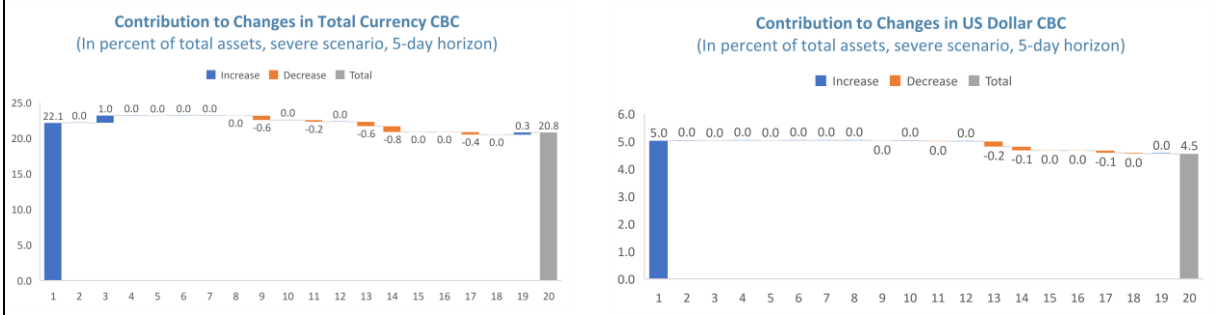
Source: IMF staff.

22. FX Liquidity shortfalls are broadly contained due to limited FX exposures on banks' balance sheet. The system-wide post-shock CBCs remain positive up to a 3-month horizon. At the individual bank level, the share of banks facing liquidity shortages is 47 percent if measured by total asset by the 3-month horizon. However, the size of CBC shortfall remains manageable at 0.7 percent of total assets. Limited dollarization of around 12 percent of loans and 15 percent of deposits helps. Nonetheless, the higher share of banks experiencing liquidity strains underscore the importance of

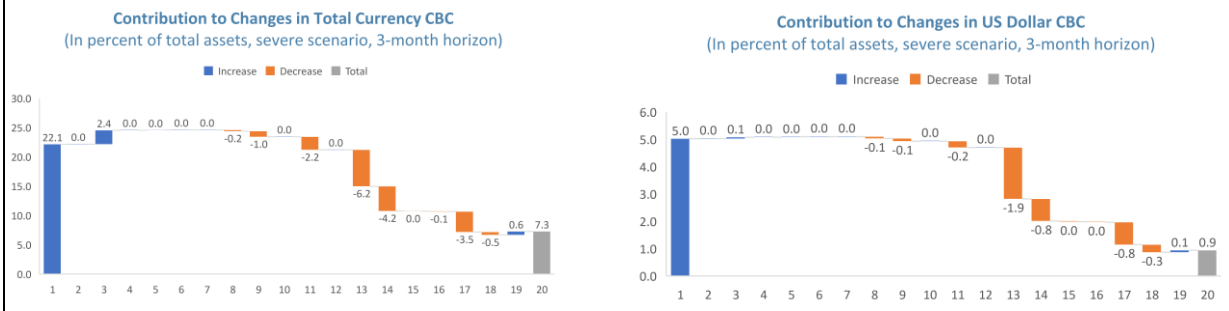
continued monitoring of foreign currency liquidity conditions to promptly identify potential liquidity gaps across all banks over the short- and medium-term horizon.[15]

Figure 18. Indonesia: Contribution to Change in CBCs
(In percent of total asset)

5-Day Horizon



3-Month Horizon

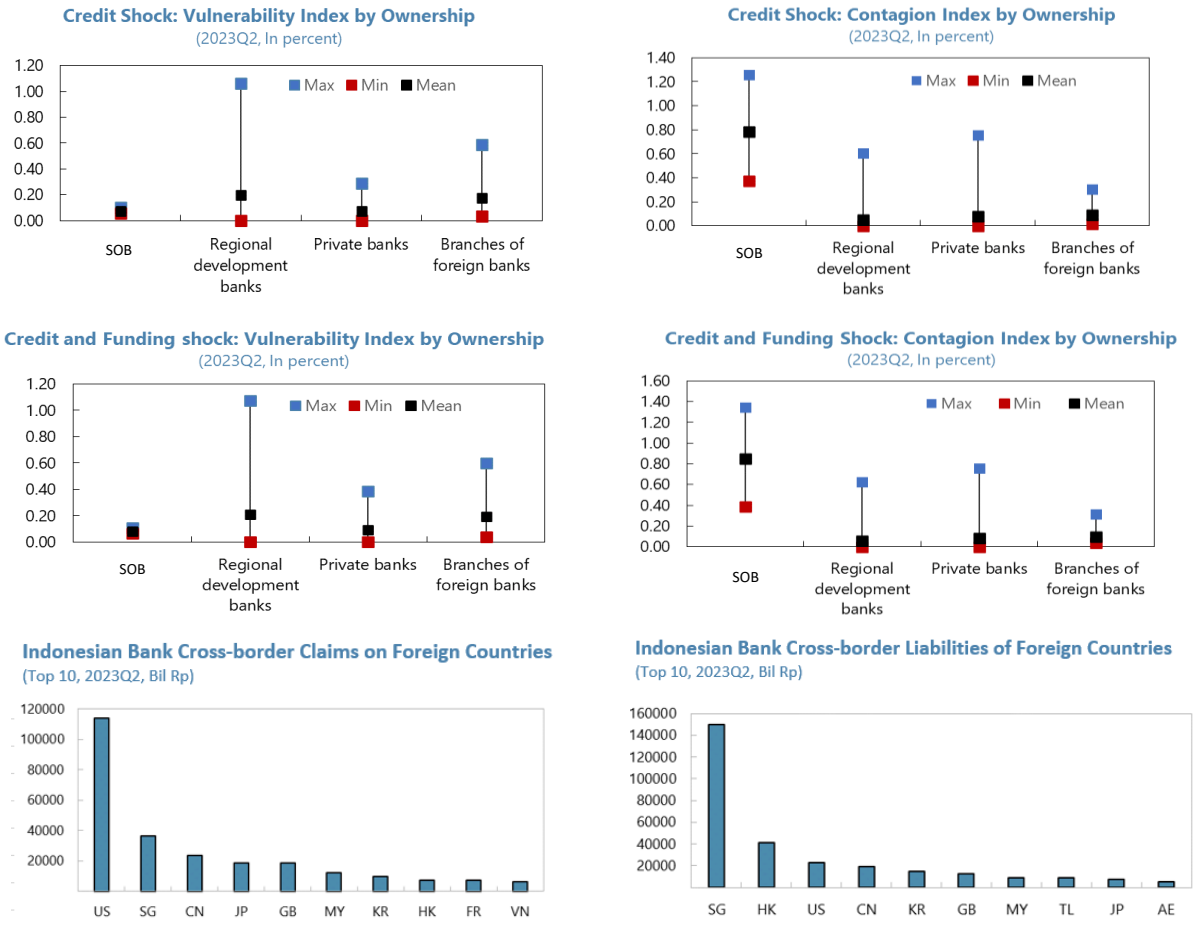


Source: IMF staff.
Note: 1= Beginning CBC, 2= Other Maturing Mutual Fund, 3= Maturing secured lending, 4= Maturing loans, 5= Inflows from derivatives transactions, 6= Interest income, 7= Other contractual inflows, 8= Own securities issuance due, 9= Due secured borrowing, 10= Securities owned by Bank obtaining after secured borrowing due, 11= Customer deposits - individuals, 12= Customer deposits - Nonfinancial legal entities - Qualifying SMEs, 13= Customer deposits - Nonfinancial legal entities - Other entities, 14= Other deposits and unsecured borrowing, 15= Outflows from derivatives transactions, 16= Interest expense, 17= Undrawn committed credit/liquidity lines, 18= Other contractual outflows, 19= CBC flows, 20= Ending CBC.

23. The potential contagion through domestic or cross-border exposure channels appears limited, albeit with a high heterogeneity across different types of banks (Figure 19). The domestic interbank positions are small, especially compared to banks' capital. The SOBs are the least vulnerable to inward spillovers, yet due to their size exhibit the highest contagion effect. The cross-border analysis reveals an interconnection between the Indonesian banking sector and the global banking system, particularly with Asian economies, such as Singapore, China, Japan, Hong Kong, and the United States, but contagion is still limited due to limited cross-border exposures and small size of the Indonesian banking system.

[15] Currently, the BI does not accept collateral denominated in FX to provide FX liquidity to banks. There are however several alternative options for the banks to receive needed FX liquidity from the market, such as FX money market, FX repo transactions, and FX swap transactions. Besides that, banks could also issue bonds in FX.

Figure 19. Indonesia: Results for Interconnectedness and Contagion Analysis



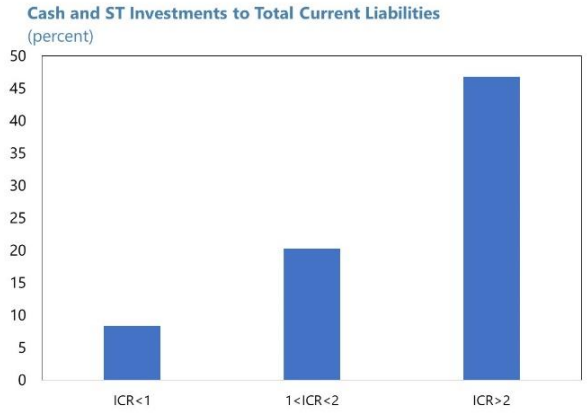
Sources: Supervisory data, Bank for International Settlement, and IMF staff calculations.
Note: The Index of vulnerability is the percentage loss at a single institution due to the default of all other institutions. The index of contagion corresponds to the average percentage of loss of other banks due to the failure of a given bank.

Corporate Vulnerability Analysis

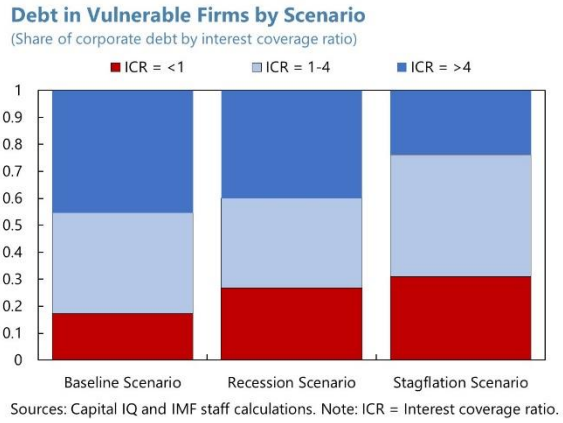
24. Corporate vulnerabilities have declined since the pandemic, but vulnerabilities remain. Debt-at-risk, measured by debt held by firms with ICR less than 1, is estimated to have risen from 13 percent in 2019 to 35 percent in 2020, before declining to about 19 percent in 2022. Small firms have higher shares of debt-at-risk than larger ones. Simulations point to significant deterioration in debt servicing capacity under the recession and stagflation scenarios, with debt-at-risk rising by 10 and 14 percentage points respectively (Figure 20). With cash buffers for at-risk firms already at low levels, such a shock could impair corporates' capacity to service their debt.

Figure 20. Indonesia: Current Corporate Cash Buffers; Debt at Risk in Stress Scenarios

Firms with low ICRs had lower cash buffers in 2022.



Adverse shocks could significantly raise debt at risk.



Sources: Capital IQ and IMF staff calculations. Note: ICR = Interest coverage ratio.

Sources: Capital IQ and IMF staff calculations.

System-Wide FX Liquidity Analysis

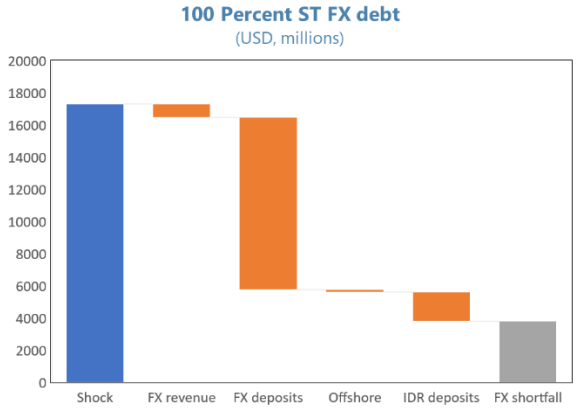
25. Indonesian corporates have significant amounts of FX debt, yet the systemwide liquidity analysis highlights overall resilience to an FX liquidity stress. As of end-2022, Indonesian corporates had about 161 billion USD of external debt, 30 billion of which was short-term, and an additional 59.5 billion USD of domestic borrowing in foreign currencies.[16] NFCs hold about 52 billion USD in FX deposits in the domestic system, indicating significant sectoral capacity to meet external rollover pressures for short-term debt by drawing on domestic liquid assets. At the same time, the banking system's FX CBC stood at over 40 billion USD, indicating significant scope to meet corporate deposit outflows.

26. The stress tests on corporate FX debt service vulnerabilities point to significant systemwide and institutional resilience, especially if pockets of strain are managed by redistributing remaining FX liquidity. In the stress test, firms experience FX debt rollover shocks, which they must meet through a combination of FX revenue, offshore and/or domestic FX, and IDR deposits. Some firms have FX shortfalls after exhausting their FX incomes and deposits (Figure 21, left). However, except for the most extreme scenarios, there remains enough FX liquidity in the banking system to close such gaps through new financing (Figure 21, right). Some smaller banks may face FX liquidity shortfalls in severe to extreme shocks.

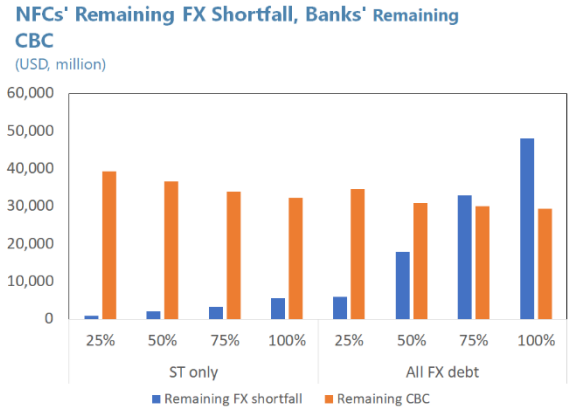
[16] Aggregate statistics shared by authorities, based on datasets of listed and non-listed firms.

Figure 21. Indonesia: Systemwide FX Liquidity Stress Test
Based on proportional shock to NFCs' FX debt

FX deposits cover large share of firms' refinancing need.



Banking systems' remaining FX CBC could cover firms' shortfalls, except in the most extreme shock scenarios.



Sources: Capital IQ, company annual reports, BI, and IMF staff calculations.
Note: Scenarios assume various percentages of NFCs' short-term or total outstanding FX debt needs to be refinanced within 1-month. The assumed pecking order is NFCs first use estimated monthly revenue (haircut of 50 percent), then domestic FX deposits, then domestic IDR deposits, with any remaining gap reported as an FX shortfall (e.g., left chart for scenario with 100 ST debt needing to be rolled over). For banks, assume zero FX liquidity inflow to increase counterbalancing capacity over the stress period. The right chart reports, for each stress scenario, whether enough FX CBC remains in the banking sector to meet NFCs' shortfall through potential new loans.

Climate-Related Risk Analysis

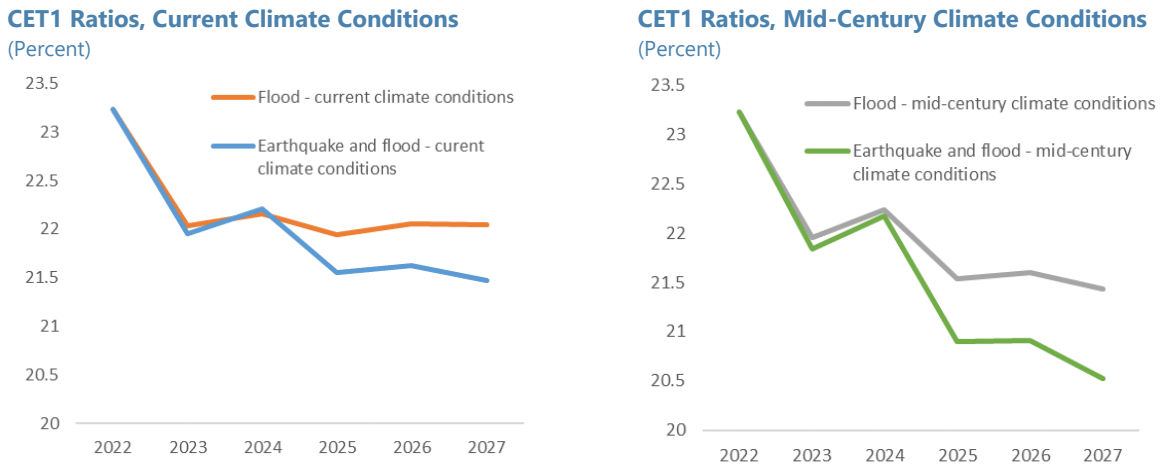
27. Under current climate conditions, the financial stability implications from physical risk appear modest. In the case of Indonesia, the main drivers of capital losses of banks due to physical risk shocks are a decline in growth and asset prices following the shock, and to a lesser extent the reaction of interest rates. While the economic damages across scenarios can be severe, the impact on the banking system is generally modest, with capital ratios declining by a maximum of about 2 percent in the most severe compound earthquake and flood scenarios (Figure 22, panel 1). However, the analysis does not capture geographical heterogeneities in the estimation of the macroeconomic and financial impact, which could also result in heterogeneity of impact among banks. Especially banks with regionally concentrated loan portfolios could be vulnerable to regionally concentrated shocks.

28. The FSAP analysis also considered hypothetical scenarios under future climate conditions representative of medium/high emissions pathway.[17] Climate change has the potential to worsen the frequency and severity of physical risk events. The distribution of extreme

[17] The modelled scenarios were designed to correspond to climate conditions under a medium-to-high emissions pathway. Due to differences in the emissions pathways used in modelled estimates from the literature, it was not possible to directly use model results for a consistent set of representative concentration pathway (RCP) scenarios. Instead, results were estimated for a medium-to-high emissions pathway (broadly consistent with RCP6.0 or RCP7.0) using the estimates from the scenarios used in the available literature.

events under future climate change conditions by the middle of the century was considered, based on evidence in the available literature. Under these hypothetical scenarios the impact on the banking system could be more substantial, especially for compound scenarios (Figure 22, panels 2).

Figure 22. Indonesia: Results for Climate Change Physical Risk Analysis



Source: IMF staff calculations.

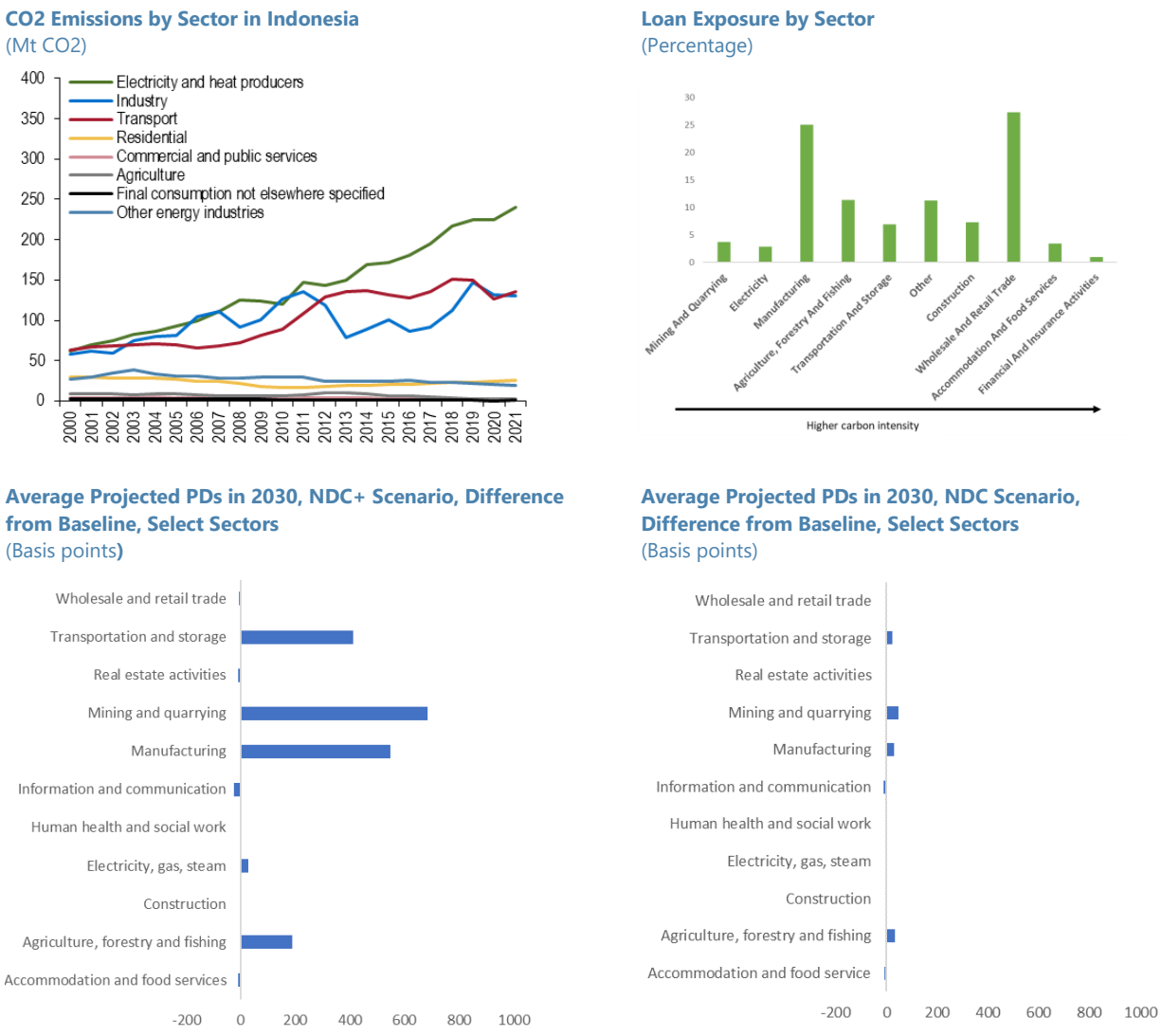
29. Climate-related transition policies could have implications for the financial sector.[18] Indonesian banks have sizable credit exposures to economic sectors vulnerable to transition (Figure 23, panels 1 and 2). The analysis suggests that default risks of firms in transition-sensitive sectors increase substantially only in the NDC+ scenario with a very ambitious carbon tax (US$200/tCO2 by 2040). In this scenario, the probabilities of default in some carbon intensive sectors increase by up to

[18] Following the scenario design of the Network for Greening the Financial System (NGFS) database and the World Bank's Country Climate and Development Report (CCDR), the FSAP considered three main transition scenarios for Indonesia:

- Redirection of electricity & fuel subsidies. Elimination of electricity and fuel subsidies, with no additional energy and land policies. Government consumption is assumed constant. Two alternative uses of the savings from elimination of subsidies are considered. Firstly, the savings is used to compensate the households at the bottom 40 percent of the income distribution. Secondly, the savings are used to finance a rise in public investments.
- Nationally Determined Contribution (NDC). This scenario includes all pledged policies, even if they have not been implemented yet. This includes, the elimination of electricity and fuel subsidies, energy policies, land policies and a carbon tax that reaches US$40.00/tCO2eq by 2040. Energy policies includes the Green RUPTL (Electricity Supply Business Plan). Land policies include forest and peatland restoration measures that have potential benefits in terms of reduced losses due to fires and improved health impacts. The carbon tax is applied to all sectors and greenhouse gas emissions except for agriculture. The tax is gradually phased in. Revenues from the carbon tax are used for investment–including in low-carbon equipment. It is assumed that replacing stranded fossil fuel assets accounts for 25 percent of the new investment.
- Nationally Determined Contribution Plus (NDC+). This scenario includes all the actions from the NDC scenario, but with a much higher carbon tax rate, reaching US$200/tCO2 by 2040. This is a more ambitious scenario that would involve higher net costs for Indonesia. To help compensate for the costs, a sensitivity analysis is added to this scenario with an increase in foreign investment that is equivalent to 1 percent of GDP throughout the projection period (NDC+ FDI).

700 basis points by 2030 (Figure 23, panel 3). In the other, less severe scenarios, the impact appear to be small (Figure 23, panel 4).

Figure 23. Indonesia: Results for Transition Risk Analysis



Sources: IMF and WB.

30. The analysis and results should be regarded as exploratory and interpreted with caution given the uncertainty associated with the scenarios and modelling approach. Both the transition and physical risk analyses are subject to various assumptions and data and model limitations. Further analysis and better data are needed to explore the sensitivity of the results. While the analysis relied on standard stress testing methodologies, it is not a standard stress test and is not focused on quantifying capital needs of the financial sector given the various challenges and the exploratory nature of the exercise.

31. The climate risk analysis highlights potential vulnerabilities from climate-related physical and transition risks. To better monitor these risks, the authorities should further develop

internal capacity and models for climate risk analysis, improve data collection, offer more detailed methodological guidance to financial institutions, and enhance the collaboration among government agencies on climate risk analyses.

FINANCIAL SECTOR OVERSIGHT

32. The OJK is responsible for microprudential as well as conduct supervision of the financial sector, while the BI focuses on macroprudential policies for the banking sector. Given the structure of the financial system in Indonesia—the presence of financial conglomerates and the push towards financial deepening and innovation—the change in the supervisory architecture by enacting the Financial Sector Omnibus Law (FSOL) in 2023 is intended to achieve more effective oversight of the entire financial sector. Maintaining financial system stability is a shared responsibility among the Financial System Stability Committee (FSSK) members (the MoF, BI, OJK, and LPS).

A. Systemic Risk Oversight and Macroprudential Framework

33. The FSOL clearly defined the objectives of BI and OJK and delineated macroprudential and microprudential responsibilities at the sectoral level. BI has macroprudential responsibility for the banking sector while OJK has some sectoral powers for nonbank sectors. The designation of systemic NBFIs is with OJK. Both authorities assess the system and sectoral interlinkages. FSOL mandates OJK as the authority dealing with the NBFI sector. It will be important to strengthen the framework for nonbank financial institutions as financial deepening occurs, financial innovation accelerates, and the nonbank sector grows in importance and becomes more interlinked.

34. Systemic risk analysis is in line with international practice despite some data gaps that remain. BI uses indicators developed by the BCBS to examine potential vulnerabilities to the financial system. There are data gaps in the corporate sector analysis, however the authorities are supplementing limited data with surveys and outreach to industry organizations. BI and OJK conduct a joint stress test—both top down and bottom up. OJK is developing methods to analyze interlinkages between sectors.

35. During the COVID-19 pandemic BI relaxed many of its macroprudential measures; in contrast to many countries, Indonesia has not yet reverted to its pre-pandemic stance. The macroprudential intermediation ratio and liquidity ratio are now at pre-pandemic levels, but LTV limits are still accommodative. To support the recovery and inclusion, BI introduced the liquidity incentives and inclusive financing ratio, although the latter is a structural tool. (See Figure 24). The actions to boost credit have mainly been targeted at priority sectors—which are determined by several factors including the authorities' assessment of sectors' positive spillovers to the rest of the economy (e.g., to employment)—and MSMEs. The credit gap continues to close and bank lending standards—as measured by the lending standards—are looser than before the pandemic.

36. Most large banks hold considerably higher capital and liquidity levels than is required by regulation—suggesting many of the macroprudential measures are not binding for these institutions—and the accommodative stance does not pose near-term risks to financial

stability. Banks hold large levels of capital, which at an average of over 25 percent of Tier 1, is well above minimum requirements and add-ons required by Pillar 2. On average banks are holding around 20 percent of their assets as government securities when the required ratio is 5 percent. While the LTV limit is currently relaxed to 100 percent, banks have expressed limited appetite to lend at this level.

Figure 24. Indonesia: BI-Macroprudential Policy Tools

Instrument - Systemic risk tools	Setting
CCyB (Countercyclical capital buffer)	0 percent
Macroprudential liquidity buffer – effectively the level of government securities that banks must hold	5 percent (Sharia banks: 3.5 percent)_
Macroprudential intermediation ratio – an extended loan to deposit ratio	84-94 percent
LTV limit on housing and downpayment on cars	100 (LTV)/0 (downpayment) percent

Instrument – Inclusion tools aimed at directing credit to particular sectors[1]	Setting
Inclusive financing ratio—percentage of lending that should be lent to MSMEs and low-income individuals	30 percent on average for the sector—in line with the President's target
Liquidity incentives—reduction in reserve requirements for lending to sectors that have high impact on the economy including downstream sectors of mining and non-mining, housing, tourism, inclusivity and green.	Up to 400bps reduction in reserve requirements
Green incentive: LTV on green houses and downpayment on green vehicles	100/0

[1] We note that the "directed credit tools" are considered by BI to be part of their macroprudential toolkit hence their inclusion here.

37. Macroprudential policy should primarily focus on resilience and financial stability. Macroprudential policy pursues a three-pronged strategy: (i) financial system resilience; (ii) balanced and sustainable intermediation; and (iii) to promote inclusive and green financing. Inclusion and growth are not usual objectives of macroprudential policy—which should be focused on reducing sources of systemic risk or financial imbalances. BI have argued that all parts of their strategy build

financial stability in the long run—but this is an indirect effect of the policies of directing credit to specific sectors. Recent communication of macroprudential policy has focused on growth and credit supply. To an extent this reflects the conjuncture, as the economy is recovering from the pandemic and aligned with the policy stance of BI. BI has stated that in the early stages of the recovery it has adopted a policy mix whereby monetary policy is aimed at preserving price and exchange rate stability while its other instruments—including macroprudential policy in the context of contained financial risk—are pro-growth.

38. BI should remove the inclusive financing ratio and the liquidity incentives from the macroprudential tool kit. To the extent that it is constrained in the medium term by the legal objective for macroprudential policy at BI to promote inclusion and growth—with the long-term goal of improving financial stability, BI should consider separately grouping these two instruments to better clarify their primary function of promoting growth and inclusion, e.g., as "sustainable economic growth tools." Such a re-classification would be in line with BI's remit and policy mix where monetary, macroprudential and payment system tools work together to provide sustainable economic growth. The role of macroprudential policy in this overall BI remit should be limited to ensuring that these policies have safeguards or considering how these tools could help financial stability -for example by enhancing diversification in the banking system.

39. Given the large toolkit, BI should think strategically about how to use its tools and how frequently it wishes to adjust them. While BI's current policy is applied to the financial cycle in all its stages, frequent adjustments to manage time-varying risk can be costly and less effective if they are seen as temporary. Currently BI is researching the merits of a positive cycle-neutral rate for the CCyB—at the same time it should also consider using other instruments in a more preemptive manner. A more strategic use of the toolkit will increase the effectiveness and lower the potential economic cost—in terms of inclusion and growth—of building a resilient financial system. This is very timely with the plan to develop macroprudential policies with the FSOL mandate.

B. Banking Sector Supervision and Regulation

Conventional Banks

40. OJK has made substantial progress in updating its regulatory and supervisory frameworks since the last FSAP in 2017. The OJK has strengthened its regulatory framework, implementing the Basel III post-crisis reforms. The recently enacted FSOL enhances the OJK's institutional set-up, powers, banking regulations and supervisory framework. OJK has developed supervision capabilities and deployed innovative technologies (SupTech), particularly the automation of data collection and processing, to achieve greater efficiency in banking supervision.

41. OJK achieves good baseline supervision; building supervisory capacity and enhancing the supervisory framework is contributing to achieving higher supervision standards. OJK's risk methodology is structured, incorporates key banking risks, and allows for granular analysis of risk, risk management processes, corporate governance, earnings, and capital. A transition to an enhanced supervisory framework by improving the risk assessment methodology and its application, and better integrating certain elements (i.e., ICAAP, stress testing, D-SIBs, and recovery plans) will

enable the achievement of greater effectiveness in banking supervision. Namely, this will allow the OJK to i) examine banks' evolving business models to identify changing risk profiles early; ii) intensifying scrutiny in assessing corporate governance and risk management; iii) focus more attention to assessing a bank's risk culture, model governance and stress testing; and iv) effectively mitigate the risks associated with related party transactions and potential sources of concentration risks.

42. OJK's existing powers do not extend to require banks to report information regarding non-financial and unregulated entities within the broader group structure particularly relevant to financial conglomerates. OJK's has limited powers to collect data on unregulated entities within a group. The FSOL will enhance OJK's ability to collect the information, understand the complete structure of a group, monitor how risks are managed, and take actions.

43. It's crucial for legislation to recognize the safety and soundness of banks and the banking sector as the OJK's primary responsibility, given its broader mandates as well as reinforce OJK's independence. The primary legislation gives OJK broad objectives, including a clear commitment to financial stability, financial sector development, credit growth and consumer protection objectives. The recently enacted FSOL introduced several new responsibilities for the OJK and strengthened its powers, such as for banks' recovery, mergers and acquisitions and investigation. While the OJK prioritizes safety and soundness as its primary objective in banking supervisory practice, the primary legislation should make this explicit to minimize ambiguity and potential conflict between objectives. It is also important to enhance the independence of OJK from Government interference (an Ex-officio member, typically Vice-Minister of Finance, is part of the Board of OJK Commissioners). Additionally, legal protection for supervisors is crucial to carry out their roles effectively.

Islamic Banks

44. The banking system in Indonesia is a dual banking system, with Islamic banking growing in significance. As of July 2023, the share of Islamic banking assets of the total banking assets is 7.3 percent with a year-on-year growth rate of 13.6 percent. The 2023 Law regarding Developing and Strengthening of the Financial Sector established a clear obligation on Islamic banks to comply with Shariah.

45. The focused review of Islamic banking regulation and supervision found that:

- Better coordination of regulation between Islamic banking and conventional banking is needed.[19]

[19] The focused review of Islamic banking regulation and supervision in Indonesia was carried out against the five additional core principles (CP) specific to Islamic banking in the Core Principles for Islamic Finance Regulation (Banking Segment) (CPIFR). These principles serve as a supplement to the Basel Core Principles (BCP). The financial regulation and supervision framework for the Islamic banking sector must be compliant with the BCP, alongside the mentioned five principles specific to Islamic banking.

- Finalization of the Shariah governance regulation is important to clarify oversight accountability on Shariah governance implementation and effective management of Shariah non-compliance risks.

- Use of profit and loss sharing Shariah contracts needs further clarification and coherence, to address Shariah risk, operational, conduct and Displaced Commercial risks, and treatment of Profit-Sharing Investment Account (PSIA) upon liquidation/resolution.

C. Financial Integrity (AML/CFT)

46. The Financial Action Task Force (FATF) 2022 assessment of Indonesia's anti-money laundering and combating the financing of terrorism (AML/CFT) regime found that the legal framework is strong, and the overall effectiveness is mostly moderate. The assessment revealed a large majority of the FATF 40 Recommendations receiving "Compliant" and "Largely Compliant" ratings (6 Recs and 29 Recs, respectively), while all the Immediate Outcomes (IOs) of effectiveness were rated "Substantial" and "Moderate" (4 IOs and 7 IOs, respectively).

47. The 2022 mutual evaluation report (MER), highlighted areas requiring improvement to enhance effectiveness. The MER identified the need for the authorities to: i) strengthen risk-based supervision (RBS) of non-financial sectors as not all reporting entities were subject to this supervisory approach, ii) take a more robust approach on imposing sanctions for non-compliance issues identified to ensure they are fully dissuasive, iii) apply targeted financial sanctions for terrorist and proliferation financing related activities, an area identified continue to implement targeted financial sanctions without delay, and iv) continue to maintain accurate and updated ultimate beneficial owner (UBO) information.

48. The authorities, together with the FATF, established an Action Plan designed to address areas needing improvement. Indonesia became an FATF member in October 2023. Although commitment in implementing the action items was noted, going forward the authorities should continue to deliver and implement the necessary measures to further strengthen the overall effectiveness of Indonesia's AML/CFT regime.

SYSTEMIC LIQUIDITY, FINANCIAL CRISIS MANAGEMENT AND RESOLUTION

A. Systemic Liquidity Management

49. BI uses liquidity management to implement exchange rate policy and safeguard rupiah and financial market stability. Indonesia, in common with most countries in the current conjuncture, has a structural surplus of liquidity—i.e., reserve money claims of the commercial banks on BI exceed demand, such that BI needs to conduct Open Market operations (OMO) to drain excess liquidity.

50. Through the stressed COVID period and now, in the transition to 'normalization,' market liquidity appears to have been well managed and delivers on BI's goals. The framework

has relied in the context of a bank-dominated financial sector, on the ability of all banks to be able to interact frequently and directly with BI. Planned market developments will inevitably change the context and disrupt this framework, pointing to the need to address some infrastructure weaknesses and bolster the ability of the authorities to respond to any future liquidity shocks. As the NBFI sector grows in importance, the authorities will need to ensure that liquidity management by this sector is well supported, including by regulatory, tax and legal infrastructures, and that an appropriate safety net structure is in place. Against this background, BI will need to work with OJK and the government to preserve market stability in the transition to a more market-driven system.

51. The domestic money market, government securities market, and foreign exchange (FX) market are not fully developed, and there is some market segmentation. This helps to explain BI's frequent and broad interaction in the markets—in rupiah and FX, and across a range of maturities—both to deliver stability, to handle larger transactions that cannot be undertaken in the market, and to offset market segmentation.[20] BI has introduced a Primary Dealer (PD) system in the conventional money markets in 2024:Q1. Given the introduction of the Primary Dealers system, BI needs to ensure (i) that the disruption associated with the changes is minimized by appropriate sequencing (and addressing technical issues such as those inhibiting the use of repos); and (ii) that the implications of this for other policies—notably short-term exchange rate stability—are fully taken on board.[21]

52. BI will need to reduce the frequency and breadth of its interactions with the market in both rupiah and FX to achieve its market development goals. Importantly, this will involve a substantial reduction in the current ability of most banks to manage rupiah liquidity and FX positions via direct access to BI's OMO.[22] Some elements of market segmentation—between the conventional and the Islamic sectors—will inevitably remain, while other aspects of segmentation could persist for some time.

B. Crisis Management and Financial Safety Net

53. Since the last FSAP, Indonesia's financial safety net and crisis management framework for banks has improved significantly and agencies have operationalized their resolution and crisis management powers. The institutional framework relies on clear mandates and powers of the safety net agencies which coordinate their responsibilities in the Financial System Stability Committee (KSSK). Legal protection for management and staff of all safety net agencies has been strengthened. The authorities are in the process of finalizing provisions for implementing FSOL amendments through regulations and guidelines. Recovery and resolution plans as well as resolvability assessments have been finalized for all domestic systemically important banks (D-SIBs)

[20] Market segmentation can weaken monetary policy transmission, increase market reliance on the central bank, and inhibit market efficiency.

[21] BI conveyed the responsibilities for liquidity provision to PD banks, which BI is actively monitoring.

[22] In accordance with the BPPU 2025, BI has already initiated a reduction in the frequency and maturities of its OMO.

and are subject to regular updates.[23] Agencies conduct system-wide crisis simulations on a regular basis.

54. The resolution framework could be further improved to minimize risks to public funding. In principle, the framework gives the authorities a wide range of powers and tools to resolve a failing institution. However, certain powers could be misused to not let unviable banks fail and instead provide inefficient open bank assistance. For example, liquidity support granted to a bank under recovery by LPS raises questions of moral hazard; dilutes primary responsibilities of management and owners; and creates overlaps with OJK's supervisory mandate during the recovery phase. Banks with liquidity needs should instead rely on BI's Emergency Liquidity Assistance (ELA). Solvency support by LPS for banks in resolution in the form of temporary capital placements pose considerable risks to the balance sheet of the deposit insurance system (DIS); can generate conflict of interests between LPS's responsibility of running the DIS and its role as owner/creditor of its deposit-taking member institutions; and brings competition concerns vis-a-vis other privately-owned institutions. Therefore, such participation should be foreseen only as a last resort and subject to other safeguards (e.g., after shareholders and creditors have been fully written off).

55. Legal changes are needed to further align the safety net framework with international standards and best practice. A further alignment of Indonesia's resolution framework with the Financial Stability Board (FSB) Key Attributes could be accomplished by introducing resolution objectives, explicit powers to remove impediments to resolution detected in resolvability assessments, and a limited role for courts to review resolution decisions. A major gap, given the importance of financial conglomerates in the sector, is that the resolution powers are not applicable to them and these groups are not covered through recovery and resolution plans. In general, resolution plans could become more effective when drafted by the resolution authority, not the banks. In line with the International Association of Deposit Insurer's (IADI) Core Principles, LPS should work on reducing the payout timeframe to seven working days and limit set-off arrangements. Deposits from financial institutions and the government should be excluded from the scope of coverage. The implementing regulation for potential primary market purchases (and later sales) of government bonds by BI during future financial crises—as allowed for by the FSOL, should be in line with international best practices to minimize risks to central bank independence and price stability. Safeguards include ensuring that any such purchases are made voluntarily at the initiative of the central bank.[24]

FINANCIAL SECTOR DEVELOPMENT

56. Broadening and deepening financial markets and services is a multi-dimensional problem requiring concerted policy effort. Financial depth is increasing but remains below peers, and access to financial services can further improve. To broaden and deepen the financial sector, the authorities will need to focus on shortcomings and bottlenecks in existing regulation as well as

[23] With the issuance of FSOL, recovery and resolution plans are now required for all banks.

[24] Tobias Adrian; Christopher J. Erceg; Simon T Gray; Ratna Sahay "Asset Purchases and Direct Financing: Guiding Principles for Emerging Markets and Developing Economies during COVID-19 and Beyond," IMF, October 2021.

alleviating intermediation and competition constraints. Furthermore, policy will need to facilitate the emerging objectives of green growth and resilience.

57. The credit infrastructure needs to be strengthened. A credit reporting system strategy and improved oversight framework are needed, as the legal and regulatory framework is fragmented and insufficient. Alternative data and innovative credit scoring require a strong regulatory framework. Approving the draft secured transactions law, based on UNCITRAL, would address the current law's main deficiencies. The collateral registry faces several challenges, and the simplification of the registration process is a priority.

58. The regulators have adopted a balanced position of harnessing the potential of digital financial services (DFS) and fintech whilst mitigating risks. More broadly, the elements of the financial market infrastructure assessed demonstrate a high level of observance of international principles, with some areas for improvement. To increase development impact, the digital public infrastructure should be strengthened by expanding (direct) access to the fast payment system and building on the National Standard for Payment Open API for a comprehensive approach to open finance. OJK should continue strengthening the regulatory and supervisory approach to alternative financing models to ensure business resilience and consumer/investor protection. Authorities should develop adequate cooperation arrangements for the regulation and supervision of information technology-based financial services, consistent with FSOL.

59. Capital market remains shallow, with systemic policy-level reforms necessary to support long-term local currency financing. The government securities markets are relatively well-developed, but the corporate bond and equity markets remain shallow. The long-term investor demand is critical, but the domestic investor base remains weak. Policy clarity and action are needed on gradual removing the minimum government asset holdings for local institutional investors and allowing some overseas diversification by public pension funds.

60. The role of the state is significant and can be refined for development impact. State-owned Banks' (SOB) partial private ownership drives a commercial orientation; they are highly profitable, have strong financial positions, and are regulated as conventional commercial banks. Clarifying the objective of state ownership would help SOBs navigate tensions between stability and development objectives. Amendments to the MSME-focused business loan program have increased its complexity, and some elements should be reviewed. State-owned guarantee institutions appear to play a limited role and their role may require adjustments.

61. Authorities should strengthen the strategy, governance, and capacity for climate finance. Authorities should establish a robust climate information system, update reporting requirements, introduce a regulatory green taxonomy, and develop a centralized database on climate information and sustainability reporting. State-owned financial institutions and schemes should be explored to mobilize climate finance. The further development of insurance markets could provide financial protection for sovereign and sub-sovereign entities, MSMEs (including agriculture), and households.

AUTHORITIES' VIEWS

62. The authorities welcomed the FSAP's comprehensive assessment of the continued resilience of the financial system and strong financial policy frameworks. As also observed globally, authorities noted that sovereign-bank nexus increased because of the pandemic policy. Banks' holdings of domestic sovereign bonds increased because of the overall increase in banks' risk appetite during pandemic. However, post-pandemic, banks' risk appetite improved significantly which is reflected in high credit growth and decreased in sovereign bonds holding. They disagree that loans to SOEs are contributing to the tightening of the sovereign-bank nexus as exposure remains small. They agreed with the team that the risk from sovereign-bank nexus is still limited as shown in the FSAP solvency stress test and healthy fiscal condition as well as improved debt repayment capacity. The authorities also noted that the combined result of corporate and bank FX liquidity stress tests indicates that banks' liquidity remains sound.

63. The authorities broadly agreed with the systemic risk assessment yet noted that the asset quality framework is adequate and effective. Authorities stated that banks' asset quality is well-managed and the NPL Ratio in Indonesia is low, along with a decreasing Loans-at-Risk ratio and improving ratios of restructured loans. Banks also maintain high loan-loss provisions to mitigate potential cliff effect in credit risk; they are also required to report their financial conditions granularly, including their NPL positions, every month via the Integrated Monthly Bank Report in a complete manner within a specified due date. Moreover, despite relatively higher NPLs in pandemic-hit sectors, the loan concentration to pandemic-hit sectors (construction; accommodation & food and beverage; textiles, textiles product and footwear industry) only accounted for less than 9 percent of total loans in December 2023, suggesting low concentration risk in these sectors. Authorities also agreed that the solvency stress test results confirmed banks' soundness.

64. The authorities welcomed the assessment of the macroprudential regulatory and supervisory framework. They stressed that the ultimate objective of macroprudential policy is, very clearly, to address financial system stability. Based on the amendment of the Law on Bank Indonesia (as stipulated in the FSOL), the objectives of BI are to achieve the stability in the value of Rupiah, to maintain payment system stability, and to contribute in maintaining Financial System Stability in order to support sustainable economic growth. The authorities underscored that the FSOL clarified and strengthened BI's macroprudential mandate to support financial system stability through a three-pronged strategy of (i) maintaining financial resilience by mitigating risk propagation from interconnectedness and contagion; (ii) managing balanced and sustainable intermediation to tackle procyclicality; and (iii) supporting financial inclusion. These strategies aim to address potential sources of systemic risks pertinent to the domestic context, particularly as an emerging country. Furthermore, the framework is particularly relevant in the domestic context, as evidenced by its support of the financial sector's stability during the pandemic, aligning more closely with the broader context of emerging markets than the narrower definition provided by the IMF.

65. The authorities also welcomed the thorough assessment of the Financial Market Infrastructure (FMI), systemic liquidity management framework and the significant progress on strengthening the crisis management and resolution frameworks, yet they noted that the approach in designing the resolution plans should consider country circumstances and

resource constraints, including fiscal (deficit). They greatly valued new insights on the FMI assessments and commendatory report on payment system (BI-RTGS) and commit to further enhance its framework consistent with FSOL provisions. On the crisis management, while recognizing international best practices, they emphasized that the approach in designing crisis management and resolution frameworks should also consider country-specific circumstances, crisis experiences, and differences in legal regimes. The authorities now focus on strengthening the implementation of the FSOL to ensure credibility in policy development as well as governance in exercising authorities' mandates. When it comes to purchasing government bonds by BI in the primary market, authorities agree on the importance of safeguards for BI. In this relation, safeguards of purchasing government bonds in the primary market will be enacted in an MoU between BI and the MoF. During the COVID-19 pandemic era, purchase of government bond in the primary market by BI has been stipulated in Law No. 2 Year 2020 and reiterated by Law No. 4 Year 2023 (FSOL), which was implemented by enactment of the Joint Decrees between BI and the MOF. The measures were used only under a crisis and were targeted, time bound, and transparent. Authorities believe that the timing for the new MoU between BI and the MoF would also be best when the President declares a crisis condition (in other words the timing remains undetermined). In this regard, future exercise of this mandate by BI will follow several safeguards that will be determined in the event of crisis condition. This practice had been applied during the COVID-19 pandemic era (enacted in the joint decrees between BI and the MoF).

Table 2. Indonesia: Structure of Financial System, June–2023

Financial Institution	Number of Institutions	Assets (in billions of Rp)	Share of total assets[1] (in percent)	Share of GDP (in percent)
Banking Sector[2]	**1,518**	**11,237,802**	**75.8**	**54.9**
Commercial Banks	105	11,052,100	74.5	54.0
Rural Banks	1,413	185,702	1.3	0.9
Non-Bank Sector[3]	**2549**	**3,594,666**	**24.2**	**17.6**
Insurance Companies	151	1,827,491	12.3	8.9
Life Insurance	60	621,392	4.2	3.0
General Insurance	78	209,604	1.4	1.0
Reinsurance	8	38,095	0.3	0.2
Social Insurance Issuers	2	794,568	5.4	3.9
Other	3	163,833	1.1	0.8
Finance Companies	153	514,365	3.5	2.5
Pension Funds	199	358,662	2.4	1.8
DPPK-PPIP	36	45,503	0.3	0.2
DPPK-PPMP	138	185,309	1.2	0.9
DPLK	25	127,850	0.9	0.6
Venture Capital Companies	55	27,731	0.2	0.1
Guarantee Institutions	22	42,295	0.3	0.2
Infrastructure Finance Companies	2	129,118	0.9	0.6
Mutual Funds	1967	508,063	3.4	2.5
Other	.	186,940	1.3	0.9
Total	**4,067**	**14,832,468**	**100**	**72**

Sources: Bank Indonesia (BI), Otoritas Jasa Keuangan (OJK), Financial Service Authority (FSA), and IMF staff calculations.

[1] Total assets exclude central bank assets.
[2] Including conventional and sharia commercial banks.
[3] Includes pension funds, finance companies, venture capitals, infrastructure finance companies, insurance, mutual funds, credit guaranteed corporations, export import companies, and pawn shops.

Table 3. Indonesia: Selected Economic Indicators, 2022–27

Nominal GDP (2023): Rp 20,892 trillion or US$1,371 billion
Population (2023): 277 million
Main exports (percent of total, 2023): coal (16.5), base metal (15.6), palm oil (8.7), oil and gas (6.2), electrical apparatus (5.5), textile and products (4.5)
GDP per capita (2023): US$4,942
Unemployment rate (September 2023): 5.3 percent
Poverty headcount ratio at national poverty line (March 2022): 9.5 percent of population

	2022	2023	2024 Proj.	2025 Proj.	2026 Proj.	2027 Proj.
Real GDP (percent change)	**5.3**	**5.0**	**5.0**	**5.1**	**5.1**	**5.1**
Domestic demand	3.8	5.1	5.0	5.2	5.1	5.1
Of which:						
Private consumption 1/	5.0	4.9	5.1	5.1	5.1	5.1
Government consumption	-4.5	2.9	5.5	4.2	3.0	3.0
Gross fixed investment	3.9	4.4	5.0	5.7	5.7	5.7
Change in stocks	0.1	0.5	0.0	0.0	0.0	0.0
Net exports 2/	0.8	0.7	0.2	0.2	0.3	0.3
Statistical discrepancy 2/	0.9	-0.4	0.0	0.0	0.0	0.0
Output gap (in percent)	**-1.1**	**-0.3**	**-0.2**	**-0.1**	**0.0**	**0.0**
Saving and investment (in percent of GDP)						
Gross investment 3/	29.7	30.5	30.5	30.6	30.7	30.8
Gross national saving	30.7	30.4	29.6	29.3	29.3	29.4
Prices (12-month percent change)						
Consumer prices (end period)	5.4	2.8	2.8	2.7	2.6	2.5
Consumer prices (period average)	4.1	3.7	2.9	2.8	2.6	2.6
Public finances (in percent of GDP)						
General government revenue	15.2	15.0	14.8	14.9	15.0	15.0
General government expenditure	17.4	16.6	17.1	17.6	17.5	17.4
Of which: Energy subsidies	0.9	0.8	0.8	0.6	0.5	0.4
General government balance	-2.2	-1.6	-2.3	-2.6	-2.5	-2.4
Primary balance	-0.2	0.5	-0.3	-0.6	-0.3	-0.1
General government debt	40.1	39.6	39.5	39.4	39.3	39.1
Money and credit (12-month percent change; end of period)						
Rupiah M2	8.4	3.5	9.9	10.0	9.8	9.8
Base money	23.9	-1.5	4.0	6.0	7.0	7.4
Claims on private sector	10.1	9.2	10.5	11.3	9.5	9.6
One-month interbank rate (period average)	4.2	6.4	...	...	...	...
Balance of payments (in billions of U.S. dollars, unless otherwise indicated)						
Current account balance	13.2	-1.9	-12.3	-20.5	-24.2	-25.5
In percent of GDP	1.0	-0.1	-0.9	-1.3	-1.4	-1.4
Trade balance	62.7	46.5	34.8	30.1	29.4	32.8
Of which: Oil and gas (net)	-24.8	-19.7	-20.9	-18.3	-13.8	-14.2
Inward direct investment	25.4	21.8	26.0	29.6	33.5	36.1
Overall balance	4.0	6.3	0.8	6.7	9.6	13.7
Terms of trade, percent change (excluding oil)	22.9	-12.4	0.8	1.0	-3.4	-0.2
Gross reserves						
In billions of U.S. dollars (end period)	137.2	146.4	147.2	153.9	163.5	177.3
In months of prospective imports of goods and services	6.2	6.1	5.5	5.2	5.1	5.2
As a percent of short-term debt 4/	206	209	198	192	190	193
Total external debt 5/						
In billions of U.S. dollars	396.5	408.5	419.0	439.4	461.6	482.8
In percent of GDP	30.1	29.8	29.4	28.3	27.5	26.6
Exchange rate						
Rupiah per U.S. dollar (period average)	14,850	15,237	...	...	...	...
Rupiah per U.S. dollar (end of period)	15,573	15,399	...	...	...	...
Memorandum items:						
Jakarta Stock Exchange (12-month percentage change, composite index)	4.1	6.2	...	...	...	...
Oil production (thousands of barrels per day)	800	797	794	791	788	785
Nominal GDP (in trillions of rupiah)	19,588	20,892	22,555	24,367	26,274	28,313

Sources: Data provided by the Indonesian authorities; Bloomberg L.P.; and IMF staff estimates and projections.

1/ Includes NPISH consumption.
2/ Contribution to GDP growth (percentage points).
3/ Includes changes in stocks.
4/ Short-term debt on a remaining maturity basis.
5/ Public and private external debt.

Table 4. Indonesia: Financial Soundness Indicators, 2020–24

	2020	2021	2022	2023	2024 Latest observation	
Depository institutions						
Capital adequacy						
Regulatory capital to risk-weighted assets	22.1	24.0	24.1	25.8	24.3	Q1
Core Tier-1 capital to risk-weighted assets	20.5	22.4	22.6	24.2	22.7	Q1
Capital to assets	12.6	13.2	13.3	13.4	12.8	Q1
Large exposures to capital	79.9	59.8	62.3	76.8	83.5	Q1
Asset quality						
Nonperforming loans to total gross loans	2.6	2.6	2.1	2.0	2.0	Q1
Nonperforming loans, net of provisions to capital	4.3	3.6	2.9	3.0	3.5	Q1
Specific provisions to nonperforming loans	68.3	71.0	71.2	67.6	66.0	Q1
Earning and profitability						
Return on assets	1.5	1.8	2.4	2.7	2.6	Q1
Return on equity	7.1	9.0	12.4	14.4	15.3	Q1
Interest margin to gross income	61.0	60.5	66.5	64.6	62.8	Q1
Trading income to gross income	6.6	4.9	2.6	2.9	2.5	Q1
Noninterest expenses to gross income	47.0	43.4	45.3	44.6	42.2	Q1
Personnel expenses to noninterest expenses	40.5	42.9	40.9	38.6	41.1	Q1
Liquidity and funding						
Liquid assets to total assets	17.5	20.0	18.3	16.1	14.9	Q1
Liquid assets to short-term liabilities	25.6	29.6	26.6	24.0	22.2	Q1
Customer deposits to total (non-interbank) loans	103.2	110.6	110.0	106.2	105.9	Q1
Sensitivity to market risk						
Net open position in foreign exchange to capital	7.1	6.7	2.9	4.6	5.6	Q1
Foreign currency denominated loans to total loans	12.2	12.5	13.2	13.1	13.7	Q1
Foreign currency denominated liabilities to total liabilities	18.3	18.2	19.4	20.2	20.8	Q1
Gross asset position in financial derivatives to capital	2.5	1.3	1.8	1.2	1.5	Q1
Gross liability position in financial derivatives to capital	1.9	0.9	1.8	1.3	1.6	Q1
Nonfinancial corporates						
Corporate debt (in percent of GDP) 1/	41.9	39.5	37.9	37.8	38.1	Q1
Leverage						
Total liabilities to total assets	48.9	46.4	46.9	45.4	41.9	Q1
Profitability 2/						
Return on assets	8.2	10.7	19.7	11.4	10.7	Q1
Liquidity 2/						
Current assets to current liabilities	194.3	204.4	203.3	198.1	223.2	Q1
Liquid assets to current liabilities	124.1	141.9	141.5	123.1	129.2	Q1
Debt servicing capacity						
Companies with negative equity (in percent of total assets)	4.1	3.4	3.1	3.0	2.9	Q1
Companies with negative equity (in percent of total firms)	8.0	8.6	8.1	7.1	6.8	Q1
Households						
Household debt (in percent of GDP)	17.7	17.3	16.1	16.5	15.4	Q1
Real estate markets						
Residential real estate prices (year-on-year percentage change, average)	1.3	1.2	2.0	1.7	1.9	Q1
Residential real estate loans to total loans	11.4	11.5	13.0	13.5	13.5	Q1
Commercial real estate loans to total loans	13.6	13.0	15.0	14.7	14.6	Q1

Sources: Authorities data; Bloomberg L.P.; IMF, *Financial Soundness Indicators*; Bank for International Settlements; Haver Analytics; CEIC Data Co. Ltd.; and IMF staff estimates.

1/ Includes domestic and foreign bonds issuance data from BIS.
2/ Based on capitalization-weighted average of listed companies.

Table 5. Indonesia: Risk Assessment Matrix[1]

	Source of Risks	Likelihood	Expected Impact	Policy Recommendation
Global	**Intensification of regional conflicts.** Escalation or spread of the conflict in Gaza and Israel, Russia's war in Ukraine, and/or other regional conflicts or terrorism disrupt trade (e.g., energy, food, tourism, supply chains), remittances, FDI and financial flows, payment systems, and increase refugee flows.	High	Medium. The impact on commodity prices, financial flows, and supply chains are likely to be the key channels of transmission. For commodities, a rise in energy prices and a fall in the price of commodities for which Indonesia is a net exporter (e.g., nickel) would lead to lower growth and worsen the external balance. A sharp increase in energy or food prices may strain the fiscal position to the extent these prices remain subject to administrative measures; price adjustments would reverse the moderation in inflation. Supply chain disruptions could impact production and trade, while also raising inflation. Capital outflows could tighten financial conditions and put downward pressure on the exchange rate vis-à-vis the U.S. dollar.	Use available policy space (e.g., fiscal and monetary policy) countercyclically to stabilize output and inflation. The exchange rate should remain flexible and determined by market forces. FXI could be used to address disorderly market conditions (e.g., a sharp pickup in the UIP premium) while keeping strong buffers.
	Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts, export restrictions, and OPEC+ decisions) and demand fluctuations causes recurrent commodity price volatility, external and fiscal pressures in EMDEs, cross-border spillovers, and social and economic instability.	High	Medium. The economic impact will critically depend on whether (and which) commodity prices rise or decline, given Indonesia's net commodity exporter status in a number of key commodities. A rise in the price of oil, of which Indonesia is a net importer, and/or a decline in price of commodities for which Indonesia is a net exporter (e.g., nickel, crude palm oil) would lead to lower growth and worsen the external balance. A sharp increase in energy prices would reverse the moderation in inflation.	Use available policy space (fiscal and monetary policy) countercyclically to stabilize output and inflation. Seek to make progress on reforming energy subsidies. The exchange rate should remain flexible and determined by market forces.
	Deepening geo-economic fragmentation. Broader conflicts, inward-oriented policies, and weakened international cooperation result in a less efficient configuration of trade and FDI, supply disruptions, protectionism, policy uncertainty, technological and payments system fragmentation, rising shipping and input costs, financial stability, a fracturing of international monetary system, and lower growth.	High	Medium/High. A weaker global economy would reduce export demand and capital flows, including FDI. Higher uncertainty could weigh on investment and capital flows. Supply chain disruptions could push up inflation. In the long-term, lower productivity gains from the transfer of knowledge and technology embedded in trade and investments from frontier economies could hinder the pace of economic convergence.	Use available policy space (fiscal and monetary policy) to stabilize inflation and output, carefully calibrating the response to a potentially long-lasting shock (or series of shocks) to maintain margin for maneuver. Accelerate horizontal structural reforms to facilitate the transition to a more productive, more diversified, higher value-added and greener economy, including through additional investment in education and infrastructure, and by continuing to support an agile business climate, including through reducing trade restrictions and supporting integration.
	Abrupt global slowdown. Global and idiosyncratic risk factors cause a synchronized sharp growth downturn, adverse spillovers through trade and financial channels, and market fragmentation triggering sudden stops in EMDEs.	Medium	Medium/High. Lower GDP growth, due to weaker investment and exports, including lower commodity prices; robust domestic demand may offer some offset depending on the size of the shock. The shock could trigger a decline in capital inflows, leading to currency depreciation and tighter domestic credit conditions; higher poverty rate.	Use available fiscal space to provide targeted support, while allowing the exchange rate to act as a shock absorber. FXI could be used to address disorderly market conditions (e.g., a sharp pickup in the UIP premium), while keeping strong buffers.

Table 5. Indonesia: Risk Assessment Matrix (Concluded)

	Source of Risks	Likelihood	Expected Impact	Policy Recommendation
	Systemic financial instability. High interest rates and risk premia and asset repricing amid economic slowdowns and political uncertainty (e.g., from elections) trigger market dislocations, with cross-border spillovers and an adverse macro-financial feedback loop affecting weak banks and NBFIs.	Medium	Medium. Direct transmission of instability to the domestic financial sector is likely to contained amidst strong bank balance sheets and limited interlinkages. However, risk-off sentiment in global financial markets would tighten external financing conditions. Impact on economic activity in major trading partners and/or on commodity prices, if significant, could worsen the external balance.	Monitor spillovers to the domestic financial sector, and stand ready to intervene if strains emerge. With inflation within BI's target range, monetary policy could be eased to limit impact output—particularly in case of easing monetary policy in major economies. Allow the exchange rate to act as a shock absorber. FXI could be used to address disorderly market conditions (e.g., a sharp pickup in the UIP premium), while keeping strong buffers.
	Re-emergence of lethal and highly contagious COVID-19 variants. Renewed health crisis and containment measures disrupt economic activity.	Low	**Medium/High.** Health crisis, and lockdown measures, lead to sharp reduction in consumption and investment, including through falling consumer and investor confidence. External demand and capital inflows fall, depreciating the currency and tightening domestic credit conditions. Higher unemployment and underinvestment, and adverse impact on human capital, scar medium term potential output.	Increase spending on health and social protection. With fiscal space available, targeted support measures for firms and households will help mitigate the social and economic costs. Monetary and macroprudential policies should be loosened. The exchange rate should remain flexible and market driven. FXI could be used to address disorderly market conditions (e.g., a sharp pickup in the UIP premium), while keeping strong buffers.
Domestic	**Extreme climate events.** Extreme climate events driven by rising temperatures cause loss of human lives, severe damage to infrastructure, supply disruptions, low growth, and financial stability.	Medium	**Low.** Disruptions to economic activity are likely to be regional.	Prioritize targeted expenditures to affected households and businesses. Preemptively monitor financial sector risks that have geographical and/or sectoral concentrations that may be particularly vulnerable to climate shocks (e.g., fisheries, or mining complexes in vulnerable locations).
	Disorderly energy transition. A disorderly shift to net-zero emissions (e.g., owing to shortages in critical metals) and climate policy uncertainty cause supply disruptions, stranded assets, market volatility, and subdued investment and growth.	Medium	**Medium.** Impact will depend on nature of transition, given Indonesia's position as a major producer/exporter of fossil fuels (e.g., coal) and critical minerals. An unanticipated acceleration in the pace of transition could raise credit and market risks, and create stranded assets, weighing on financial sector balance sheets given exposures to carbon-intensive firms. However, a sharp increase in prices of critical minerals of which Indonesia is a major producer (e.g. nickel) could boost export values and corporate profits.	Improve approach to climate risk assessment, monitoring of transition risk exposures, as well as disclosure and availability of data. Deploy broad horizontal structural reform to support diversification, value-addition, and green growth.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Table 6. Indonesia: Macroeconomic Scenarios Used in Stress Test

(In percent)

Real GDP growth	2023Q2	2024Q2	2025Q2	2026Q2	2027Q2	2028Q2
Baseline	5.2	4.9	5.0	5.0	5.0	5.0
Adverse - Stagflation	5.2	-3.0	-3.3	0.2	4.6	8.0
Adverse - Recession	5.2	-3.9	-1.2	6.8	7.5	6.4
Nominal GDP growth						
Baseline	12.3	7.8	7.5	7.6	7.5	7.0
Adverse - Stagflation	12.3	2.4	1.4	4.5	8.6	10.8
Adverse - Recession	12.3	-2.6	-2.3	5.8	7.8	7.3
Inflation						
Baseline	3.9	2.5	2.5	2.5	2.3	1.7
Adverse - Stagflation	3.9	5.2	5.1	4.3	2.9	1.5
Adverse - Recession	3.9	0.8	-0.1	1.9	2.6	2.6
Unemployment rate						
Baseline	5.3	5.2	5.1	5.1	5.1	5.1
Adverse - Stagflation	5.3	8.0	8.8	8.8	7.7	7.0
Adverse - Recession	5.3	8.0	8.8	8.5	6.7	5.3
3-month interbank rate						
Baseline	6.8	7.1	6.0	4.9	4.0	3.9
Adverse - Stagflation	6.8	8.6	8.0	6.9	5.5	5.4
Adverse - Recession	6.8	6.4	4.9	4.1	3.7	3.8
Long term yield						
Baseline	6.3	6.3	6.0	5.9	5.8	5.8
Adverse - Stagflation	6.3	11.5	10.8	9.0	7.8	7.2
Adverse - Recession	6.3	11.7	6.5	5.2	5.2	5.4
Exchange rate						
Baseline	2.3	-1.1	-0.7	-0.4	-0.6	-0.7
Adverse - Stagflation	2.3	21.6	15.7	5.1	-1.9	-5.4
Adverse - Recession	2.3	19.4	-3.4	-9.7	-9.4	-7.8
Housing price growth						
Baseline	1.9	1.9	1.9	1.9	1.9	1.9
Adverse - Stagflation	1.9	-3.5	-2.7	-0.9	2.6	4.8
Adverse - Recession	1.9	-7.2	-2.5	2.8	3.7	1.9
Stock price growth						
Baseline	-4.1	9.0	9.0	9.0	8.8	8.0
Adverse - Stagflation	-4.1	-27.9	20.3	13.0	12.7	10.7
Adverse - Recession	-4.1	-30.6	6.9	10.7	11.1	9.9
Oil price growth						
Baseline	-36.5	3.8	-5.0	-6.8	-6.0	-4.5
Adverse - Stagflation	-36.5	77.0	-2.8	-19.6	-26.0	-16.3
Adverse - Recession	-36.5	-24.9	6.2	-3.6	5.1	-2.4
Commodity price growth						
Baseline	-6.2	-3.0	-0.2	0.1	0.4	0.7
Adverse - Stagflation	-6.2	-27.7	9.1	8.9	9.8	2.4
Adverse - Recession	-6.2	-23.6	7.1	7.2	8.0	2.1

Source: IMF staff.

Appendix I. Implementation Status of 2017 FSAP Recommendations[1]

Key Recommendations	Authorities' Actions
Institutional and Legal Arrangements	
Revise OJK Law to give primacy to objective of safeguarding stability, BI Law to include a financial stability and macroprudential policy mandate focused on systemic risk of the financial system, with access to data; and LPS Law to focus objectives on the maintenance of financial stability, continuity of critical functions, protection of insured deposits, and minimization of resolution costs.	**Partially implemented**. There has been structural reform in the Indonesian financial sector through the issuance of an Omnibus law (FSOL) on 12 January 2023 which revises 17 laws related to the financial sector, including OJK Law, BI Law, and LPS Law. The Law 4/2023 aims to strengthen institutional authorities and governance in the financial sector, which includes BI, OJK, LPS, and MoF. Furthermore, the Law focuses on the objectives, duties, and authority of the three institutions (BI, OJK and LPS) to bolster financial system stability, while still prioritizing their independence. The FSOL included the objective of the OJK on financial stability ("actively maintain financial system stability") but has not established the hierarchy of the OJK multiple objectives, giving primacy to the objective of safeguarding stability.
Amend the Insurance Law to specify policyholder protection as principal objective of OJK.	**Partially implemented.** Article 4 letter c of the OJK Law stipulates the purpose of OJK, that all activities in the financial services sector should be able to provide protection of the consumers and public interest. Furthermore, in article 1 number 15 of the OJK Law stipulates that the scope of consumers includes policy holders in Insurance. Thus, the OJK Law has stated that the protection of policyholders in insurance is one of OJK's objectives.
Strengthen legal protection of supervisors and officials of all agencies involved in financial oversight and crisis management in line with global standards.	**Pending.** In addition to being regulated under Article 45 of BI Law and Article 48 of PPKSK Law (Law Number 9 of 2016), the legal protection of supervisors and officials of all agencies (MoF, BI, OJK, LPS) has been further strengthened by Article 27 section 2 of Law Number 2 Year 2020 (Government Regulation in Lieu of Law No. 1 Year 2020 on State Financial Policy and Financial System Stability for Handling COVID-19 Pandemic and/or Encounter the Threat to National Economy and/or Stability of Financial Systems). The law provides legal protection to KSSK members, secretariat and members of Secretariat, as well as officials or employees of MOF, BI, OJK, LPS who carry out their functions in good faith and according to prevailing laws and regulations. In 2023, the FSOL introduced legal protection for OJK and its staff against lawsuits arising from actions or omissions made in good faith. However, the OJK Law does not explicitly provide for the supervisor and their staff to be adequately protected against the costs of defending their actions or omissions.

[1] Based on responses received from Authorities, with IMF staff assessment reflected in bold.

Key Recommendations	Authorities' Actions
Financial Sector Oversight	
Introduce a foreign currency liquidity coverage ratio.	**Pending.** Indonesia has complied with the Basel standards by supervising banks' foreign exchange liquidity position using an additional monitoring tool based on the significance of such foreign exchange to the bank's financial position. OJK has been imposing LCR based on significant currencies as a monitoring tool as stipulated in regulation No.42/POJK.03/2015 concerning Liquidity Coverage Ratio Requirement for Commercial Banks. Article 51 and its elucidation of such regulation requires banks to monitor LCR based on significant currencies.
Strengthen BI's capacity for systemic risk analysis and macroprudential stress tests, and OJK's capacity for regulatory stress tests; OJK should do bottom-up stress tests for D-SIBs regularly.	**Implemented.** BI and OJK have been implementing Joint Stress Test (JST) regularly once a year since 2017. BI is responsible for designing macroeconomic scenarios, namely baseline, adverse I (for severe), and adverse II (for moderate), based on potential medium-term global and domestic economic risks, and performing Top-Down Stress Test (TDST) and Granular Stress Test (GST) by using those scenarios. Meanwhile, OJK is responsible for coordinating Bottom-Up Stress Test (BUST) for systemic banks (D-SIB) and other large banks. The results of TDST, GST and BUST are compared and discussed to generate a final report that will be reported to the Board Meeting of BI and OJK.
Reduce OJK's silo structure, including by revising the OJK Law to remove the responsibilities of individual Commissioners for the supervision of specific sectors.	**Partially implemented**. Currently several steps have been taken to reduce silo structures at the OJK, including implementing the RKPT forum for cross-sectoral supervision. Further, OJK has issued and implemented various integrated regulation as joint commitment from OJK to develop and strengthen integrated supervision of financial service sector. The FSOL introduced the requirement that the OJK Charmain leads and conducts systemic assessment of the integrated supervision of financial conglomerates. While there has been some progress in reducing OJK's silo structure, further efforts are required to fully implement this recommendation. FSAP 2024 has not conducted a comprehensive review of its implementation.
Governance of Financial Conglomerates (FCs)	
Strengthen the banking supervisory approach and continue enhancing supervisory practices for financial conglomerates (FCs).	**Partially implemented**. OJK's Committee of Integrated Supervision (RKPT) decided on February 5, 2021 that 14 FCs meet the definition criteria according to OJK Regulation No.45/POJK.03/2020 on FCs (POJK 45). The FCs, through its Lead Entities, have also prepared and submitted their Corporate Charters to OJK as stipulated in Article 5 of POJK 45. 2017 FSAP noted that the OJK has identified 49 FCs in Indonesia at that time, and as mentioned above, the OJK has identified only 14 FCs under the new regulation. FSAP 2024 has not conducted a full review of this recommendation's implementation (this area was reviewed only from consolidated supervision perspective).

Key Recommendations	Authorities' Actions
Strengthen corporate governance practices within the financial system, including the boards of commissioners' (BoC) oversight roles and responsibilities.	**Partially implemented**. OJK has stipulated regulations No.55/POJK.03/2016 and 17/POJK.03/2023on Good Corporate Governance for Commercial Banks and No. 18/POJK.03/2016 on the Implementation of Risk Management for Commercial Banks. The regulations require BoC to conduct active oversight over the bank's activities and to provide advice to the board of directors to improve corporate governance and risk management practice. FSAP 2024 has not conducted a full review of this recommendation's implementation. For banking supervision, FSAP 2024 recommended that the OJK should continue playing a proactive role in strengthening the BoC's role and responsibilities.
Introduce legal provisions for licensed non-operating financial holding companies.	**Implemented.** OJK established its Regulation Number 45/POJK.03/2020 concerning FCs that defines FC as Financial group of company which has combining assets equal to or larger than IDR100,000,000,000,000 (one hundred trillion Rupiah) and consists of more than 1 (one) type of business activities. The regulation requires the FC to appoint or establish a financial company to be the holder of the financial conglomeration. The type of businesses that can be included in financial conglomerates are banks, insurance, multi-finance companies, and securities. In addition, the discussion of financial sector reform has also included the strengthening of OJK function in supervising financial holding companies, including the appointment of financial entity or establishment of new entity as the controller of the FC. FSOL introduced requirements for licensing of financial holding company (it requires the controlling party of financial conglomerates to form financial holding company) and mandated the OJK to issue regulations regarding financial conglomerates, including the licensing of financial holding company, the fit and proper test of the board members of the financial holding company, and other necessary prudential aspects within two years after the promulgation of the law (by January 2025). The implementation of these FSOL requirements remains a high priority. FSAP 2024 has not conducted a full review of this recommendation's implementation.
Crisis management and resolution, and safety nets	
Revise the PPKSK Law to clarify the role of the KSSK as solely a coordination body; limit the involvement of the President to approving public funding.	**Partially Implemented.** Law No. 4 of 2023 regulates the role of KSSK as a coordination body as reflected in the duties and powers of KSSK. KSSK is in charge of coordinating in handling the problem of Systemically Important Banks and coordinating the steps to be taken by the members of the Financial System Stability Committee to support the implementation of the problems handling of Systemically Important Banks by the Indonesia Deposit Insurance Corporation. . Under the constitution, it is the President who can declare a crisis or state of emergency situation as it was last done during the COVID-19 pandemic (Art. 12 of the 1945 Constitution). In addition, he can declare a system wide Bank Restructuring Program.

Key Recommendations	Authorities' Actions
Adjust the emergency liquidity assistance (ELA) framework to ensure it is effective.	**Implemented.** In response to the COVID-19 pandemic, the Government enacted Law No. 2 of 2020 concerning State Financial Policy and Financial System Stability for Handling COVID-19 Pandemic, which included enhancement of BI's mandate and power in crisis conditions. As a follow up, BI amended its crisis management and resolution framework, particularly regarding BI crisis management protocol and provision of PLJP/PLJPS.
Amend the relevant laws to ensure that resolution powers can be exercised over FCs.	**Pending.** Resolution power over FCs is amongst the topics to be discussed and considered in the amendment of LPS Law under the discussion of financial sector reform.
Develop resolution options and implementation guidelines for banks, and resolvability assessment and resolution planning frameworks for D-SIBs.	**Implemented.** Indonesian authorities have regulated the recovery plan under the Law Number 9 of 2016 concerning Prevention and Mitigation of Financial System Crisis, which was complemented by issuance of OJK Regulation (POJK) No. 14/POJK.03/2017 concerning Recovery Plan for Systemic Banks require Domestically Systemic Important Bank to have recovery plan. On the resolution plan, the Indonesia Deposit Insurance Corporation (IDIC) promulgated IDIC Regulation Number 1/2021 on Resolution Plan in March 2021. Under the regulation, DSIBs and selected non-DSIBs must prepare resolution plan starting in 2022. The regulation also stipulates the resolvability assessment requirement.
Financial Integrity	
Integrate key money laundering or terrorist financing (ML/TF) risks in the priorities and operations of relevant agencies.	**Implemented.** OJK has implemented FATFs' recommendations regarding risk-based AML/CFT, which were adopted as the National Committee of Prevention and Eradication of the Criminal Act of Money Laundering (NCC)s' commitment as stipulated in the National Strategy. This includes risk-based regulation and supervision, and cooperation with related institutions/ministries in the context of information exchange on money laundering offenses. Financial institutions and supervisors have been equipped with National Risk Assessment (NRA) and Sectoral Risk Assessment (SRA) guidelines for the financial services sector as compiled by OJK.
Finalize and implement risk-based AML/CFT supervisory tools.	**Implemented.** In accordance with the FATF Recommendation, OJK has carried out AML/CFT risk-based supervision. Based on the results of the MER FATF 2023, OJK is considered to have a good understanding of ML/TF risks through the establishment of effective regulations and the implementation of effective risk-based AML/CFT supervision.
Developmental issues	
Develop an integrated roadmap for promoting financial deepening and inclusion.	**Implemented.** Financial Deepening. The National Financial Market Development and Deepening Strategy (SN-PPPK) has been reviewed and revised in light of the pandemic and changing global and domestic economic and financial market conditions. The financial market deepening is a part of Pillar II "Development of the Financial Services Ecosystem" in The OJK Financial Services Sector Master Plan 2021–2025. In line with the SN-PPPK, OJK and all members of FK-PPPK undertake financial market deepening initiatives.

Key Recommendations	Authorities' Actions
	OJK supports the development of the primary and secondary bond and Sukuk market infrastructure. In November 2020, the Indonesian Stock Exchange launched an electronic trading platform phase 2 (Alternative Market Operator System). In addition, in 2019, KPEI as CCP in the stock exchange market also developed a third-party Repo system to support Repo transactions in the market in the absence of standardized services to support the implementation of Repo transactions in accordance with existing regulations. Financial Inclusion. The Government of Indonesia issued Presidential Regulation No. 114 of 2020 on National Strategy for Financial Inclusion (SNKI) that has provided an impetus to accelerate Indonesia's financial inclusion. BI has developed a new approach to enhance financial inclusion focusing on integrating economic activities and financial inclusion.
Enhance bond yield curve by consolidating debt issuance and improving secondary markets.	**Implemented.** IDX has launched IGBF (Indonesia Government Bond Futures) products to improve the secondary market as derivative instruments. As of November 2020, IGBF offered two new series available for market players via the Indonesia Stock Exchange Platform. However, the participation of market players and the demand for the above instruments still need to be further improved. Regarding consolidating debt issuance to enhance the government bond yield curve, the government is actively undertaking prudent portfolio management such as issuing benchmark series in the primary market to maintain the bond yield curve. The government also conducts debt switching transactions to smooth out the maturity profile and reduce non-liquid series in the secondary market. A private placement is also available as an option to increase the volume of specific series to create a more active secondary market. In terms of debt switch in 2021, the government has conducted an auction to buy back bonds in the domestic market on June 17, 2021, which obtained bids amount submitted by bidders of IDR 11.5 trillion with the nominal won by the government amounting to IDR 4.98 trillion. The second auction was held on September 23, 2021. The nominal bids submitted by bidders was IDR 11.24 trillion, while the nominal amount won by the government was IDR 7.07 trillion. In the global market, the government announced the successful completion of its inaugural Tender Offer/Liability Management (LM) Exercise launched on eight series of Notes (the Old Bonds) on September 20, 2021. The LM Exercise was well-received by global investors, and the total amount of tender instructions received across all series of Notes reached USD 2.68 Bio. However, the government decided to repurchase a total nominal amount of USD 1.16 bio as part of our general cash management program and a broader plan to manage our external liabilities. To enhance trading activity, the government, in cooperation with Indonesia Stock Exchange, has been developing an electronic trading platform for government bonds to provide more transparency on price discovery under the over-the-counter market. Currently, the Government and IDX have introduced the system and continue to improve infrastructure with the cooperation of government bond primary dealers. It is expected that the program will be launched formally in the first quarter of 2022.

Key Recommendations	Authorities' Actions
Institutional and Legal Arrangements	
Further strengthen the enforcement of credit and risk management regulations.	**Partially implemented.** OJK has issued a number of regulations to strengthen banks' credit and risk management practices. OJK is in the process of issuing an updated regulation on Risk-Weighted Assets for Credit Risk and Market Risk which will be implemented by 2023 in line with the target agreed by the Basel Committee on Banking Supervision.
Revise the insurance supervisory framework (three strikes-approach) to allow prompt actions.	**Implemented.** FSAP recommendation has been implemented through issuance of OJK Regulation Number 17/POJK.05/2017 concerning the imposition of administrative sanctions in the form of revocation of business license without prior imposition of other administrative sanctions in cases where there is a drastic deterioration of financial conditions, shareholders are not cooperative and no way of solving the problems that endanger the interests of policyholders, the insured, or the participants.

Appendix II. Banking Sector Stress Testing Matrix

Banking Sector Stress Testing Matrix	
Domain	**Tentative Scope and Approaches for the Top-Down Tests by FSAP Team**
Banking Sector: Solvency Stress Test	
Institutions included	1. All regulated 105 banks according to KBMI and ownership classification.
Data and starting position	2. Supervisory and market data (balance sheet and income statements).
Methodology	3. Satellite models and methods developed by the FSAP team.
Stress test horizon	4. Five years (June 2023 - June 2028).
Risks and scenario analysis	Macro-financial analyses with a baseline and two adverse scenario(s). 5. Baseline scenario based on the latest IMF WEO projection. Adverse scenario(s) are simulated using the MCM macro-financial model, reflecting risks in the RAM, all of which are triggered by risk factors but amplified by domestic vulnerabilities. The recessionary scenario will feature a contraction in domestic demand and output, decline in commodity and real estate prices, and lower policy rate in response to lower inflation expectations. The stagflation scenario will feature persisting inflationary pressure driven by supply-side constraints due to geopolitical fragmentations, thus prompting further monetary tightening and rise in risk-free rates. 6. Both scenarios will consider jump in term and risk premia on various types of asset classes.
Sensitivity analysis	7. Sensitivity analyses evaluate impacts of single risk factors on the existing capital buffers, such as shift in yield curve, concentration risk, sectoral risks, as well as credit losses stemming from the unwinding of the forbearance program.
Risks/ factors assessed	8. Credit, market, and funding losses from loan portfolios, holdings of debt securities and net open FX and equity position, respectively.
Behavioral adjustments	9. Quasi-static balance sheet assumption and dividend payout restriction.
Risk parameters	10. Point-in-time PDs, LGDs, and EADs.
Regulatory standards	11. National regulatory framework with fully loaded Basel III definitions.
Output presentation	12. System-wide capital shortfalls.
Banking Sector: Liquidity Stress Test	
Institutions included	13. All regulated 105 banks according to KBMI and ownership classification.
Data and starting position	14. Supervisory data at the reference date (e.g., 2023Q2).
Methodology	15. Cash-flows-based analysis with horizon up to 3 months. 16. The FSAP team will explore possibility of NFSR-based analysis.
Risks	17. Short-term liquidity outflows, asset price shocks, and fire-sales.
Buffers	18. Counterbalancing capacity in all types of tests includes liquidity obtained from markets through asset sales and from BI's standing facilities.
Size of shocks	19. Haircuts will be calibrated consistent with haircuts from BI's standing facilities and solvency stress test scenarios. 20. Run-off rates will be calibrated with hypothetical system-wide runs and dry-up of whole funding and allow for higher outflow rates for uninsured funding than insured funding.
Regulatory standards	21. National regulatory framework.
Output presentation	22. System-wide and bank-level liquidity ratio, and liquidity shortfalls.

Banking Sector Stress Testing Matrix (Concluded)	
Domain	**Tentative Scope and Approaches for the Top-Down Tests by FSAP Team**
Banking Sector: Contagion Analysis	
Institutions included	23. All regulated 105 banks according to KBMI and ownership classification.
Data and starting position	24. Supervisory and market data at the reference date (e.g., 2023Q2).
Methodology	25. Interbank and cross-border network model by Espinosa-Vega and Solé (2010).
Risks	26. Credit and funding losses related to bilateral exposures, default of large borrowers.
Buffers	27. Institution's own capital and liquidity buffers.
Size of shocks	28. Default of institutions or largest borrowers.
Output presentation	29. System-wide and bank-level capital shortfalls and other risk measures.
Climate Risk Analysis	
Institutions included	30. All regulated 105 banks according to KBMI classification.
Data and starting position	31. Supervisory data at the reference date (e.g., 2023Q2).
Methodology	32. Analysis of transition and physical risks using "Macro" approach. 33. Physical risk: Scenarios based on climate-related damage estimates from World Bank catastrophe risk modelling are simulated using the MCM macro-financial model. 34. Transition risk: Based on climate transition scenarios sectoral output pathways, simulated with a World Bank macro model, are used to generate firm-level probabilities of default which are then used to assess aggregated banking exposures.
Risks and scenario analysis	35. Physical risk scenarios based on NGFS climate scenarios. 36. Transition risk scenarios to be determined jointly with World Bank and authorities.
Output presentation	37. System-wide and bank-level capital shortfalls and other risk measures.
Nonfinancial Corporate Sector Vulnerability Analysis	
Institutions included	38. About 460 listed and non-listed Indonesian firms.
Data and starting position	39. Capital IQ—S&P Global Market Intelligence, as of end-2022.
Methodology	40. Solvency risk analysis using ICR as the main indicator of interest. 41. Cash flow analysis.
Risks and scenario analysis	42. Baseline scenario based on the July 2023 WEO forecasts. 43. Adverse macroeconomic scenario consistent with other analyses in the FSAP team.
Systemwide Liquidity Analysis	
Institutions included	44. Banks, NBFIs and Corporates.
Data and starting position	45. Supervisory and market data (Capital IQ) at the latest reference date (e.g., 2023Q2).
Methodology	46. Sectoral (e.g., bank, NBFI, corporates, households) network analysis and systemwide liquidity shock simulations. 47. Simulation of FX outflows from large corporates and spillover to the banks at entity level.
Risks	48. Liquidity outflow risks on banks and NBFIs. 49. FX debt rollover shocks for corporates and spillover to the banking sector.
Buffers	50. Available liquid assets (or counter-balancing capacities) in domestic and foreign currencies for banks, NBFIs and corporates.
Size of shocks	51. Range of run-off rates calibrated on bank deposit outflows, NBFI share redemptions, Insurance companies' policyholder surrenders, lapses, and withdrawals, and FX debt rollover shocks on nonfinancial corporates.
Output presentation	52. Net liquidity position and liquidity shortfalls for banks, NBFIs, Corporates.