BANK INDONESIA
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SYNERGY DRIVING QUALITY INTERMEDIATION
amidst Global Economic Uncertainty

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SYNERGY DRIVING QUALITY INTERMEDIATION AMIDST GLOBAL ECONOMIC UNCERTAINTY

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MACROPRUDENTIAL DEPARTMENT

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BANK INDONESIA

GLOSSARY

AE : Advanced Economies
AL : Liquid Assets
AML : Anti-Money Laundering
APBN : State Budget
API : Application Program Interface
AS : United States (US)
ASEAN : Association of Southeast Asian Nations
ASF : Available Stable Funding
ASPI : Indonesia Payment System Association
ATMR : Risk-Weighted Assets (RWA)
BCB : Banco Central do Brazil
BCBS : Basel Committee on Banking Supervision
BEI : Indonesia Stock Exchange (IDX)
BI SSS : Bank Indonesia Surveillance and Supervision System
BI-7DRR : BI 7-Day (Reverse) Repo Rate
BNM : Bank Negara Malaysia
BoJ : Bank of Japan
BOK : Bank of Korea
BOPO : BOPO efficiency ratio
BOT : Bank of Thailand
BPD : Regional Banks
Bps : Basis Point
BSP : Bangko Sentral ng Pilipinas
BUK : Conventional Commercial Bank
BUKU : Commercial Bank Classification
BUMN : State-Owned Enterprise
BUS : Islamic Bank
BWI : Indonesia Waqf Board
CAR : Capital Adequacy Ratio
CCB : Countercyclical Capital Buffer
CCP : Central Counterparty
CDS : Credit Default Swap
CCS : Cross-Currency Swap
CDR : Customer Data Rights
CeBM : Central Bank Money
CKPN : Provisions for Impairment Losses
CoF : Cost of Funds
CPM : Customer Presented Mode
CPO : Crude Palm Oil
CPR : Country Peer Review
CR : Current Ratio
CSO : Call Spread Option
CWLS : Cash Waqf-Linked Sukuk
DAR : Debt at Risk
DNDF : Domestic Non-Deliverable Forwards
DPK : Deposits
DPLK : Financial Institution Pension Funds
DSR : Debt Service Ratio
EBITDA : Earnings Before Interest, Tax, Depreciation and Amortisation
ECB : European Central Bank
EDC : Electronic Data Capture
EM : Emerging Market
EMBI : Emerging Market Bond Index
EMEAPWGBS : Executives' Meeting in East Asia Pacific Working Group on Banking Supervision
EMV : European Master Visa
EPF : Employee Provident Fund
EPU : Economic Policy Uncertainty
ETP : Electronic Trading Platform
FCI : Financial Condition Index
FFR : Federal Funds Rate
FinTech : Financial Technology
FKMM : Macro and Micro Coordination Forum
FK-PPK : Coordination Forum – Development Financing through Financial Markets
FSAP : Financial Sector Assessment Program
FSB : Financial Stability Board
FTV : Financing-to-Value Ratio
GDP : Gross Domestic Product
GISWAF : Indonesia Waqf Movement
GWM : Reserve Requirements
HLM : High-Level Meeting
IAIS : International Association of Insurance Supervisors
ICBI : Indonesia Composite Bond Index
ICR : Interest Coverage Ratio
IDMA : Inter-Dealer Market Association
IHKEI : Indonesia Export Price Index
IHSG : Jakarta Composite Index (JCI)
IKNB : Nonbank Financial Institution
ILS : Lending Standard Index (LSI)
IMF : International Monetary Fund
indONIA : Indonesia Overnight Index Average
IOSCO : International Organisation of Securities Commissions
IoT : Internet of Things
IPO : Initial Public Offering
IRSP : Banking Systemic Risk Index (BSRI)
ISF : Islamic Social Finance
ISSK : Financial System Stability Index (FSSI)
JGB : Japanese Government Bond
JIBOR : Jakarta Interbank Offered Rate
JST : Joint Stress Test
KCBA : Foreign Bank
KIK-EBA : Asset-Backed Securities – Collective Investment Contract
KIK : Collective Investment Contract
KK : Consumer Loan
KMK : Working Capital Loan
KPPK : Application of Prudential Principles
KPR : Housing Loan (Landed House)
KSEI : Indonesian Central Securities Depository
KSK : Financial Stability Review (FSR)
KWAP : Retirement Fund
KYC : Know Your Customer
Laku Pandai : Branchless Banking

LaR	: Loan at Risk
LCR	: Liquidity Coverage Ratio
LDR	: Loan-to-Deposit Ratio
LGA	: Electricity, Gas and Water
LKD	: Digital Financial Institution
LKS-PWU	: Islamic Financial Institution – Waqf Receiver
LPEI	: Indonesia Eximbank
LPS	: Deposit Insurance Corporation
LTV	: Loan-to-Value Ratio
mbpd	: million barrels per day
MPC	: Marginal Propensity to Consume
MPM	: Merchant Presented Mode
MTN	: Medium-Term Note
NBS	: National Balance Sheet
NCG	: Net Claims on Central Government
NFA	: Net Foreign Assets
NFL	: Net Foreign Liabilities
NIM	: Net Interest Margin
NK	: Memorandum of Understanding (MoU)
NPL	: Non-Performing Loan
NSFR	: Net Stable Funding Ratio
OHC	: Overhead Cost
OJK	: Indonesian Financial Services Authority
OM	: Monetary Operations
OPEC	: Organisation of the Petroleum Exporting Countries
OTC	: Over the Counter
PACC	: Paris Agreement on Climate Change
PDN	: Net Open Position (NOP)
Pemda	: Regional Government
Pempus	: Central Government
PER	: Price-to-Earnings Ratio
PFMIs	: Principles for Financial Market Infrastructures
PJSP	: Payment System Service Provider
PLJP	: Short-Term Liquidity Loan
PLJPS	: Islamic Short-Term Liquidity Financing
PLM	: Macroprudential Liquidity Buffer (MPLB)
PMI	: Purchasing Managers Index
PMK	: Crisis Management Protocol (CMP)
PNM	: Permodalan Nasional Madani (Persero)
PP	: Finance Company
PPIP	: Employer Pension Funds – Defined Contribution Plans (EPF-DCPP)
PPMP	: Employer Pension Funds – Defined Benefit Plans (EPF-DBPP)
PSAK	: Financial Accounting Standards
PSD	: Payment Service Directive
PSI	: Product Similarity Index
PSN	: National Strategic Project
PUAB	: Interbank Money Market
RBA	: Reserve Bank of Australia
RBC	: Risk-Based Capital
RBI	: Reserve Bank of India
RBS	: Regional Balance Sheet
RCA	: Revealed Comparative Advantage
RCG	: Regional Consultative Group
RIM	: Macroprudential Intermediation Ratio (MIR)
ROA	: Return on Assets
ROE	: Return on Equity
RRH	: Average Daily
RSF	: Required Stable Funding
RT	: Household (HH)
S&P	: Standard & Poor's
SBI	: Bank Indonesia Certificate
SBIS	: Islamic Bank Indonesia Certificate
SBN	: Tradeable Government Security
SBSN	: Islamic Tradeable Government Security
SBT	: Weighted Net Balance (WNB)
SCAV	: Standing Committee on Assessment of Vulnerabilities
SCSI	: Standing Committee on Standards Implementation
SDBI	: Bank Indonesia Certificate of Deposit
SDGs	: Sustainable Development Goals
SDM	: Human Resources (HR)
SIEM	: Security Information and Event Management
SimKrisNas	: National Crisis Simulation
SIP	: Banking Information System
SIPP System	: Finance Company Reporting Information
SPBI	: Bank Indonesia Noncash Payment System
SRC	: Supervisory and Regulatory Cooperation
SSB	: Securities
SSBs	: Standard Setting Bodies
SSK	: Financial System Stability
SukBI	: Bank Indonesia Sukuk
TA	: Total Assets
TCFD	: Task Force on Climate-Related Financial Disclosures
TL	: Total Liabilities
TO	: Turnover
TSI	: Information System Technology
ULN	: External Debt
UMKM (MSME)	: Micro, Small and Medium Enterprises
UNGGUL	: *Universal, Gampang, Untung dan Langsung* (Universal, Simple, Profitable and Direct)
UU PPKSK	: Financial System Crisis Prevention and Mitigation Act
UUS	: Islamic Business Unit
VIX	: Volatility Index
WCP	: Waqf Core Principles
WEO	: World Economic Outlook
WTV	: World Trade Volume
YOY	: Year on Year


Annual Growth 2013 - 2014
+10.2%
EBIT 2015
673.0M
EBITDA 2015
1,009.0M
-5.9%
Revenue
9,40
2011
2012

DEPUTY GOVERNOR'S FOREWORD

DEPUTY GOVERNOR'S FOREWORD

Praise God Almighty for His blessings upon completion of the 33rd edition of the Financial Stability Review (FSR). The Financial Stability Review (FSR) is the primary Bank Indonesia review of financial system stability presented to the public as one of Bank Indonesia's contribution in presenting the result of assessments and research conducted by Bank Indonesia in the execution of its macroprudential duties and authority.

On one hand, this edition of the Financial Stability Review reminds us to remain optimistic concerning financial system conditions in Indonesia. Bank Indonesia's rigorous assessments have shown that financial system stability was effectively maintained in the first half of 2019 despite increasing global uncertainty that has persisted since 2018. The corporate sector maintained resilience on solid repayment capacity, supported by prudent external debt exposure, thus containing the risk of a currency mismatch or liquidity mismatch. Financial market risk was also mitigated in line with asset price movements that mirrored the gains recorded in other regional financial markets.

On the other hand, this edition of the Financial Stability Review delivers the results of a Bank Indonesia assessment into the characteristics of financial system vulnerabilities in Indonesia. In addition, reflecting financial system resilience and the various risks faced, financial system projections are also presented. Departing from previous research and assessments that have been carried out supported by accurate data and a proven methodology, Bank Indonesia presents its projections of future FSS conditions. In response to those projections and the future challenges, Bank Indonesia also details its plan to maintain an accommodative policy stance in order to stimulate bank lending and expand economic financing. Bank Indonesia is cognisant that efforts to maintain financial system stability and catalyse economic growth momentum must be conducted in synergy with the Ministry of Finance, Indonesian Financial Services Authority and Deposit Insurance Corporation, as with efforts to prevent and handle financial crises.

By presenting balanced information regarding the financial system, risk signals, financial system vulnerabilities as well as Bank Indonesia's projections and the policy response, I hope this edition of the Financial Stability Review (FSR) will be used as a trusted reference by decision makers in the financial sector when formulating an optimal and prudent business strategy moving forwards. I also hope the FSR can enrich our knowledge to support research and educational activities. Furthermore, I expect the information contained in the FSR will strengthen confidence and optimism amongst all social elements towards maintaining financial system stability in Indonesia.

May the almighty god always provide protection and blessing for each of our endeavours and prayers in maintaining the stability of the financial system in Indonesia.

Jakarta, November 2019

Deputy Governor of Bank Indonesia

Erwin Rijanto

BANK INDONESIA

EXECUTIVE SUMMARY

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Entering 2019, financial system stability was effectively maintained in Indonesia despite ongoing global uncertainty that had persisted from the previous year. The banking industry successfully mitigated the liquidity risk and contained the credit risk, while maintaining an adequate capital ratio on the back of sustained profitability. In the financial markets, improving global financial market dynamics at the beginning of the year helped to increase domestic financial market in line with the increase in foreign capital inflows. Looking ahead, unrelenting global economic and financial uncertainty will continue to demand vigilance. Global economic moderation has impacted domestic corporate performance and could potentially amplify risks in the financial system and undermine the economic intermediation process. In that context, Bank Indonesia has adjusted its macroprudential policy stance to mitigate the potential risk.

During the first semester of 2019, a global economic that continued to be in a state uncertainty tinted the condition of the global and domestic financial system stability. The ongoing trade war between the United States and China, which has eroded business confidence to invest, has led to a weakening in the global economy, reduced trade volume and lowered commodity prices. Countries whose economies dependent on international trade and commodity exports will be affected, with conditions exacerbated by other global risks, including Brexit uncertainty and the emergence of geopolitical risks in several regions.

In response to global economic slowdown and uncertainty, nearly all central banks have simultaneously relaxed their policy stance in order to stimulate economic growth. The broad economic slowdown has not only prompted looser monetary policy in advanced economies, yet also in emerging markets (EM), which have been affected by the impact of trade rebalancing due to the trade war, as well as in countries where economic performance has been adversely affected by dwindling global demand. Nevertheless, the interest rate differential between advanced economies and emerging markets, coupled with demand for higher yields, has pushed global investors and capital inflows to emerging market economies.

The fallout from the trade war has also influenced macrofinancial conditions in Indonesia. The performance of export-oriented corporations has been affected by weakening global demand and sliding commodity prices. In general, however, corporate sector resilience has been relatively well maintained. Credit risk from the corporate sector remains under control in line with solid repayment capacity. Furthermore, corporate sector resilience has been supported by prudent exposure to external debt. Bank Indonesia regulations that require indebted corporations to hedge have reduced the risk of currency and liquidity mismatches. Nevertheless, global uncertainty is expected to persist and ultimately undermine corporate performance, to which the banking industry has responded through prudent and selective lending. Anticipation of the future risks has also left the corporate sector reluctant to expand or borrow. Such conditions, combined with a potential funding gap due to slower deposit growth than credit growth, have reduced aggregate credit growth.

In the financial markets, attractive returns on financial assets for investment in Indonesia together with the upgraded credit rating have been exploited by global investors seeking higher returns against a backdrop of global economic uncertainty. During the first half of 2019, risk in Indonesian financial markets was kept under control with asset price movements mirroring the improvements observed in regional financial markets. Moving forward, the role of foreign investors in Indonesia's financial markets requires attention. The increasing role of investors in the midst of financial markets that are not too deep requires us to continue to encourage the role of domestic investors and accelerate financial market deepening.

In response to the macrofinancial conditions experienced in the first semester of 2019, which point to a downturn in the financial cycle, Bank Indonesia has relaxed its macroprudential policy stance. Striving to provide more space for the banking industry to absorb risk and utilise its capacity for economic financing, Bank Indonesia has held the countercyclical capital buffer (CCB) at an accommodative 0%. Furthermore, Macroprudential Liquidity Buffer (MPLB) flexibility may still be used in full for repo transactions with Bank Indonesia. In addition, the banking industry is free to determine its own Loan-to-Value (LTV) and Financing-to-Value (FTV) ratios on the first mortgage facility. Bank Indonesia has adjusted the Macroprudential Intermediation Ratio (MIR) from 80%-92% to 84%-94% in line with accommodative macroprudential policy to support liquidity management in the banking industry. Bank Indonesia relaxed MIR policy to signal the banking industry to exploit its intermediation capacity. Furthermore, Bank Indonesia relaxed the reserve requirements at the beginning of the second semester of 2019 to reinforce the accommodative policy mix.

In the near term, macrofinancial conditions will remain overshadowed by the deleterious impact of the trade war and the global economy's ability to absorb the fallout. Bank Indonesia will maintain an accommodative macroprudential policy stance to stimulate intermediation, including policy to catalyse bank lending by expanding the scope of MIR funds to include loans, relaxing LTV and down payment policies, as well as promoting green financing.

Regarding the payment system, Bank Indonesia will also help to develop the digital economy and finance, while monitoring progress to avoid triggering new risks that could lead to financial system instability. Therefore, policy will be directed towards maintaining an optimal balance between efforts to optimise the opportunities created by digital innovation and efforts to mitigate the risks. To that end, Bank Indonesia has prepared the Indonesia Payment System Vision 2025, which is oriented towards efforts to build a healthy digital economic and financial ecosystem as a blueprint for digital economic and financial development in Indonesia.

To ensure the readers can optimally utilise the 33rd edition of the Financial Stability Review (September 2019), what follows is a brief explanation of the systematics of the report. The macrofinancial developments of the global economy and financial conditions, as well as their impact on the domestic economy and finance, are presented in Chapter 1.

Readers interested in financial system stability will find data and analyses in Chapter 1 to enrich their understanding of what is happening in Indonesia's financial system. Readers concerned with a more granular assessment of the vulnerabilities detected by Bank Indonesia and how financial system players respond and overcome such vulnerabilities are detailed in Chapters 2 and 3. Chapter 4 describes how Bank Indonesia has responded to the vulnerabilities and disruptions to ensure the financial system can overcome the potential risks and that the vulnerabilities do not materialise into risk. To that end, Bank Indonesia utilises several macroprudential policy instruments as well as other policy instruments and risk-mitigation efforts through policy coordination with other relevant authorities. In the final chapter (Chapter 5), Bank Indonesia delivers its rigorous analysis of what can be expected to occur in the financial system based on what has happened in previous semesters as well as Bank Indonesia's own expert judgement in terms of containing systemic risk. Bank Indonesia remains of the opinion that the participation of all financial players in terms of maintaining integrity and financial system stability will support the efforts of Bank Indonesia and other financial authorities to mitigate the risks and maintain financial system stability. Therefore, this review/report was compiled to urge all market players to concurrently strive towards maintaining financial system stability.

CHAPTER I

MACROFINANCIAL CONDITIONS

Macrofinancial conditions in Indonesia remain overshadowed by escalating global economic risks triggered by a furtherance of the trade dispute between the United States and China. Ongoing trade tensions have undermined economic growth in both countries. Furthermore, geopolitical risks and dwindling domestic demand have also translated into economic moderation affecting a number of other countries. Consequently, such developments have prompted lower world trade volume and international commodity prices.

Global financial risks have continued to intensify in line with global economic moderation. In response to the economic slowdown, several central banks in advanced economies and emerging markets have adopted a more accommodative monetary policy stance. Expectations of an economic downturn and potentially lower interest rates have spurred foreign capital outflows from the United States. Congruently, foreign capital inflows to Indonesia have continued to grow, thus increasing foreign holdings of domestic financial assets.

Financial system stability has been maintained in Indonesia despite global financial vulnerabilities. Confronting global financial market and domestic economic uncertainty, the banking industry has maintained capital resilience and adequate liquidity. Economic financing, primarily from the banking sector, has tended to decelerate in line with weaker demand for finance from the real sector. Such conditions have impacted bank profitability.

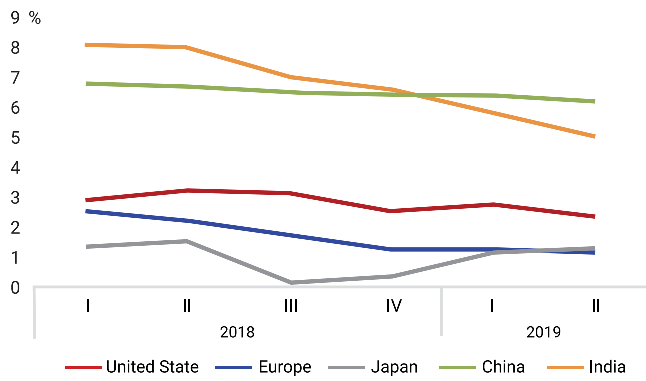
1.1 Global Economic Moderation Triggered by Escalating Trade War

Global economic growth has decelerated as the global economic risks have increased. Economic growth in the United States has slowed, recorded at 2,7% (yoy) in the first quarter of 2019 and 2,3% (yoy) in the second quarter of 2019, primarily held back by languishing exports and investment. Residential and non-residential investment have slowed as the effect of fiscal stimuli has begun to fade in 2019. Meanwhile, slower export growth was realised in the first quarter of 2019 before declining in the next period due to the ongoing trade dispute with China and decreasing global demand. Mirroring conditions in the United States, economic growth in China decelerated to 6,2% (yoy) in the second quarter of 2019. The escalating trade dispute along with other geopolitical risks, such as the emergence of populist politics in various countries as well as uncertain conditions in the European Union relating to the unresolved Brexit issue and increasing government debt in other European countries, have restrained economic activity in many countries. Table 1.1 and Graph 1.1 clearly illustrate such conditions. Europe's economy grew at the stable pace of 1,2% (yoy) in the first quarter of 2019 before slowing to 1,1% (yoy) in the second quarter of 2019. Japan's economy maintained moderate 1,1% (yoy) growth in the first quarter and 1,2% (yoy) in the second quarter of 2019. Meanwhile, emerging market economies have also begun to feel the bite of the trade tensions. In India, economic growth slowed to just 5% in the second quarter of 2019 compared with 7,4% in 2018.

Table 1.1 Global Economic Growth

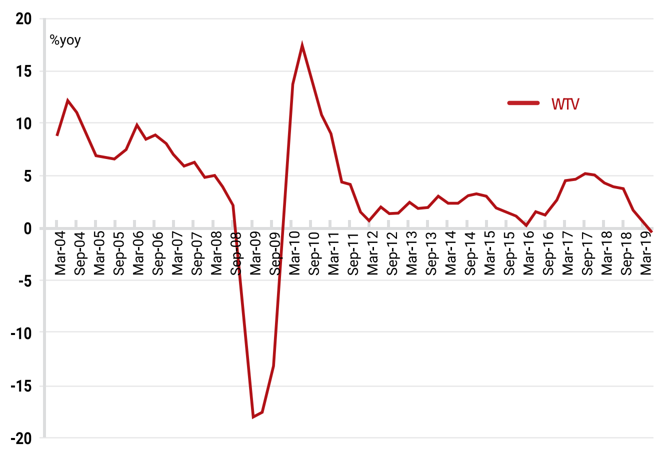
GDP	2017	Realisation 2018 I	II	III	IV	2018	2019 I	II
Global	3.7					3.6		
Advanced Economies	2.4					2.2		
• United State	2.3	2.9	3.2	3.1	2.5	2.9	2.7	2.3
• Europe	2.4	2.5	2.2	1.7	1.2	1.8	1.2	1.1
• Japan	1.7	1.3	1.5	0.1	0.3	0.8	1.1	1.2
Developing Economies	4.7					4.5		
• China	6.9	6.8	6.7	6.5	6.4	6.6	6.4	6.2
• India	6.7	8.1	8	7	6.6	7.4	5.8	5

Graph 1.1 Global Economic Growth



Source: International Monetary Fund (IMF), Bank Indonesia

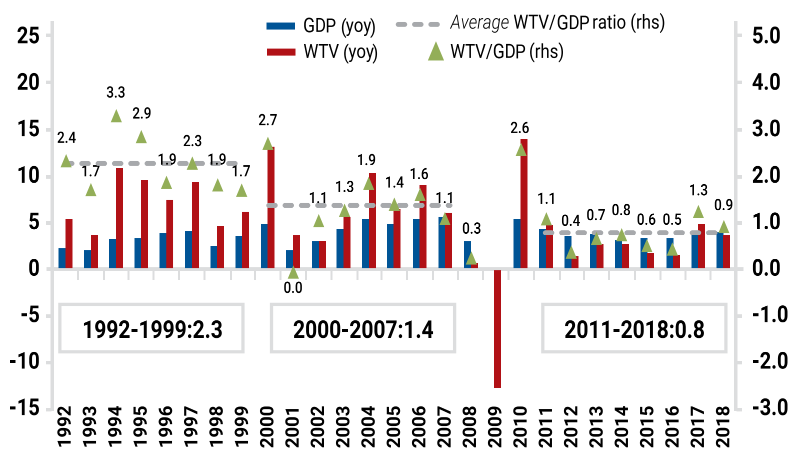
Graph 1.2 World Trade Volume



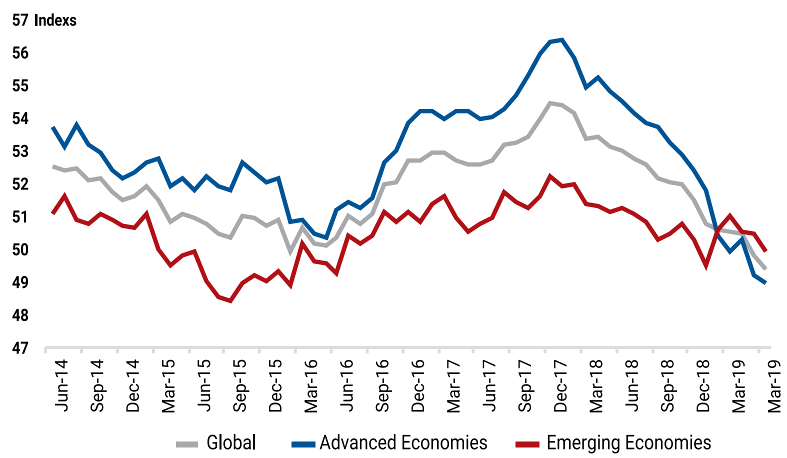
Source: CPB, Bloomberg, processed

World trade volume (WTV) has declined in line with global economic moderation. World trade volume began to decline in the latter half of 2018, a trend that has continued in 2019. WTV slumped to just 0,5% (yoy) in the first quarter of 2019 before contracting -0,4% (yoy) in the second quarter of 2019 (Graph 1.2). The decline was triggered by a global economic downturn coupled with the imposition of import tariffs by the United States on Chinese goods, effective from September 2018. Export and import activities in advanced economies have also declined in line with flagging economic growth. The declining WTV trend is projected to precipitate a decline in the WTV/GDP ratio to 0,5 in 2019 and 0,8 and 2020 from 0,9 in 2018 (Graph 1.3). Furthermore, export and import activities in developing countries have experienced a correction after recording strong growth triggered by frontloading policy in China. Declining trade activity has also been reflected by decreases recorded in the Global Manufacturing Purchasing Managers Index (PMI)[1] (Graph 1.4) and level of global investment. Advanced economies have been the primary contributors to the lower PMI, although declines have begun in developing economies as well. Notwithstanding, milder downside pressures on WTV are expected in the second half of 2019 as the effect of fiscal stimuli to catalyse investment take hold and the supply chain diversifies to countries not impeded by tariff barriers.

Graph 1.3 WTV/GDP



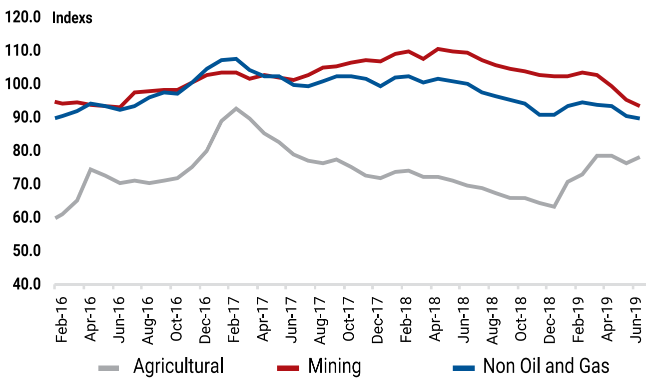
Graph 1.4 Global Manufacturing PMI



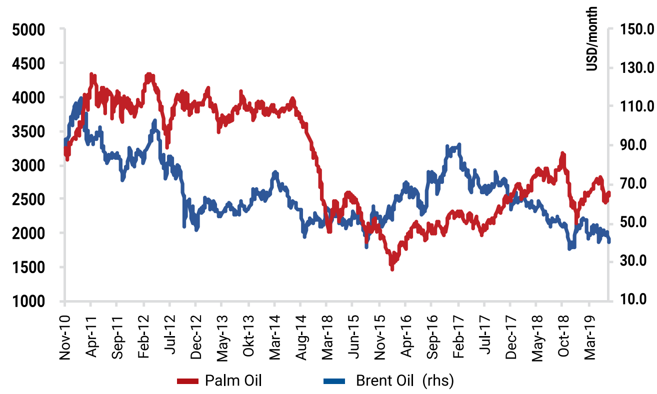
Source: HIS Markit

[1] *The manufacturing PMI is an indicator of manufacturing sector performance. A value above 50 indicates expansion and below 50 indicates contraction in the manufacturing sector*

Graph 1.5 International Commodity Prices



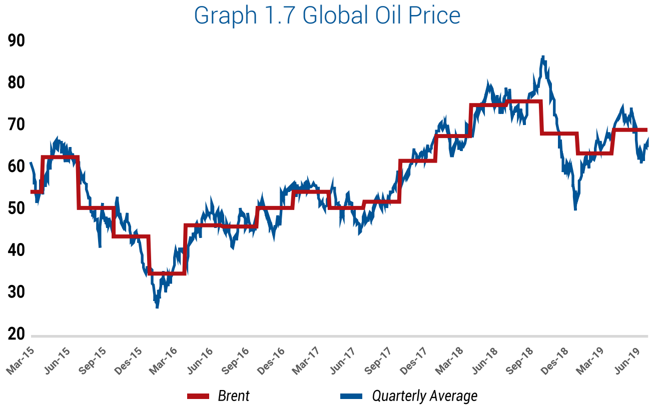
Graph 1.6 CPO Price Developments



Source: Bloomberg

Commodity prices have experienced another wave of pressures in line with declining world trade volume, primarily affecting the prices of agricultural, metal and mining commodities (Graph 1.5). Oversupply in the CPO market due to high production in Malaysia and Indonesia coupled with weaker demand weighed on prices (Graph 1.6). CPO demand has been undermined by restrictions on CPO imports for biofuel in Europe, which have been implemented gradually since May 2019, as well as lower prices of viable CPO substitutes, namely rapeseed (a CPO substitute in India) and soybean.

Graph 1.7 Global Oil Price



Graph 1.8 Coal Price

Source : Bloomberg
Data 'till 26 August '19

*) Reindex for prices before Apr '18

Metal prices, in this case aluminium, have been influenced by larger inventories due to increasing supply from Brazil and Russia after sanctions were lifted and bauxite production increased in Malaysia as a raw material of aluminium. Other metal prices also experienced corrections, including copper and nickel.

Energy prices have fallen in line with international commodity prices. The average price of Brent Crude in the first semester of 2019 was recorded at USD 65,9 per barrel, down from USD 71.5 per barrel in the second semester of 2018. Nonetheless, oil price dynamics regained upward momentum from USD 53,2 per barrel at the end of 2018 to USD71.9 per barrel in April 2019 on declining supply due to production cuts by OPEC+ that exceeded the target, export disruptions in Russia, Venezuela and Libya as well as sentiment factors after the United States announced the suspension of a waiver on sanctions against Iran. The oil price subsequently fell to USD 64,4 per barrel at the end of June 2019 (Graph 1.7) as a corollary of weaker demand due to the trade tensions between the United States and China. Lower demand due to the decision by OPEC+ to extend oil cuts totalling 1,2 mbpd for nine months (until the first quarter of 2020) has failed to offset deeper demand declines. Similarly, the international oil price has also tracked a downward trend. Nonetheless, the export price of low-calorie coal from Indonesia has remained stable at USD 36,1 per metric ton (Graph 1.8).

The impact of the trade war on global economic moderation demands attention considering the potential instability that could spill over to the domestic financial system. Box 1.1: Nexus between the US-China Trade War and Indonesia's Financial System analyses the relationship between the trade war and domestic financial system stability.

Boks 1.1 Nexus between the US-China Trade War and Indonesia's Financial System

In the first semester of 2019, the United States raised import tariffs from 10% to 25% on Chinese goods worth USD 200 billion. In retaliation, China increased its own import tariffs from 5-10% to 25% on USD 60 billion worth of American goods (Table B1.1). In response, central banks in various countries adopted a dovish policy stance. Congruently, the governments of various global players, such as the US, Japan and China, introduced fiscal stimuli to strengthen the economy.

The imposition of import tariffs by the United States on Chinese goods triggered global trade rebalancing, which could potentially weigh on domestic corporate performance due to the reallocation of Chinese exports (Graph B1.1). In total, 5% of national goods exports are expected to be impacted by the trade war, dominated by commodities with a high Product Similarity Index (PSI) and low Revealed Comparative Advantage (RCA) against Chinese goods.

The Product Similarity Index (PSI) is calculated based on the following formula:

$$PSI_j\,(ab,k) = 1 - \frac{\sum_i [X_{j(a,k)} - X_{j(b,k)}]}{\sum_i [X_{j(a,k)} + X_{j(b,k)}]} \qquad \text{(B1.1)}$$

Where:

$PSI_{j(ab,k}$ = *Product Similarity Index for product j for exports from country a and b to country k*
$Xj_{(a,k)}$ = exports of product j from country a to country k
$Xj_{(b,k)}$ = exports of product j from country b to country k

Meanwhile, Revealed Comparative Advantage (RCA) is calculated based on the following formula:

$$RCA_j = \frac{X_{j(a,w)} / \sum_{j=(a,k)}^{k} X_{j(a,w)}}{X_{jw} / \sum_{j=1}^{k} X_{jw}}, \; j = 1, \ldots, k \qquad \text{(B1.2)}$$

Where:

RCA_j = *Revealed Comparative Advantage of product j*
$Xj_{(a,w)}$ = exports of product *j* from country *a* to the world
X_{jw} = exports of product *j* from the world
$Xj_{(b,k)}$ = exports of product *j* from country *b* to country *k* pick

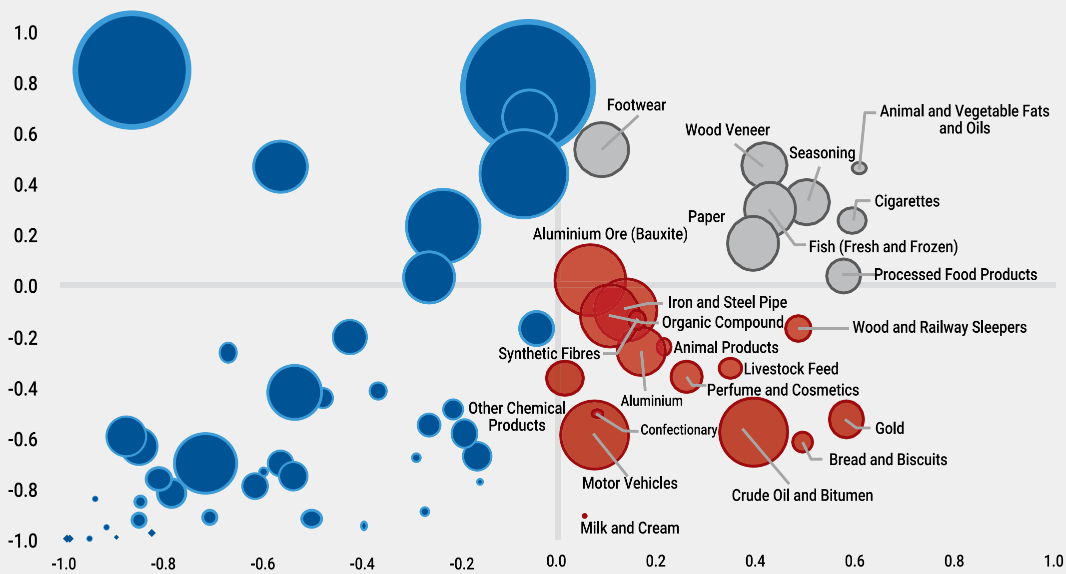
Table B1.1 Escalation of the US-China Tarde War

Period	US	China
6 Jul 2018	25% tariff on goods worth $34 billion	25% tariff on goods worth $34 billion
23 Agt 2018	+25% tariff on goods worth $16 billion	+25% tariff on goods worth $16 billion
24 Sep 2018	+10% tariff on goods worth $200 billion	+5-10% tariff on goods worth $60 billion
1 Dec 2018	US and China agree a temporary reprieve in the trade war	
Jan-Feb 2019	Both sides agree to trade negotiations	
9-10 May 2019	No deal reached during negotiations in Washington	
15 Jun 2019	Tariffs raised from 10% to 25% on goods worth $200 billion	Tariffs raised by up to 25% on goods worth $60 billion

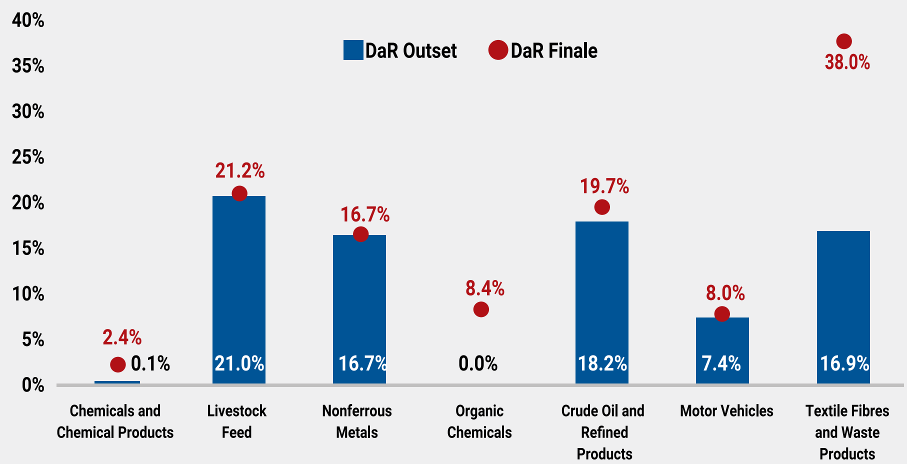
All sectors producing commodities with a high PSI and low RCA compared to China could potentially experience a downturn. Based on PSI and RCA, commodities in Quadrant III are potentially under threat from the impact of product reallocation, including chemicals and chemical products, livestock feed, nonferrous metals, organic chemicals, crude oil and derivatives as well as textile fibres and waste products (Graph B1.1). Similarly, debt at risk is expected to deteriorate in a number of sectors, the textile industry in particular (Graph B1.2).

After identifying commodities with a high PSI and low RCA, corporations with strong linkages to export commodities must also be identified. Such corporations could potentially experience declining performance through decreasing production and repayment capacity. A lower repayment capacity would ultimately feed through to undermine bank lenders. A discussion on the potential risks in the financial system due to the trade war is continued in Chapter 3.

Graph B1.1 PSI and RCA of Indonesian Exports



Graph B1.2 Debt at Risk



1.2 Global Financial Risk has increased in line with Global Economic Moderation

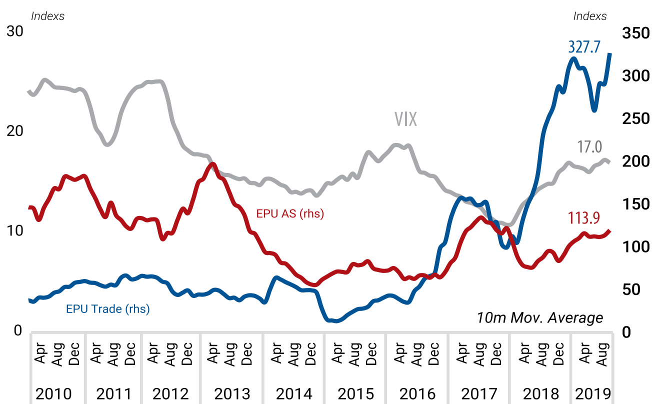
The monetary authorities in various countries have adopted a dovish policy stance in response to global economic moderation. Although most central banks held their policy rates in the first quarter of 2019, global monetary policy embraced a more dovish stance in the second quarter of 2019 through policy rate reductions by a number of central banks, including Reserve Bank of India (RBI), Bangko Sentral ng Pilipinas (BSP), Bank Negara Malaysia (BNM) and Reserve Bank of Australia (Table 1.2). Meanwhile, the federal funds rate (FFR), as the policy rate of the US Federal Reserve, remained unchanged during the first half of 2019, with the Fed implementing dovish monetary policy in response to low inflationary pressures. Likewise, the European Central Bank (ECB) and Bank of Japan (BOJ) also held their policy rates during the first semester of 2019. Looking ahead, the ECB and BOJ are expected to hold their policy rates until the end of 2019. The Fed's forward guidance indicates further FFR declines in 2019 and 2020. Meanwhile, the BOJ is predicted to maintain its current dovish monetary policy stance and strengthen forward guidance with no changes expected until the second quarter of 2020. Global financial market uncertainty has continued to rise despite the dovish monetary policy stance adopted by central banks in several advanced economies. Such developments were reflected by increases in the Economic Policy Uncertainty (EPU) index and Volatility Index (VIX) (Graph 1.9). Concerns stoked by economic moderation in the United States compelled investors to reallocate their placements, thus triggering capital outflows from the United States, which spurred demand for Japanese Government Bonds (JGB) and, therefore, JGB yields fell (Graph 1.10). Congruently, demand for gold, as a safe haven asset, increased, prompting higher prices. On the other hand, expectations of lower interest rates in the United States to stimulate economic growth weighed on lower yields of US government bonds. Such conditions contributed to an inverted yield curve in May 2019, affecting 3-month and 10-year tenors in particular. Market players interpreted the inversion as a growing indication of a potential recession. Nevertheless, that interpretation was not supported by prevailing economic performance, which remained solid, with analysts thus inferring that the inverted yield curve was more the result of normal supply and demand factors.

Table 1.2 Monetary Policy Stance in Several Countries

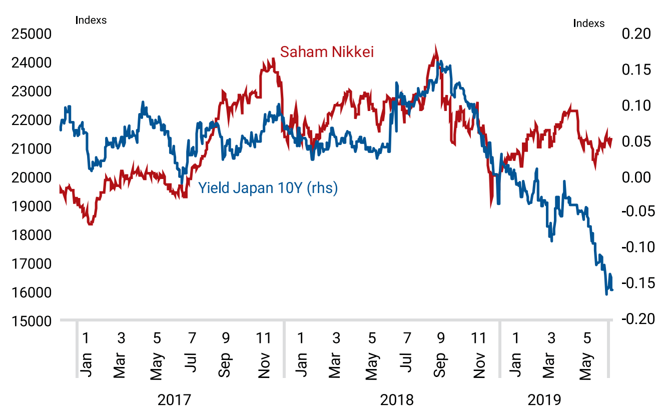
CENTRAL BANK	CURRENT MPC MEETING	Q. I '19	Q. II '19	Q. III '19	Q. IV '19
RBI	Jun'19 : Policy rate lowered to 5.75%. Neutral policy stance replaced by accommodative policy to stimulate growth consistent with the inflation target.	6.25%	5.75%	5.75%	5.75%
BSP	Jun'19 : Policy rate held at 4.50%, prudent pause taken in line with controlled inflation outlook and solid domestic growth outlook.	4.75%	4.50%	4.50%	4.50%
BNM	Jul'19 : Policy rate held at 3.00%, maintained accommodative monetary policy stance against weaker growth outlook.	3.25%	3.00%	3.00%	3.00%
RBA	Jul'19 : Policy rate lowered 25bps to 1.00% to support employment growth amidst growing confidence in stable inflation.	1.50%	1.25%	1.00%	1.00%
BOK	Jul'19 : Policy rate lowered 25bps to 1.50% in line with expectations of economic moderation on slower investment and export growth.	1.75%	1.75%	1.50%	1.50%
FED	Jun'19 FFR held, rate cut signals from the Fed in line with the low inflation outlook and projected FFR reduction.	2.50%	2.50%	2.25%	2.25%
ECB	Jun'19 Policy rate held at 0.00% until Semester I-2020, reinvesting APP and detailed TLTRO II. Interest rates and APP remain policy options.	0.00%	0.00%	0.00%	0.00%
BOJ	Jun'19: Maintained accommodative monetary policy and strengthened forward guidance by indicating no further changes until spring 2020	-0.10%	-0.10%	-0.10%	-0.10%
BOT	Jun'19 : Policy rate held at 1.75%; monetary policy considered sufficiently accommodative amidst economic moderation (lower GDP outlook) and FSS risk.	1.75%	1.75%	1.75%	1.75%
BCB	Jun'19: Policy rate held at 6.5% in line with inflation risk and the risk premium due to underperforming reforms. Potential policy rate reduction to stimulate economic growth.	6.50%	6.50%	6.50%	6.50%

Source: Bloomberg, Central Banks

Graph 1.9 Economic Policy Uncertainty (EPU)



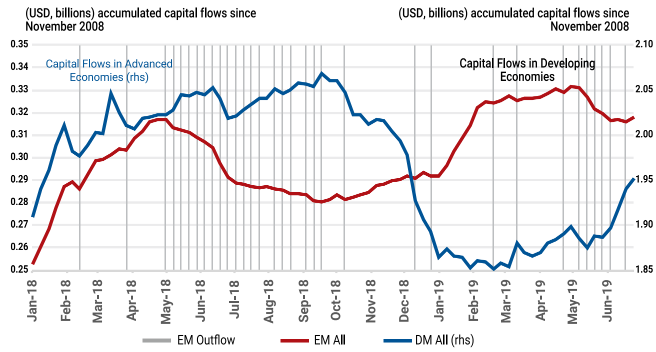
Graph 1.10 Japan's Stock Market



Source: Bloomberg

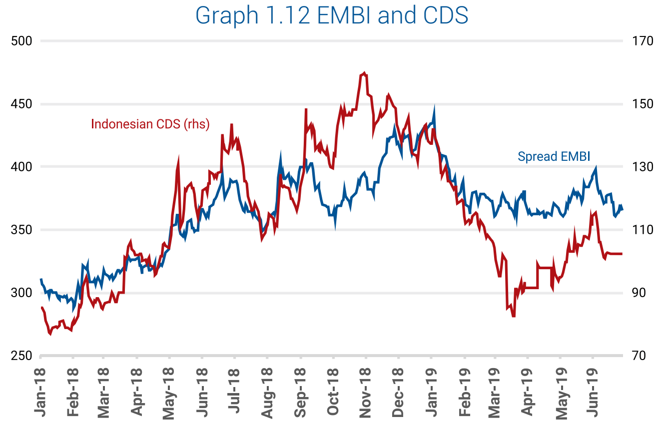
Foreign capital inflows to emerging markets continued in line with the dovish policy stance maintained by various central banks. The influx of capital inflows remained high due to growing expectations of FFR reductions in United States, which triggered efforts to reallocate international placements. Consequently, regional currencies strengthened against the US dollar, including the rupiah (Graph 1.11). Capital flows were also drawn to emerging markets in line with lower risk, as confirmed by a 365.8 level of EMBI Spread, coupled with a lower level of Credit Default Swaps (CDS) at 102.3 (Graph 1.12). Global financial vulnerabilities increased despite maintained capital flows.

Graph 1.11 Capital Flows



Source: EPFR

Graph 1.12 EMBI and CDS



Source: Bloomberg

The escalating trade war and other geopolitical developments precipitated a shift in market sentiment, which lowered the prices of higher risk assets. On the other hand, such conditions also reduced long-term government bond yields, with yields on several tenors recording all-time lows (Graph 1.13). Furthermore, corporate debt exposure also increased due to more leverage as a result of looser financial conditions amidst maintained capital flows. Nevertheless, global financial system resilience tended to improve, as reflected by a higher capital ratio and lower leverage compared to pre-2008 levels.

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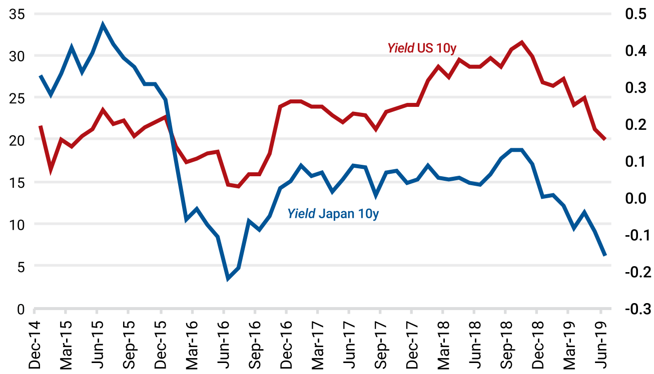
1.3 Indonesia's Financial System Maintained despite Global Financial Vulnerabilities

Pressures in the financial system gradually eased as public confidence grew after the announcement of the results of the presidential election and cash flowed back into the banking system after Eid Al-Fitr.

Banking systemic risk was contained in line with a stable Financial System Stability Index (FSSI). Furthermore, the Banking Systemic Risk Index (BSRI) also confirmed that

Graph 1.13 Government Bond Yield

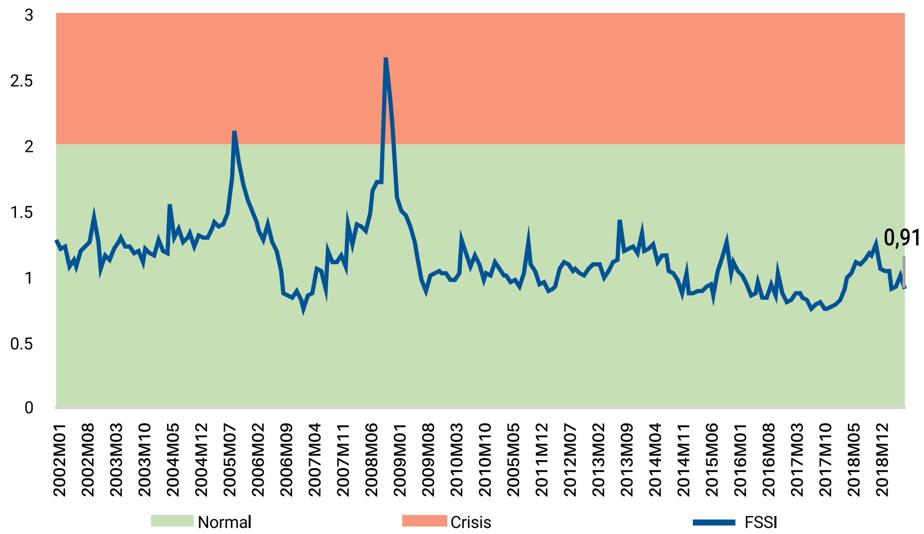


Source: CPB, Bloomberg, processed

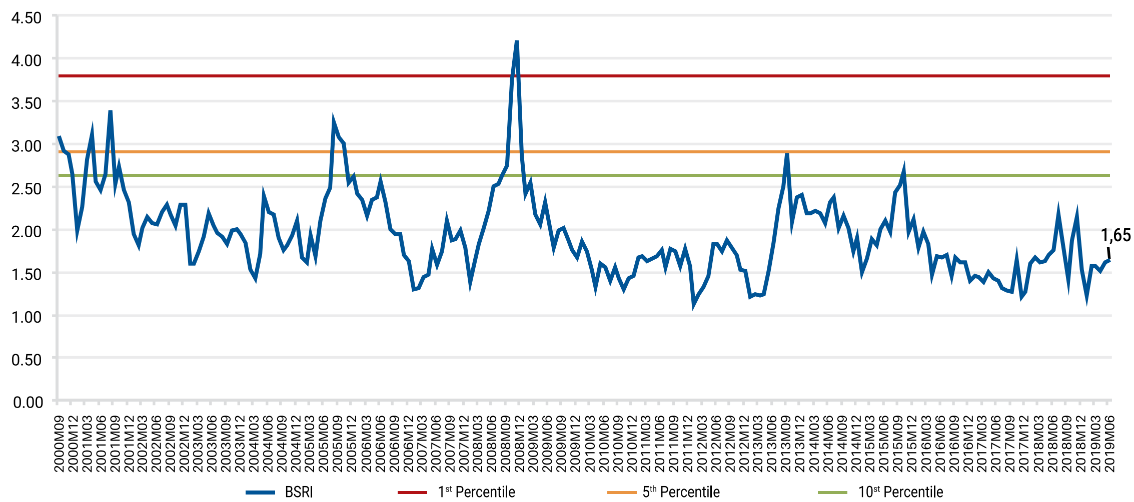
systemic risk was effectively mitigated during the first half of 2019 despite increasing slightly towards the end of the semester to a level of 1,65, which is still well below the 10th percentile however (Graph 1.15). The modest uptick recorded in the BSRI in June 2019 was caused by a slight decline of bank capital.

The banking industry maintained resilience in line with low banking systemic risk. The Capital Adequacy Ratio (CAR) was recorded at 22,53% (Graph 1.16) and the ratio of liquid assets to deposits was maintained at a level of 19,05% in June 2019. Banks maintained liquid assets more than two times the projected 30-day demand for cash outflow, as reflected by a Liquidity Coverage Ratio (LCR) of 208% (LCR requirement is 100%). In addition, stable demand for funding for financing for the upcoming year was maintained, as reflected by a Net Stable Funding Ratio (NSFR) of 126,2 percent (NSFR requirement is 100%) (Graph 1.17).

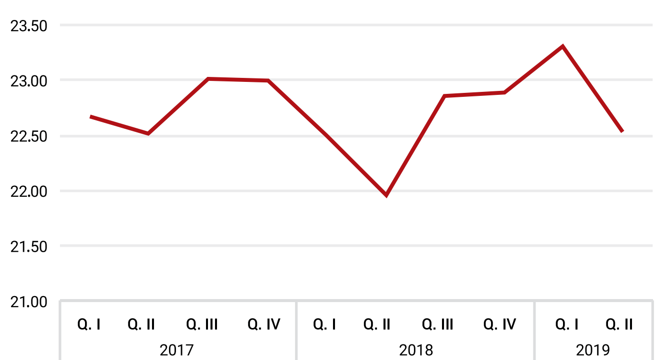
Graph 1.14 Financial System Stability Index



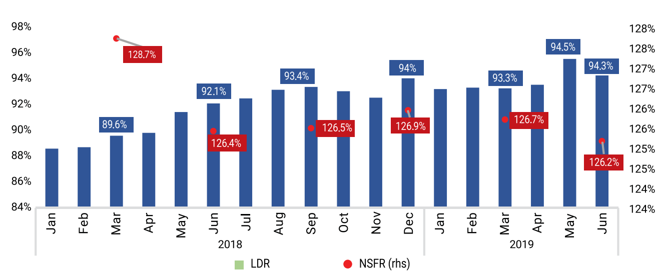
Graph 1.15 Banking Systemic Risk Index



Graph 1.16 Bank CAR



Graph 1.17 Bank Liquid Assets



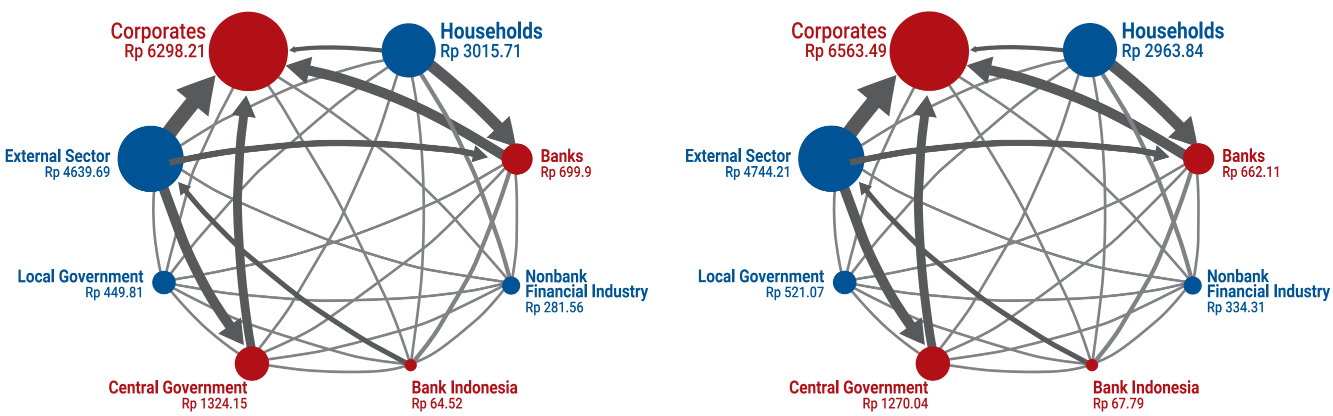
Source: Financial Services Authority (OJK)

Foreign capital flows to Indonesia continued to expand in line with maintained financial system resilience[2]. External sector asset transactions in the first quarter of 2019 stood at Rp 208,69 trillion, up more than 200% on the same period of 2018 (Table 1.3). The rapid growth was attributed to the corporate sector, central government and banking industry. More than 56% of external sector asset transactions went to the corporate sector totalling Rp118,41 trillion. In line with seasonal first-quarter trends, the household sector reversed the previous net lending position to record a net borrowing position. The external sector dominated domestic financial assets, driven by an influx of foreign capital. During the first quarter of 2019, most external sector assets were placed in the corporate sector, followed by the central government and banking industry, which continued to rely on foreign financing. Meanwhile, the banking industry, as financial intermediaries, maintained a solid intermediation function in terms of accumulating deposits and disbursing loans, primarily from the household sector and to the non-financial corporate sector (Graph 1.18). On the other hand, the corporate sector maintained the highest position of financial liabilities, followed by the banking industry. The non-financial corporate sector was most interconnected with the external sector and banking industry.

Table 1.3 Financial Transaction Network Analysis Q1/2019 (Rp trillions)

		Asset		
		Total	Foreign	Percentage
Liability	Total	475.08	208.69	100.00%
	Corporates	117.99	118.41	56.74%
	Bank Indonesia	-23.78	-4.14	-1.98%
	Banks	39.12	44.40	21.27%
	Nonbank Financial Industry	29.54	3.28	1.57%
	Central Government	162.92	46.75	22.40%
	Local Government	-0.76	0.00	0.00%
	Households	48.16	0.00	0.00%
	External Sector	101.89	0.00	0.00%

Graph 1.18 Financial Position Network Analysis Q4/2018 and Q1/2019 (Rp, trillions)



Quarterly IV 2018 | Quarterly I 2019

Notes:
Nodes represent net financial asset position, while the edges refer to bilateral exposure between sectors.

Source: Financial Account and Balance Sheet Indonesia (FABSI)

[2] *The dynamics of financial transactions across domestic economic sectors as well as interconnectedness with the external sector are illustrated in the Financial Account and Balance Sheet Indonesia (FABSI) analysis as a composite of stock positions and transaction flows.*

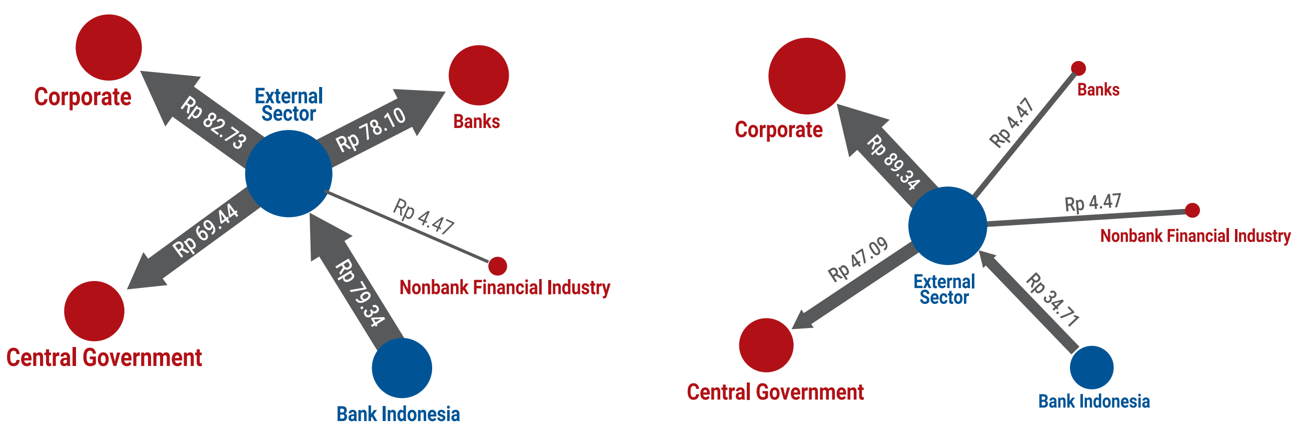
The ratio of domestic to external financial liabilities has tracked a downward trend since the end of 2015 despite the dominant role of the external sector. Although the external sector still dominates domestic financing, the domestic sector continues to play a significant role in terms of stimulating GDP growth in Indonesia. Such dynamics have lowered the net position of domestic to external financial assets/liabilities from 31,55% in the first quarter of 2018 to 31,40% in the first quarter of 2019 (Table 1.4). In general, the portion of domestic to external financial liabilities has tended to decline across all sectors, except in the banking sector which recorded an uptick from 9.25% in the first quarter of 2018 to 9,75% in the first quarter of 2019. The financial structure across sectors has remained stable despite a decline in transaction value, as reflected by a relatively stable network structure of financial positions over the past few periods, albeit with a decrease in transaction value (Graph 1.19). Funding from the external sector was primarily absorbed by the corporate sector, banking industry and central government. Considering the importance of the external sector in terms of domestic financing, potential sources of vulnerability in the domestic financial system demand vigilance, especially fragilities that could amplify the impact of global economic and financial shocks.

Table 1.4 Net Domestic to External Financial Asset/Liability Position

% of external

Sektor	Q. I 2015	Q. I 2016	Q. I 2017	Q. I 2018	Q. I 2019
Corporate	-33.15%	-28.40%	-17.83%	-14.47%	-13.40%
Banks	-11.24%	-9.43%	-9.05%	-9.25%	-9.75%
Nonbank Financial Industry	-2.86%	-2.69%	-2.19%	-2.01%	-1.98%
Bank Indonesia	12.78%	11.48%	11.98%	11.87%	11.17%
Central Government	-14.94%	-16.35%	-16.77%	-17.69%	-17.44%
Total Domestik/Nasional	-49.41%	-45.40%	-33.86%	-31.55%	-31.40%

Graph 1.19 Analysis of Foreign Financial Transactions (Rp, trillions)



Note :
Net Lending ■ Net Borrowing
Nodes represent net financial position, while the edges refer to bilateral exposure between sectors.
■

Source: Financial Account and Balance Sheet Indonesia (FABSI), processed using NodeXL

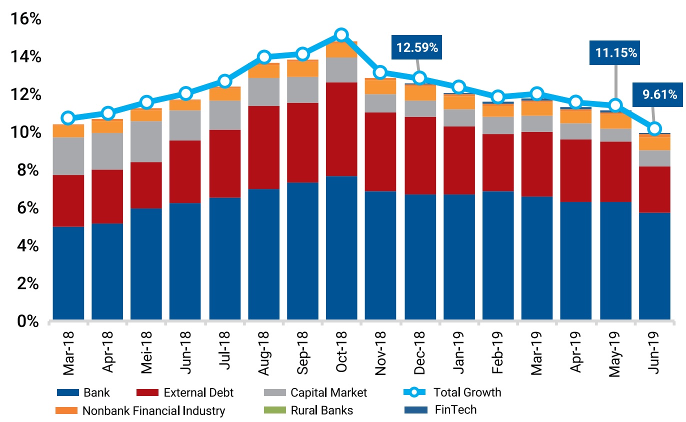
Conditions in Indonesia's financial markets remain under control in line with improving financial market performance, led by stronger capital market and bond market indexes, including government and corporate bonds (Table 1.5). The Jakarta Composite Index (JCI) traded up to a level of 6.359 at the end of the first semester of 2019, while the rupiah maintained a Rp14.128 exchange rate against the US dollar. The Inter-Dealer Market Association (IDMA) index and Indonesia Composite Bond Index (ICBI) rallied to levels of 98,7 and 260 respectively at the end of the first semester of 2019. In the interbank money market, spread continued to increase in the first semester of 2019, albeit at a slower rate compared with the same period in 2018. Adequate liquidity was also maintained, as confirmed by an average daily trading volume of Rp12,9 trillion, up from Rp11,9 trillion in the second semester of 2018. The various gains rode on positive sentiment at home, including an upgraded credit rating affirmed by S&P, which triggered a surge of capital inflows to domestic markets, controlled inflation and policy rate reductions. Despite improvements in the financial markets, economic financing tended to decelerate, primarily held back by slower growth of bank financing and external debt (Graph 1.20). In addition, financing through the capital market slowed in the first semester of 2019 to 8,14% (yoy) from 8,49% (yoy) in the second semester of 2018 (Table 1.6). Moving forward, financing growth is expected to accelerate in line with an uptick in the financial cycle during the first half of 2019, showing early signs of expansion (Graph 1.21).

Table 1.5 Financial Market Performance

Market	Unit	2017	2018		2019
		Sem II	Sem I	Sem II	Sem I
Jakarta Composite Index (JCI)	Price	6.356	5.799	6.194	6.359
Rp Exchange Rate	Price	13.568	14.330	14.390	14.128
Government Securities (SBN)	"IDMA Price*	"105.4	"95.0	"94.9	"98.7
	10-yr *Yield* (%)"	6.6"	8.1"	8.1"	7.5"
Corporate Bonds	"ICBC Price**	"243	"233	"241	"260
	Yield (%)"	10"	11"	11"	11"
Interbank Money Market	Avg. *Spread* (bps)	16.4	31.6	27.9	30.6
	Average Daily Volume (Rp T)	8.6	11.9	11.9	12.9

**Government Bond Index*
***Corporate Bond Index*
****O/N Interbank Rate*

Graph 1.20 Sources of Financing



Source: OJK, KSEI

Graph 1.21 Financial Cycle

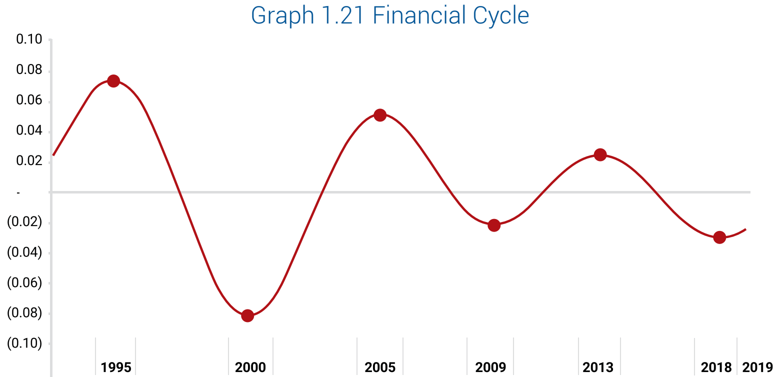


Table 1.6 Non-Financial Private Financing Growth

Instrument	Growth (yoy)						
	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19
Loans*	8.24	8.61	10.78	12.67	11.55	11.53	10.06
External Debt	8.67	11.93	14.54	18.4	18.13	14.84	9.18
Capital Market	10.67	20.75	15.65	13.61	8.49	8.12	8.14
Nonbank Financial Industry**	7.97	7.43	6.39	9.05	8.62	7.9	8.53
FinTech	n a	n.a	n.a	n.a	620	518	283
Total	9.5	10.46	11.8	13.82	8.56	11.73	9.61

* Loans include commercial banks and rural banks
**The nonbank financial industry includes finance companies, infrastructure finance companies, Indonesia Eximbank, Pawnbrokers, PNM, Venture Capital

Source: Financial Services Authority (OJK), Indonesian Central Securities Depository (KSEI), Bank Indonesia, processed

Economic financing was the main drag on credit growth, which decelerated to 9,92% (yoy) in June 2019 on dwindling demand for loans. The banking industry confirmed slower growth of working capital loans and consumer loans in the reporting period, contrasting the gains posted by investment loans until May 2019 before retreating in June 2019. In terms of lending, slower credit growth was caused by loans allocated to sectors impacted by lower commodity prices and global demand. By sector, growth of loans disbursed by the banking industry to trade, miscellaneous and the manufacturing industry experienced contractions as collateral damage of the ongoing trade war (Table 1.7).

Table 1.7 Credit Growth by Economic Sector

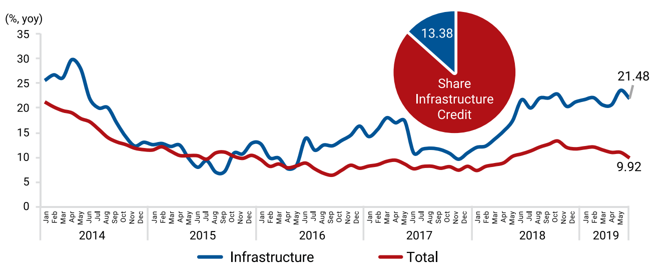
Sector	Credit Growth by Economic Sector							
	Sem I 2017	Sem II 2017	Q. I 2018	Q. II 2018	Q. III 2018	Q. IV 2018	Q. I 2019	Q. II 2019
Trade	3.44	5.20	5.56	9.12	11.28	9.40	9.12	7.42
Miscellaneous	9.01	10.29	11.57	10.61	11.59	10.30	8.79	7.56
Manufacturing	5.29	5.42	4.86	7.51	9.73	9.10	9.51	6.89
Transportation	(2.03)	6.31	12.29	23.12	20.37	19.00	11.36	8.51
Construction	21.58	20.57	18.32	18.36	17.24	22.08	27.11	25.65
Agriculture	11.42	12.05	12.23	12.69	11.32	11.67	10.96	8.63
Corporate Services	12.05	7.96	8.39	8.81	9.42	12.98	11.23	10.40
Social Services	14.86	24.05	14.71	12.97	16.52	13.15	16.28	14.91
Mining	2.07	(10.07)	(16.07)	(7.29)	24.58	21.39	31.47	20.29
Electricity	14.36	7.88	11.58	29.58	33.34	16.46	21.15	26.87
Total	7.75	8.24	8.54	10.75	12.69	11.75	11.54	9.92

Infrastructure sector financing continued to shore up domestic credit growth. Infrastructure credit growth of 21,9% (yoy) offset further credit declines (Graph 1.22). The main contributor to infrastructure loan growth was construction, with a dominant share and the fastest credit growth amongst other sectors (Graph 1.23). Despite relatively solid growth, infrastructure loans have tended to moderate since the beginning of 2019 in line with the progress of infrastructure projects as well as those already completed.

Non-performing loans (NPL) were well mitigated in the reporting period in line with moderating credit growth. The NPL ratio was comparatively low at 2,50% in the second quarter of 2019 despite increasing slightly compared with conditions at the end of 2018. The main contributors to the higher annual NPL ratio were the miscellaneous sector, manufacturing industry and trade (Table 1.8). Notwithstanding, attention should be drawn to the rising level of Loans at Risk (LaR), in particular the increase of level 2 restructured loans.

Growth of bank deposits was subdued in line with weaker credit growth. Bank deposits expanded 7,42% (yoy) in June 2019. Deposit growth has tracked a downward trend since the third quarter of 2017, primarily held back by decreasing corporate deposits in line with muted corporate performance due to global pressures (Graph 1.24). Furthermore, lower deposit growth was also confirmed by slower growth of Net Claims on Central Government (NCG) and Net Foreign Assets (NFA) (Graph 1.25). The NFA position declined on rising imports, including raw materials, capital goods and consumer goods. A net fiscal expansion planned by the government for the latter half of 2019 is expected to stimulate growth of bank deposits and liquid assets.

Graph 1.22 Infrastructure Loan Growth



Graph 1.23 Infrastructure Loan Growth by Subsector

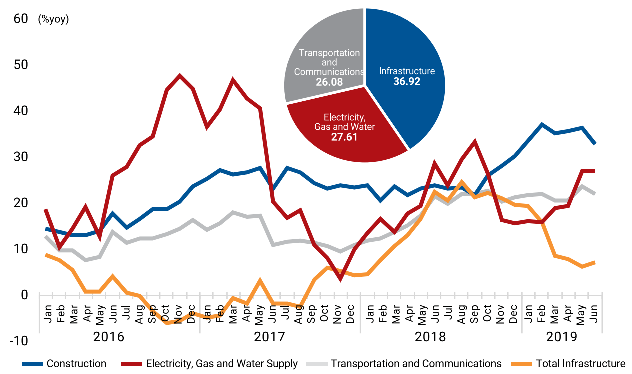
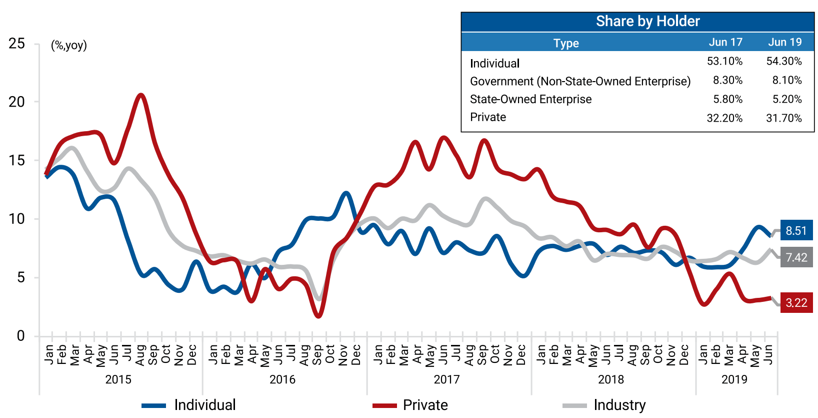


Table 1.8 NPL Ratio by Sector

Sector	NPL Kredit (T)				NPL Kredit (%)			
	Sem I 2018	Sem II 2018	Q. I 2019	Q. II 2019	Sem I 2018	Sem II 2018	Q. I 2019	Q. II 2019
Trade	42.28	40.80	42.89	43.48	4.11	3.79	4.00	3.94
Miscellaneous	24.90	22.93	25.61	26.74	1.78	1.55	1.72	1.78
Manufacturing	24.03	22.72	24.16	25.86	2.85	2.53	2.78	2.87
Transportation	6.41	5.83	5.03	4.81	2.99	2.68	2.35	2.07
Construction	12.09	9.92	11.89	12.80	4.36	3.14	3.67	3.67
Agriculture	4.82	4.89	5.57	5.50	1.39	1.33	1.52	1.46
Corporate Services	8.86	7.47	7.43	8.41	1.92	1.52	1.53	1.65
Social Services	2.88	2.02	2.43	2.61	2.26	1.41	1.66	1.78
Mining	4.93	6.42	5.98	4.88	4.34	4.66	4.34	3.58
Electricity	1.83	2.26	1.93	1.80	1.11	1.33	1.03	0.86
Total	133.02	125.26	132.91	136.88	2.67	2.37	2.51	2.50

Non-deposit funds have continued to increase despite slower deposit growth. To ensure adequate liquidity, the banking industry took measures to optimise sources of non-deposit funds. Bank capital has continued to grow at an average rate of 17,7% per year. Similarly, banks have increased loans by an average of 30,5% per year since 2005 (Table 1.9). Such developments have expanded the share of capital and loans in terms of total funds (Graph 1.26). This has bolstered liquidity and capital in the banking system. In addition, bank profitability has remained relatively stable despite slower credit and deposit growth. The return on assets (ROA) was recorded at 2,47% in June 2019, down slightly from the 2,50% position recorded at the end of 2018. The decline stemmed from a narrower profit margin in order for the banks to maintain credit growth momentum, which reduced the net interest margin (NIM) to 4,8% in the middle of 2019 (Graph 1.27). Nevertheless, the banking industry successfully maintained efficiency, as reflected by relatively stable BOPO efficiency ratio at 80,4%, which prevented a deeper profitability decline.

Graph 1.24 Deposits



Graph 1.25 Net Government Transactions

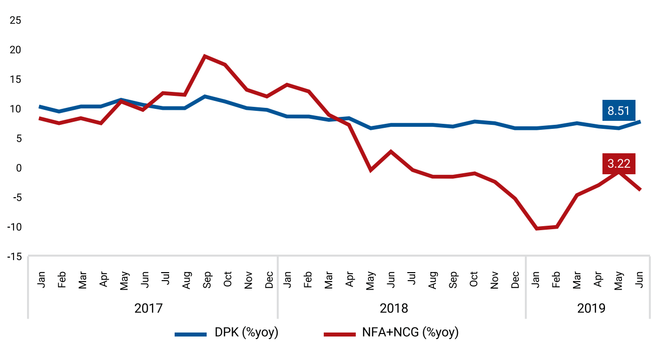
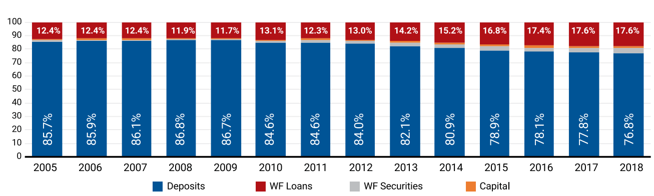


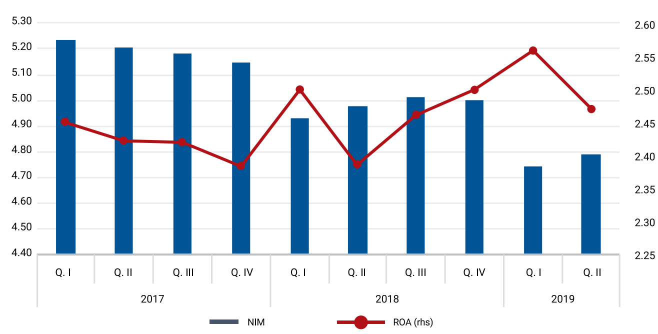
Table 1.9 Bank Sources of Funds

"AVERAGE GROWTH (YOY) OF LIABILITIES AND EQUITY"		2005-2008	2005-2008	2005-2008	2005-2008
	Deposit	16.1%	15.90%	9.00%	13.50%
	WF Loans	7.4%	5.70%	22.40%	30.50%
	WF Securities	4.1%	32.2%	17.20%	18.80%
	Capital	15.4%	21.80%	15.50%	17.70%

Graph 1.26 Bank Sources of Funds

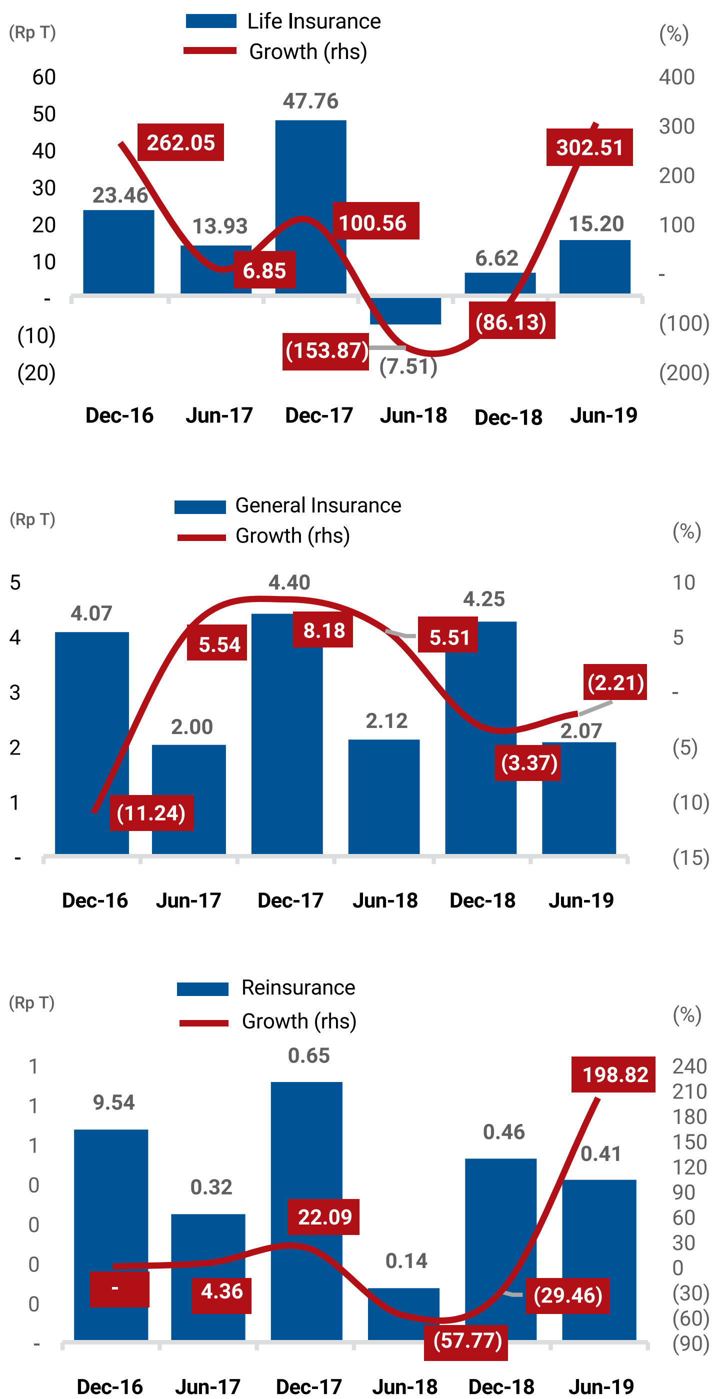


Graph 1.27 Bank Profitability



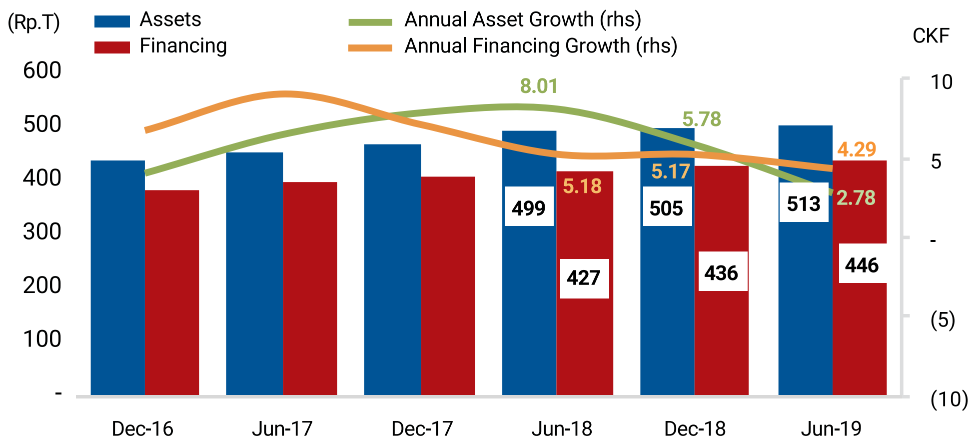
Non-bank financial institutions maintained relatively stable performance amidst slower growth of bank loans. The insurance industry enjoyed increasing investment returns, with growth recorded at 302,5% (yoy) in the life insurance industry. In contrast, general insurance posted a -2,21% (yoy) decline, with reinsurance expanding 198,8% (yoy) (Graph 1.28). Meanwhile, the insurance industry has remained solvent with risk-based capital (RBC) recorded at 313,5% in the life insurance industry and 662,9% in the general insurance industry, well above the 120% threshold. Conversely, finance companies disbursed Rp446 trillion of finance in the reporting period, with growth recorded at 4,29% (yoy) (Graph 1.29). Likewise, the pension funds industry grew 20,8% (yoy) (Graph 1.30).

Graph 1.28 Return on Investment - Insurance Industry



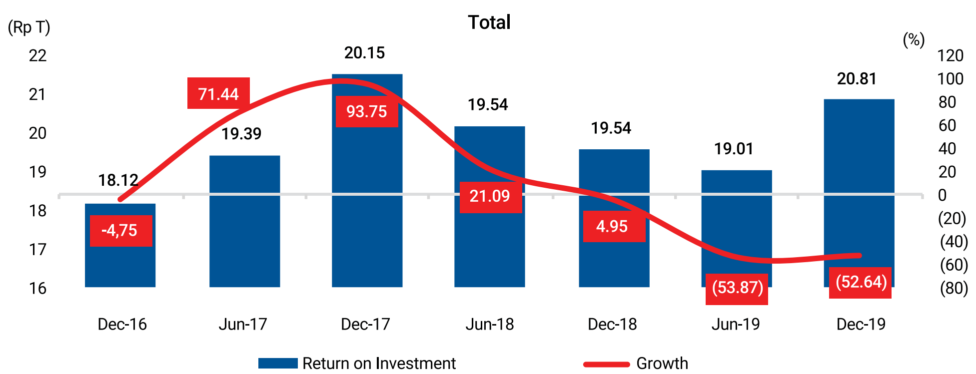
Source: Financial Services Authority (OJK)

Graph 1.29 Finance Company Performance



Source: Financial Services Authority (OJK)

Graph 1.30 Return on Investment - Pension Fund Industry



Source: Financial Services Authority (OJK)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CHAPTER II

MAJOR VULNERABILITIES

In the first semester of 2019, Indonesia's financial system faced three major sources of vulnerability with the potential to disrupt financial system resilience in the event of a domestic or global economic shock. The first vulnerability stemmed from interconnectedness between the banking industry and the corporations to which financing has been disbursed, especially in the event of loans concentrated in disrupted economic sectors. Weakening of corporate performance due to due to the impact of the trade war and commodity prices caused credit demand to decline so that credit growth slowed. If the decline in corporate performance and slower credit growth persist, the resultant vulnerabilities could potentially materialise into financial system stability risks. Despite weak on demand, the supply side remains upbeat as reflected by adequate liquidity in the banking system from non-retail funding sources to sustain slower growth of retail funds. Furthermore, the banks have lowered lending standards, thereby indicating a propensity to extend financing despite more selective lending in practice.

The second vulnerability was linked to the persistently high portion of foreign currency financing in the corporate sector. Corporate inclination towards foreign funds is determined by comparatively attractive interest rates. Nevertheless, the dominance of foreign exchange in terms of corporate financing has left the corporate sector exposed to market risk in the case of increasing exchange rate volatility. Corporations mitigate the risk of vulnerability, however, through hedging activity in compliance with Bank Indonesia regulations require hedging to corporations that have external debt.

The third vulnerability was influenced by foreign holdings of portfolio investment in Indonesia's underdeveloped financial markets. Such conditions demand vigilance due to potential portfolio rebalancing. To that end, Bank Indonesia has coordinated with other relevant authorities to constantly ensure the availability of deep, liquid, efficient, inclusive and secure financial markets that are resilient to shocks arising from foreign exposure.

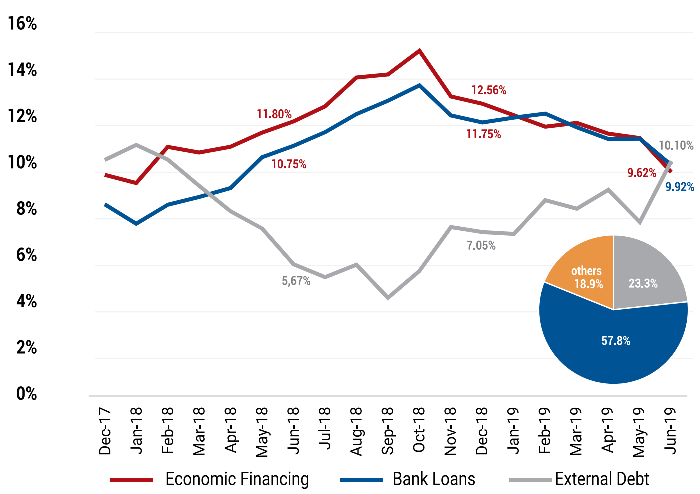
2.1 Banks That Have Exposure to Corporations with Disrupted Performance Experience a Slower Credit Growth

Global and domestic economic moderation as a corollary of the escalating trade war affect the slowing growth in economics financing, loans disbursed by the banking industry in particular. In the first semester of 2019, economic financing grew just 9.62% (yoy), decelerating from 11.80% (yoy) and 12.56% (yoy) in the first and second semesters of 2018 respectively. Bank loans have been the main drag on financing growth, held back by demand-side factors in line with deteriorating corporate performance, particularly in sectors impacted by the trade war and commodity prices. Meanwhile, on the supply side, the banking industry remains upbeat, as indicated by adequate liquidity in the banking system from non-retail funding sources to replace slower growth of retail funds. In addition, the banking industry has relaxed lending standards, pointing towards a propensity to lend despite remaining selective in practice in anticipation of increasing credit risk, particularly in sectors impacted by the trade war and commodity prices.

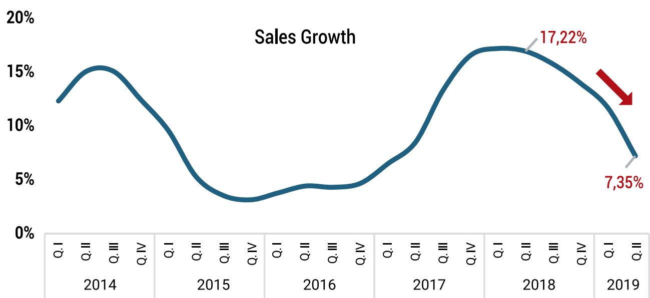
On the demand side, the relatively high level of interconnectedness between the domestic non-financial corporate sector (hereinafter known as the corporate sector) and global economy has meant that global economic moderation, sliding commodity prices and furtherance of the trade war have restrained corporate sector performance. In general, Indonesia's corporate sector is dominated by trade and manufacturing, which rely on imported raw materials, leading to relatively higher product prices. Therefore, during a period of sliding commodity prices, as occurred during the first half of 2019, corporations involved with trading commodities experienced significant pressures. At the same time, global economic moderation has undermined world trade volume, thus reducing export demand for domestic products. On the other hand, the ongoing trade dispute between the United States and China, which has been accompanied by a market reallocation of Chinese products, including inundating Indonesia's traditional export destinations, has intensified pressures on the corporate sector because Indonesian exports struggle to compete with the lower prices of Chinese goods.

Pressures on corporate performance have been reflected by declining sales and capital expenditure (capex) since the beginning of 2018, with agriculture, mining and construction worst affected. Consistent with declining sales, profitability has also decreased that could place additional strain on corporate repayment capacity. As an aggregate, the corporate sector's Interest Coverage Ratio (ICR) was maintained at a level of around 2.0 in the second quarter of 2019 although the number of corporations experiencing a lower repayment capacity, namely with an ICR < 1.5, tended to increase from a 34.7% share in the first semester of 2018 to 38% in the reporting period (Graph 2.1.2). By sector, agriculture, transportation and corporate services reported a lower interest coverage ratio (ICR) in the first half of 2019. Deteriorating corporate performance together with global economic moderation and sliding international commodity prices point to a high level of operational interconnectedness in the domestic corporate sector to global factors, primarily in the form of fulfilling demand for raw materials and product marketing. Consequently, the corporate sector is exposed to global economic developments and commodity price movements.

Graph 2.1.1 Economic Financing, Bank Loans and External Debt



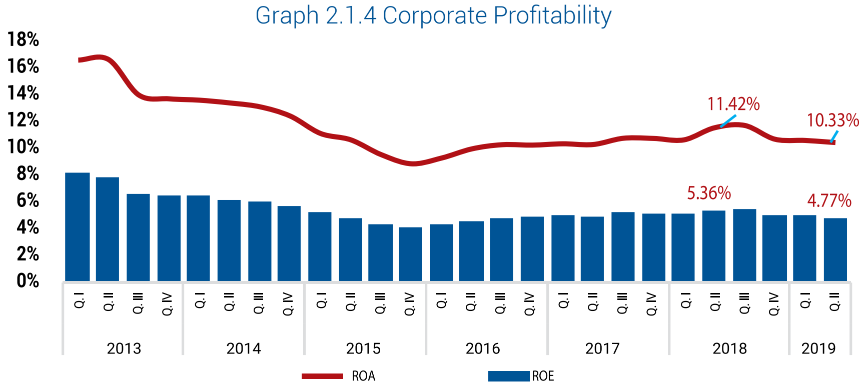
Graph 2.1.2 Corporate Sales Growth



Graph 2.1.3 Corporate Capex Growth

Source: Bank Indonesia, Indonesia Stock Exchange, Bloomberg, processed

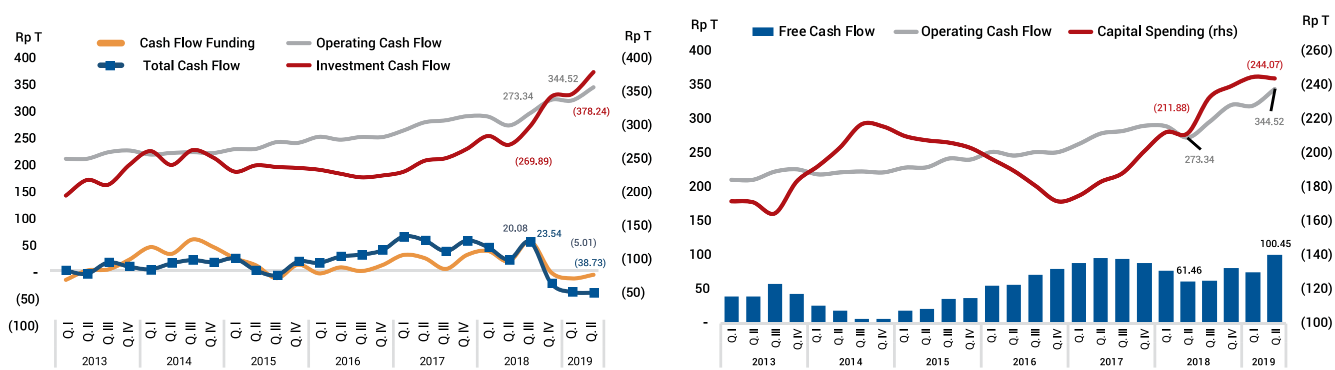
Graph 2.1.4 Corporate Profitability



Source: Bank Indonesia, Indonesia Stock Exchange, Bloomberg, processed
Total of 431 non-financial corporations in the observation sample

Against a backdrop of declining performance, the corporate sector tended to pare back investment expenditure to anticipate future risks by postponing business expansion and optimising internal funds to reduce the debt burden. Corporate cash flow developments confirmed the optimisation of internal funds. Based on cash flow data, cash flow funding in the corporate sector has declined since 2018. Meanwhile, operating cash flow and investment cash flow have increased over the same period (Graph 2.1.5).

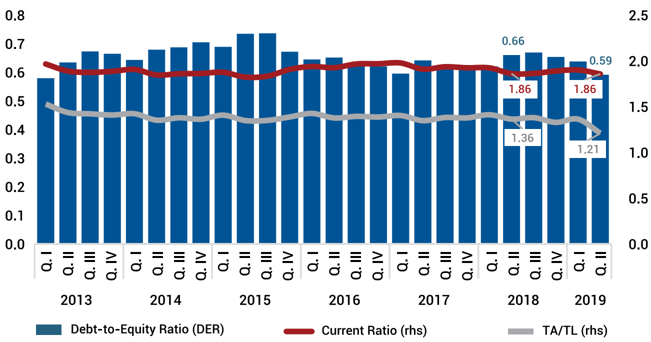
Graph 2.1.5 Corporate Cash Flow



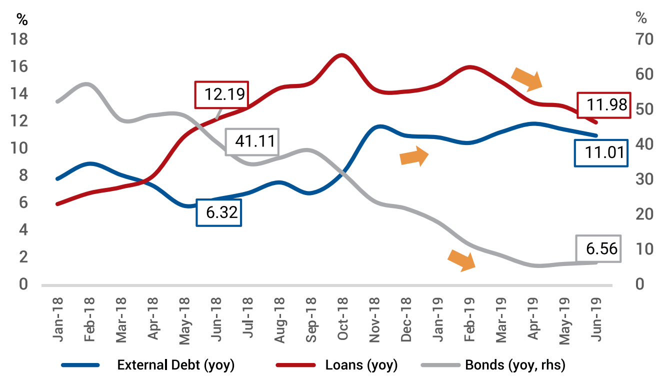
Source Bank Indonesia, BEI, Bloomberg, processed

Such developments are indicative of a corporate sector utilising operating funds for business expansion. Meanwhile, the current corporate trend to reduce the debt burden is evidenced by lower corporate leverage (Graph 2.1.6). Corporate financing sources have declined, from bonds and loans in particular, while financing from external debt continued to accelerate in the first semester of 2019, albeit modestly, compared with conditions in the first and second semesters of 2018 (Graph 2.1.7). Restrained business expansion was also reflected in the corporate sector's financial transactions, which experienced a net borrowing[1] decline in the first quarter of 2019 despite a surge of international funds in line with an increase of capital inflows (Table 2.1.1). The net borrowing decline was primarily caused by less capital investment by the central government in the corporate sector, affecting state-owned enterprises in particular, as well as less corporate financing from the banking industry. In accordance with annual trends, corporate net borrowing could potentially increase in the second quarter. Notwithstanding, the increase is not expected to match that of the previous year due to the wait-and-see attitude of the corporate sector with respect to global and domestic economic developments after the general election has played out along with the tit-for-tat trade war between the United States and China.

Graph 2.1.6 Corporate Leverage



Graph 2.1.7 Corporate Financing Sources



Source: Bank Indonesia, Indonesia Stock Exchange, Bloomberg, processed
Total of 431 non-financial corporations in the observation sample

Table 2.1.1 Net Lending/Borrowing by Sector

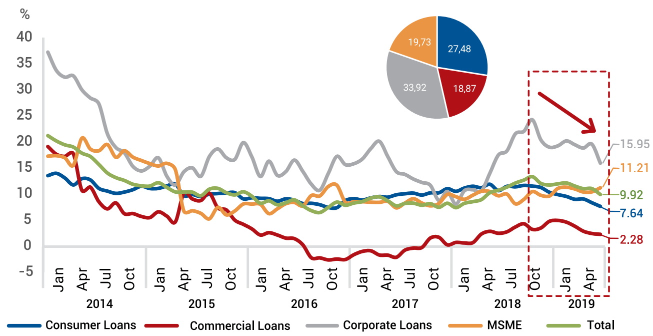
Q4/2018	Corporates	Bank Indonesia	Bank	Nonbank Financial Institutions	Central Government	Local Government	Households	Domestic Total	International
Financial Assets	252.41	171.98	309.68	49.43	2.45	(85.88)	159.96	860.02	283.76
Financial Liabilities	414.03	167.90	276.31	38.57	54.60	3.96	60.07	1015.43	128.34
Net Lending/Borrowing	(161.62)	4.08	33.37	10.86	(52.15)	(89.85)	99.89	(155.41)	155.41

Q1/2019	Corporates	Bank Indonesia	Bank	Nonbank Financial Institutions	Central Government	Local Government	Households	Domestic Total	International
Financial Assets	0.53	(27.86)	82.96	69.79	82.57	108.64	(50.23)	266.39	283.76
Financial Liabilities	117.99	(23.78)	39.12	29.54	12.92	(0.76)	48.16	373.19	128.34
Net Lending/Borrowing	(117.46)	(4.08)	43.83	40.25	(80.34)	109.40	(98.39)	(106.80)	155.41
Note									

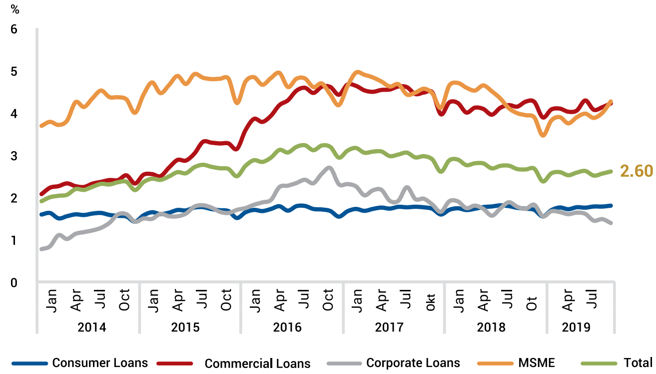
Source: Financial Account and Balance Sheet Indonesia, Q1/2019, preliminary data

[1] *Net borrowing = financial liabilities > financial assets*

Graph 2.1.9 Loan Performance by Segment



Graph 2.1.10 NPL by Segment



Decreasing corporate demand for loans to anticipate risk against deteriorating corporate conditions has undermined the bank intermediation function. Based on loan data, credit growth began to decelerate in the third quarter of 2018, affecting nearly all loan segments except MSMEs, with corporate loans and consumer loans[2] confirmed as the main drag on credit growth. Both credit segments experienced deep declines, while dominating the share of credit, which exacerbated the significant impact on total credit growth in the industry (Graph 2.1.9). Departing from consumer loans, slower growth of corporate loans was not accompanied by an uptick of non-performing loans (NPL), indicating that slower corporate loan growth during the first half of 2019 was influenced more by demand-side factors in line with deteriorating corporate performance as an impact of the current trade war and lower commodity prices (Graph 2.1.10).

In addition to deteriorating corporate performance, corporate credit growth has also been influenced by lower demand for loans from the infrastructure sector. The development of massive infrastructure projects since 2016 positioned infrastructure financing as the main driver of bank loans through to the end of 2018. Entering 2019, however, despite declining corporate performance, infrastructure financing remained in high demand and the key contributor to credit growth. Nevertheless, as the government's large infrastructure projects are already underway or nearing completion, demand for infrastructure loans has begun to decline in terms of value.

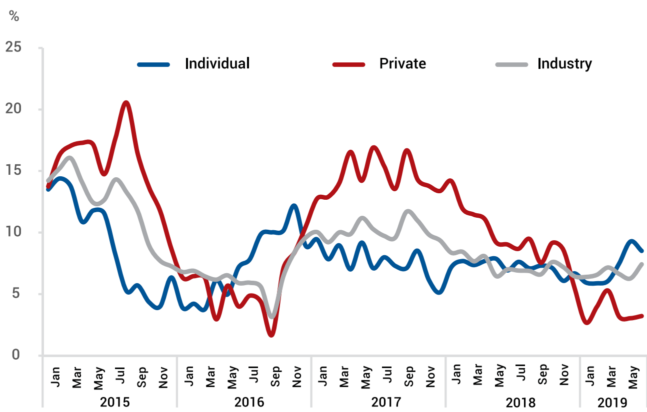
Despite declining corporate performance, the household sector continued to perform well yet the risks will demand attention if household income continues to decrease.

The corporate downturn has not significantly impacted household income. Households are still inclined to save, as confirmed by faster growth of individual deposits in the first half of 2019 (Graph 2.1.11). The main contributor to faster growth was individual deposits with a value of > Rp2 billion. Recent developments were characterised by higher deposit rates in response to policy rate hikes in the second semester of 2018, making investment in the form of term deposits more competitive compared with other financial instruments for investment. Stronger deposit growth demonstrates that the household sector has maintained adequate funding reserves to meet their needs in the short-medium term. Nevertheless, the increase is only expected to be transitory. In anticipation of potentially lower incomes moving forward, the Consumer Survey conducted by Bank Indonesia confirmed that household sector propensity to consume has decreased, while households are also less inclined to borrow (Graph 2.1.12). Consequently, the funds used to meet daily household necessities will be optimised from the income received and savings held.

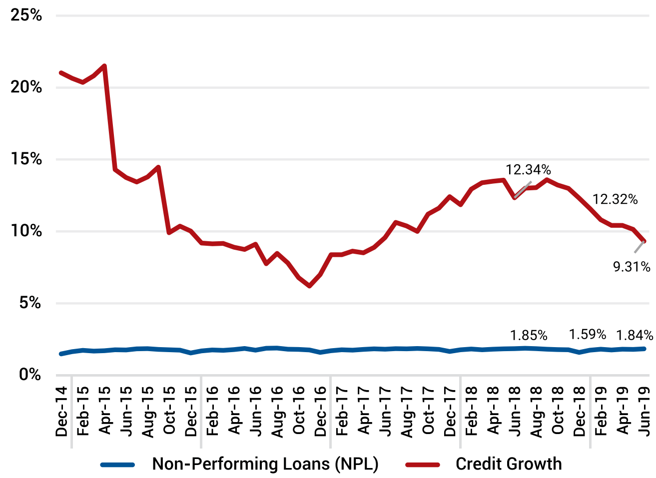
Efforts by households to reduce debt have translated into slower growth of household loans. In the first semester of 2019, household loans grew 9.31% (yoy) compared with 12.34% (yoy) and 12.32% (yoy) in the first and second semesters of 2018 respectively. Notwithstanding, the slowdown has not significantly impacted total credit due to the relatively small share of just 23%. Amidst slower credit growth, credit risk (NPL ratio) in the household sector has remained relatively stable at 1.8%, well below the industry average of 2.6%.Congruent with less debt, household repayment capacity remains solid, as reflected by a downward debt service ratio (DSR) trend. Moving forward, however, household risks will continue to demand vigilance if incomes continue to decline.

[2] Corporate loans include investment loans and working capital loans, excluding MSME loans, with a credit ceiling Rp100 billion.
Commercial loans include investment loans and working capital loans, excluding MSME loans, with a credit ceiling < Rp100 billion.

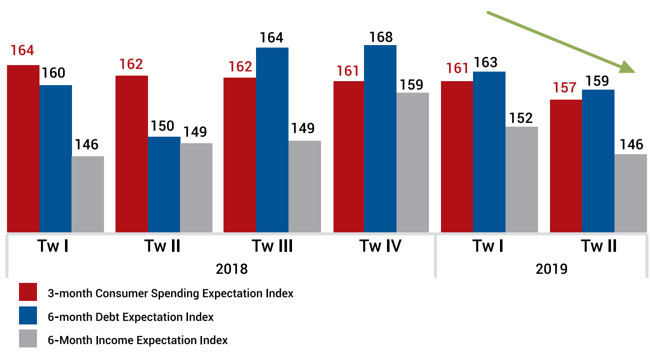
Graph 2.1.11 Growth of Individual Deposits



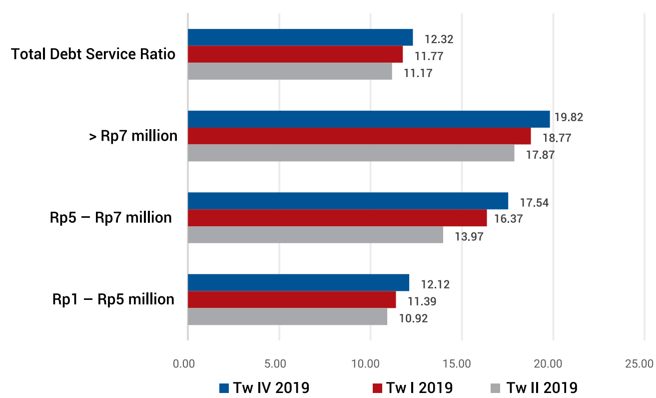
Graph 2.1.13 Household Loans



Graph 2.1.12 Consumer Expectation Indexes



Graph 2.1.14 Household Debt Service Ratio by Spending Bracket



Source: Bank Indonesia, processed

On the supply side, declining economic activity in Indonesia triggered negative sentiment concerning the bank intermediation function. Bank prudence towards a potential build-up of credit risk coupled with a declining trend of retail funding[3], as the dominant funding source in the banking industry, could potentially undermine the pace of credit growth. Since the third quarter of 2017, the banking industry has maintained a stable NPL ratio of less than 3%, which is well below the 5% threshold. Nevertheless, potential credit risk demands attention because, during the same period, loans at risk (LaR) have remained high at 10-11% with level 2 restructured loans peaking at 2% in the second quarter of 2019 (Graph 2.1.15).

By segment, consumer loans and MSME loans were the main contributors to the higher LaR. In contrast, risk on corporate loans was effectively contained despite several sectors demanding attention due to a high LaR or significant LaR increase, namely agriculture, manufacturing, construction, trade and consumption (Table 2.12). Increasing risk in the agricultural sector stemmed primarily from lower commodity prices, while risks in the manufacturing industry and trade sector were mainly due to fallout from the trade war. In addition, the accumulation of risk in the construction and consumption sectors was spurred by restrained demand for housing. Moving forward, the impact of contagion to other sectors will demand attention if economic moderation and the trade war continue.

3 *Retail funding is bank deposits.*

Graph 2.1.15 Loan at Risk

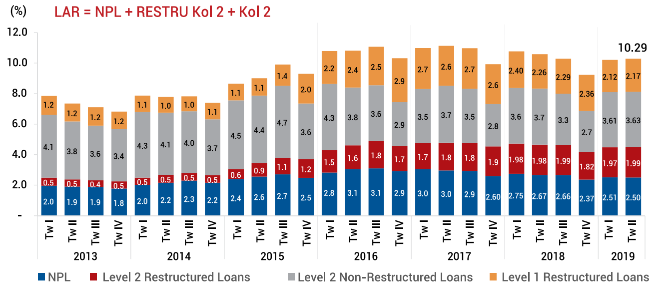


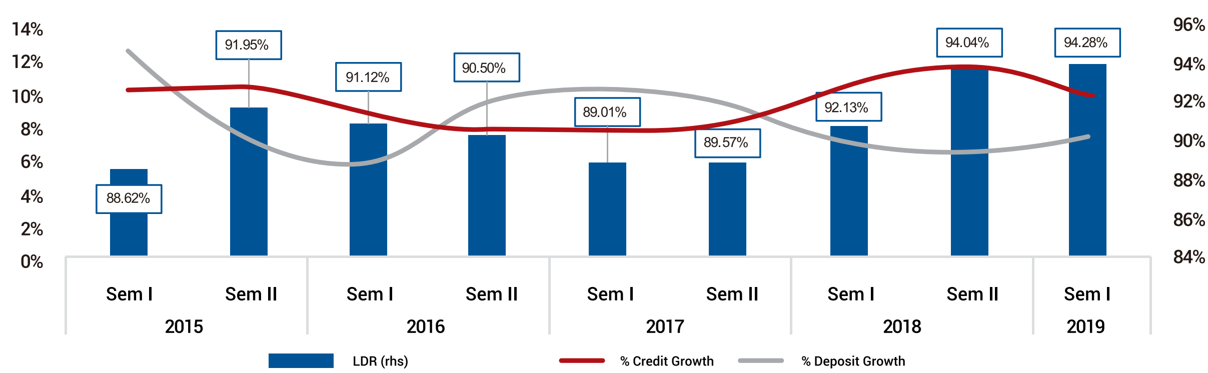
Table 2.1.2 LaR by Sector

Sector	Rasio L&R		Growth		Pangsa	
	Dec-18	Jun-19	Dec-18	Jun-19	Dec-18	Jun-19
Agriculture	5.4%	6.5%	-8.63	27.26	5.44	6.49
Mining	3.4%	3.0%	-31.48	-6.13	3.38	3.00
Manufacturing Industry	18.3%	16.8%	7.82	0.38	18.31	16.75
Electricity, Gas and Water Supply	1.3%	1.1%	-5.67	3.84	1.30	1.10
Construction	8.0%	10.7%	13.93	34.59	8.01	10.74
Trade	26.0%	25.7%	3.93	5.05	26.04	25.69
Transportation	5.3%	4.4%	-9.46	-9.87	5.30	4.36
Corporate Services	9.1%	8.3%	10.78	1.36	9.12	8.29
Social Services	2.3%	2.2%	4.31	-1.52	2.27	2.19
Others	20.8%	21.4%	10.61	7.87	10.83	21.39
Total	100%	100%	3.71	6.90	100.00	100.00

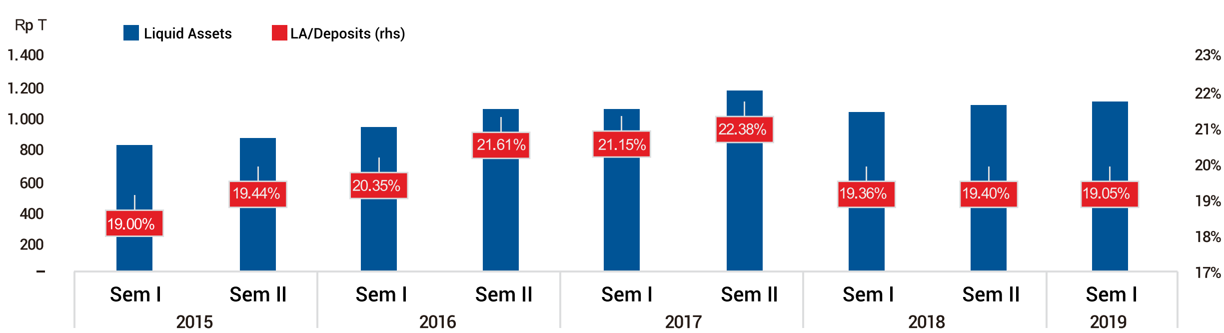
Striving to contain non-performing loans (NPL) and maintain profitability, the banking industry applied more selective lending, favouring better performing borrowers while reallocating disbursed loans to sectors deemed profitable. This triggered slower credit growth due to tight competition for borrowers, while the sectors experiencing a build-up of risk were those historically dominant in terms of borrowing, including the manufacturing industry, trade and others (consumer loans).

Besides the influence of bank prudence to more intense credit risk pressures, supply-side constraints to credit expansion included sluggish growth of retail funding[4] as the dominant source of bank funds. Based on the data, growth of bank deposits accelerated from 6.45% (yoy) in the second semester of 2018 to 7.42% (yoy) in the first semester of 2019 (Graph 2.1.11). The growth surge was in line with maintained capital inflows and an increase of individual deposits. In contrast, non-financial corporate deposits continued to moderate in line with increasing propensity to utilise internal funds for business activities. Despite the recent uptick, the long-term growth trend of bank deposits has moderated. Furthermore, a deeper decline of deposit growth than credit growth has increased the loan-to-deposit ratio (LDR) and eroded liquidity, despite adequate liquidity maintained (Graph 2.1.16 and 2.1.17). The prevailing upward LDR ratio and downward liquidity ratio trends have made the banking industry more selective when disbursing loans in terms of their ability to accumulate deposits.

Graph 2.1.16 LDR, Credit and Deposit Growth



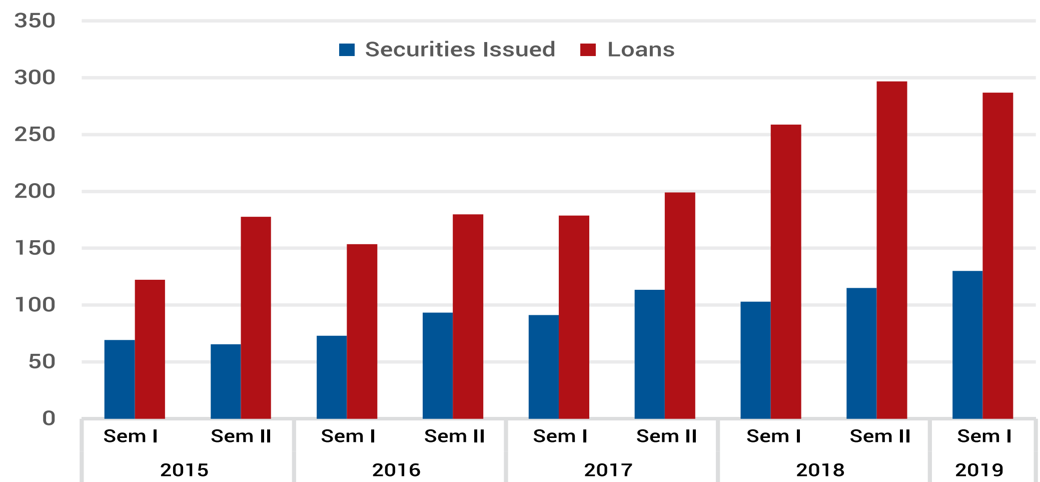
Graph 2.1.17 Liquid Assets and Liquid Assets to Deposits



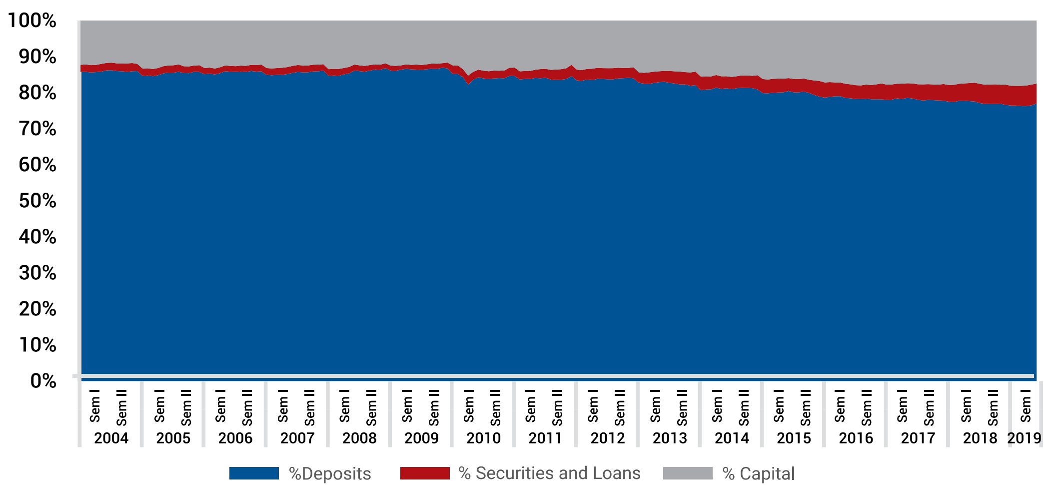
4 *Retail funding is bank deposits*

Confronting the challenge of flatter deposit growth, the banking industry strived to maintain credit growth by expanding funding sources beyond deposits, namely to non-retail or wholesale funding in the form of issuing securities and withdrawing loans (Graph 2.1.18). Nevertheless, departing from conditions in the first and second semesters of 2018, wholesale funding growth decelerated in the first semester of 2019 due to low demand for non-retail funding amidst faster deposit growth and slower credit growth. Wholesale funding in advanced economies is considered higher risk yet bank exposure in Indonesia to wholesale funding remains relatively low at just 5.53% of total funding sources, which can be used to offset the shortfall of deposits (Graph 2.1.19). Moving forward, by expanding funding sources beyond the dependence on retail funding to include securities and loans, Bank Indonesia could potentially relax the liquidity ratio to help stimulate stronger financing growth in the banking industry. On the demand side, ongoing infrastructure projects, particularly in the form of electricity, roads, bridges and toll roads as well as gas and water are expected to support future credit growth. The positive outlook was confirmed by the results of the Banking Survey conducted by Bank Indonesia in the second quarter of 2019, which revealed a lower Lending Standard Index (LSI) predicted for the third quarter of 2019 against a trend of policy rate reductions by Bank Indonesia. Notwithstanding, the US-China trade dispute continues to demand vigilance due to its potential influence on higher lending standards. A more detailed discussion on lending standards is presented in Box 2.1.1.

Graph 2.1.18 Securities and Loans



Graph 2.1.19 Composition of Banking industry Funding Sources



Boks 2.1 The Banking Industry Relaxes Lending Standards to Stimulate Credit Growth

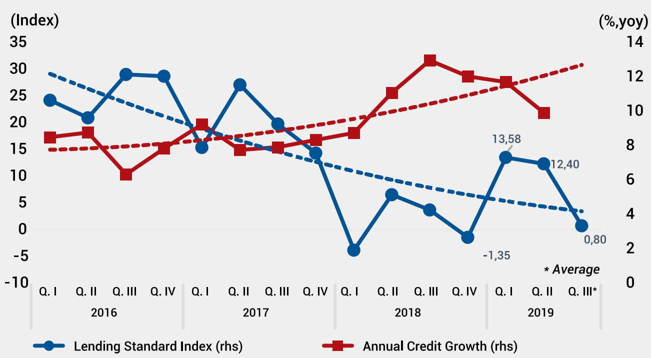
When lending, each respective bank applies its own policy strategy based on internal conditions, economic developments and the regulatory landscape. The Lending Standard Index (LSI) is an indicator of bank lending policy behaviour based on a survey of 40 banks in Indonesia, accounting for an 80% share of the total. LSI is a measure of bank lending behaviour and is used by Bank Indonesia as an input when assessing the supply side of bank finance. LSI is calculated using the weighted net balance (WNB) based on a credit weight for each respondent to total credit and the weight of each response (Tighter (1), Slightly Tighter (0.5), Unchanged (0), Slightly Looser (-0.5) and Looser (-1)). An LSI value of > 0 implies that the banks have tightened lending standards and, in contrast, an LSI value of < 0 implies that the banks have relaxed lending standards.

Banks tended to maintain accommodative lending policy during the period from the first quarter of 2016 until the third quarter of 2019 in order to expand lending. Despite tightening lending standards in the first quarter of 2019, the banks subsequently relaxed lending standards in the second quarter of 2019 and are expected to relax lending standards further in the third quarter of 2019. Such developments were reflected by a relatively low ILS recorded in the third quarter of 2019 at 0.80, down significantly from 12.40 and 13.58 in the first and second quarters of 2019 respectively (Graph B2.1.1).

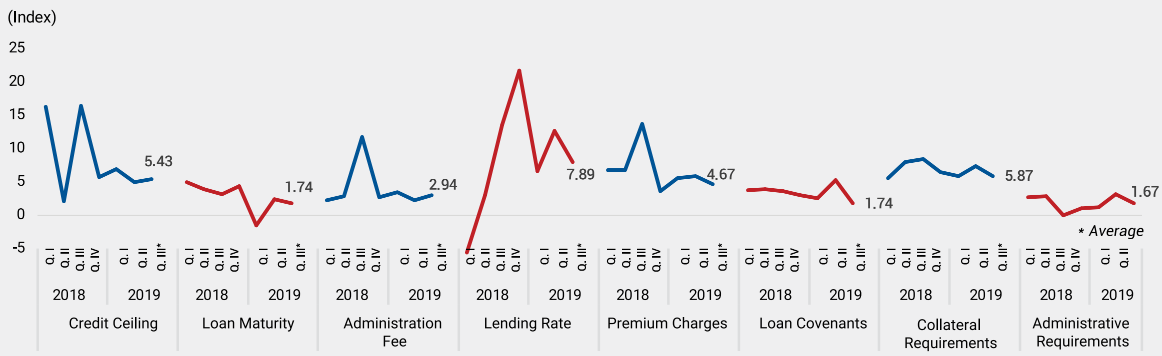
The trend of accommodative lending policy has affected all aspects, administration fees, maturity restrictions and loan covenants in particular (Graph B2.1.2). In contrast, the tightest aspects of lending policy maintained by the banking industry were lending rates, credit ceilings and collateral requirements. Nonetheless, the banking industry has gradually relaxed such aspects. Tighter lending rates in the third and fourth quarters of 2018 were in response to BI 7-Day (Reverse) Repo Rate (BI policy rate) hikes implemented by Bank Indonesia in August, September and November 2018, each by 25bps respectively (Graph B2.1.3). Notwithstanding, the banks continued to maintain low lending rates despite raising deposit rates in line with the policy rate due, amongst others, to tight competition for good borrowers against a backdrop of dwindling demand for new loans, mirroring corporate sector performance. On the other hand, the lower credit risk premium was in line with the decrease recorded in terms of non-performing loans (NPL) on corporate loans in 2019 (Graph B2.1.4).

Accommodative lending policy in the first three quarters of 2019 was precipitated by adequate liquidity in the banking system, coupled with an increase of bank capital, greater risk tolerance, a promising economic outlook and adjustments to the latest real sector dynamics. Despite a general upward loan-to-deposit ratio (LDR) trend, LDR at BUKU 1 and 2 banks decreased in the first and second quarters of 2019. Notwithstanding a relatively high LDR, BUKU 3 and 4 banks still had room to increase financing due to alternative funding sources beyond deposits (Graph B2.1.5). In addition, the banking industry has maintained a solid capital ratio. Adequate liquidity in the banking system during the third quarter of 2019 was also influenced by Bank Indonesia policy to reduce the reserve requirements by 50bps, effective from 1st July 2019.

Graph B2.1.1 LSI and Loan Growth

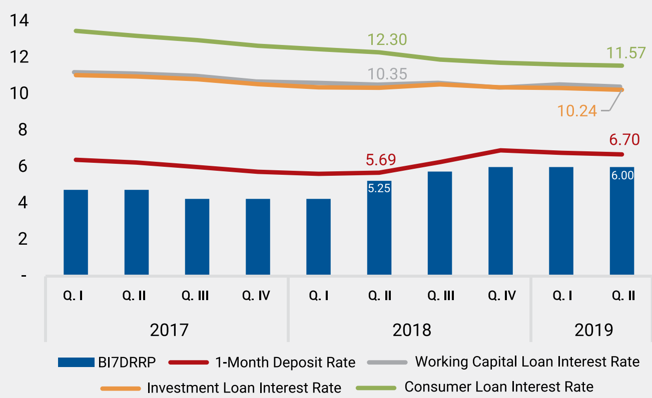


Graph B2.1.2 LSI Performance by Policy Aspect

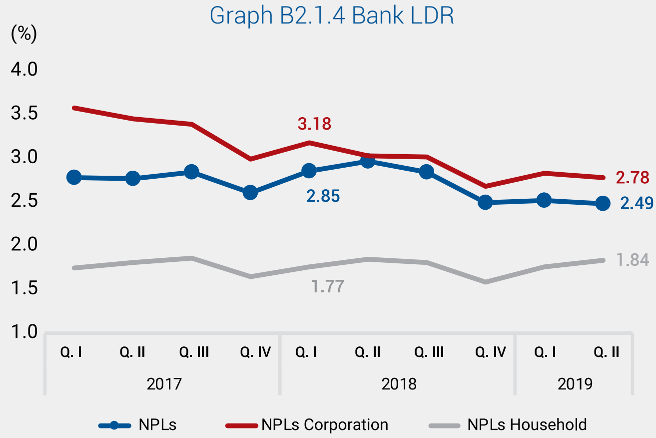


Source: Bank Indonesia

Graph B2.1.3 Interest Rates



Graph B2.1.4 Bank LDR



Source: Bank Indonesia, processed

Table B2.1.1 Three Major Lending Policy Considerations

Rank	Q. I - 2019	Q. II - 2019	Q. III - 2019*
1	Liquidity conditions	Liquidity conditions	Liquidity conditions
2	Capital conditions	Risk tolerance	Economic projections
3	Risk tolerance	Economic projections	Latest real sector conditions

* Average

Source: Bank Indonesia

2.2. Vulnerabilities at Corporates with External Debt Demand Attention

External debt growth in Indonesia accelerated during the first half of 2019 in line with an influx of capital flows. External debt expanded 10.10% (yoy) in the first semester of 2019, up from 5.67% and 7.05% (yoy) recorded in the first and second semesters of 2018 respectively. All sectors contributed to the increase, led by the government sector (Graph 2.2.1). Despite the national increase of external debt, Indonesia's aggregate external debt ratio was well maintained at around 36% of GDP, which is relatively low compared to other peer countries (Graph 2.2.2).

As described previously in Section 2.1, corporate external debt has continued to increase despite a decline of corporate financing sources. Nevertheless, corporate financing remains dominated by bank loans, accounting for 54.5%, followed by external debt with 41.4% and bonds with 4.1% (Graph 2.2.3). In terms of currency, foreign exchange continued to dominate with a 55.5% share of external debt in the first semester of 2018, which subsequently declined slightly to 54.3% in the first semester of 2019. The dominance of foreign currency financing has left corporations exposed to market risk in the event of exchange rate volatility. Furthermore, foreign exchange debt does not only originate from external debt but also from loans disbursed by domestic banks as well as bonds.

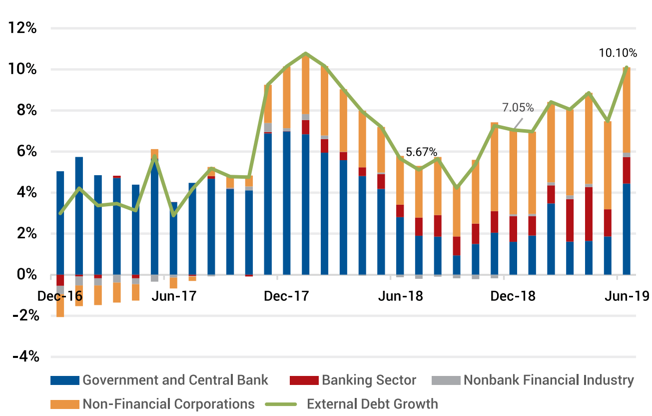
The selection of corporate funding sources is primarily influenced by the cost of funds and risk appetite. Since 2018, the corporate sector has been inclined to seek offshore funding sources due to a lower cost of funds stemming from the widening interest rate differential between Indonesia and advanced economies, as confirmed by the large spread between rupiah interest rates and foreign currency interest rates (Graph 2.2.4). In addition, rapid infrastructure development over the past few years in Indonesia has increased demand for foreign financing for imported raw materials. On the other hand, a number of private corporations are expanding market share by unlocking foreign markets, thus necessitating additional foreign currency financing.

In relation to the upward external debt trend, corporate vulnerabilities to such leverage must be monitored, particularly in terms of a potential currency mismatch and currency risk at corporations with net foreign liabilities but insufficient foreign exchange funding sources. Of the 2,879 leveraged corporations registered in the first semester of 2019, a total of 82% were concentrated in the electricity, gas and water supply sector, mining and manufacturing.

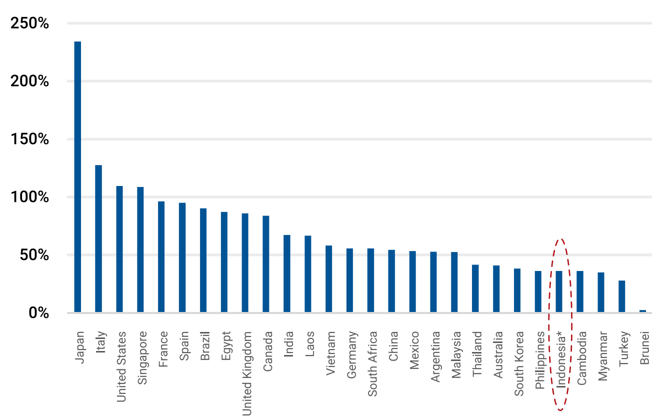
Of that 82%, 73% have already submitted a Prudential Principles Report (KPPK) concerning their external debt drawing. Of those, only around 10% are potentially exposed to a currency mismatch and currency risk due not only to a net foreign liability position and insufficient foreign exchange funding sources but also because such corporations have not fulfilled the prevailing liquidity ratio or hedging ratio[5]. Notwithstanding, the corporate sector effectively

mitigated the risks during the first semester of 2019, as reflected by less leverage and greater repayment capacity. Such conditions were confirmed by a decrease in the debt-to-equity ratio (DER) from 2.19 in the first quarter of 2018 to 1.29 in the second quarter of 2019 as well as an improvement in

Graph 2.2.1 External Debt Growth (yoy) and Sectoral Contribution

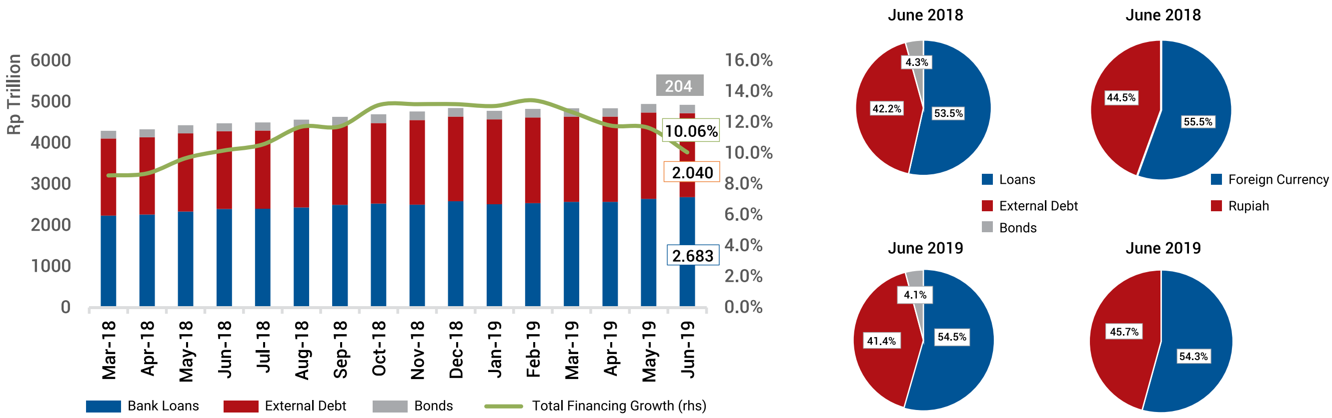


Graph 2.2.2 External Debt to GDP Ratio



5 *In accordance with Prudential Principles: a) the hedging ratio is 25% of the negative balance between foreign currency assets and liabilities for 0-3 months and 3-6 months; and b) the hedging ratio is 70% of the foreign currency assets to foreign currency liabilities with a maturity of up to 3 months.*

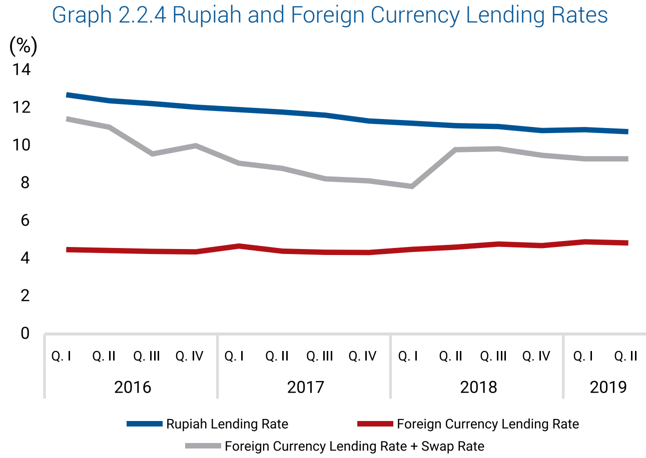
Graph 2.2.3 Corporate Financing



Source: Bank Indonesia, Indonesian Central Securities Depository (KSEI), Bloomberg, processed

the debt service ratio (DSR) from 58.08 in the first quarter of 2018 to 20.69 in the first quarter of 2019.Growth of external debt in the banking industry has accelerated yet continues to account for a comparatively small portion of the total. In the first semester of 2019, external debt in the banking sector grew 14.37% (yoy), up significantly from 6.88% (yoy) in the first semester of 2018. Nevertheless, the share of banking industry external debt has remained relatively stable at around 9% of the national total. Bank exposure to currency risk has been contained, as reflected by a low net open position (NOP) of less than 3%, well below the 20% threshold. Furthermore, the results of a maturity mismatch analysis revealed how the banking industry has maintained adequate foreign liquidity to meet its short and long-term foreign currency payment obligations.

Graph 2.2.4 Rupiah and Foreign Currency Lending Rates



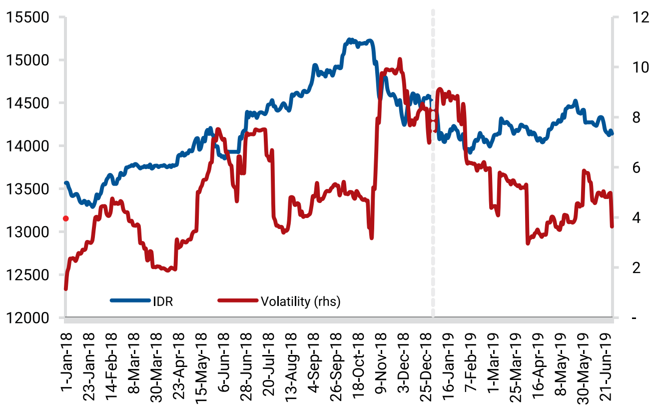
Source: Commercial Bank Reports and Bloomberg, processed

2.3. Financial Markets Exposed to Portfolio Rebalancing Risk

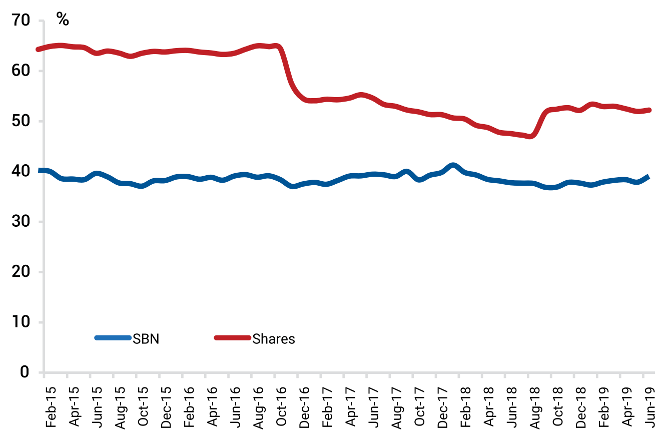
Against the macroeconomic backdrop of a negative saving-investment gap, the role of foreign investment is still necessary to bridge that gap. Nevertheless, if the foreign investment arrives in the form of significant portfolio investment, fragilities in the domestic financial markets could disrupt funding stability. That said, risk in the foreign exchange market was effectively contained during the first half of 2019, as reflected by lower rupiah exchange rate volatility. Furthermore, the rupiah strengthened to Rp14,142 per US dollar at the end of the first semester of 2019 compared with Rp14,390 per US dollar at the end of the second semester of 2018 (Graph 2.3.1). Attractive yields and positive sentiment stemming from Indonesia's upgraded credit rating affirmed by S&P bolstered the positive perception held by investors concerning Indonesia's national economic outlook, thus drawing capital inflows (Graph 2.3.2).

Domestic financial market risks were contained in the first semester of 2019 despite global economic uncertainty, as evidenced by a decrease of average volatility coupled with rising asset prices in the stock and SBN markets as well as a stronger rupiah. Asset price movements in the domestic financial markets were consistent with the majority of regional asset price movements, which also increased. Global investors continue to acknowledge lower risk in emerging markets, including Indonesia, compared with conditions at the end of the third quarter of 2018, when the value of credit default swaps (CDS) peaked at its highest level in the past three years.

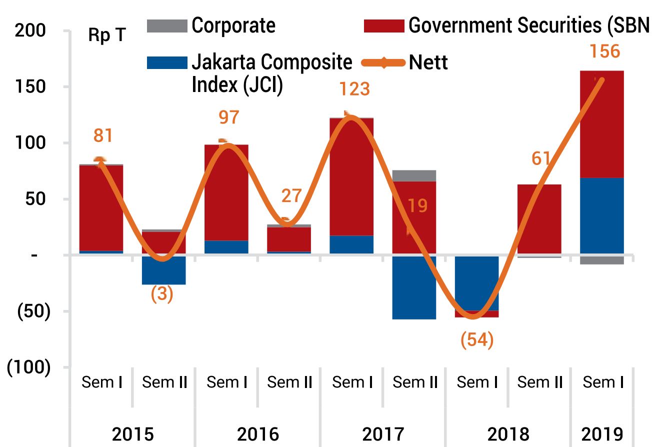
Graph 2.3.1 Exchange Rate Volatility



Graph 2.3.3 Foreign Holdings of SBN and Shares



Graph 2.3.2 Capital Inflows



The recent improvements in terms of risk perception have indirectly maintained asset price movements in the capital market, the SBN market in particular. The stock market gains recorded during the first two quarters of 2019 were wiped out in May 2019 after the United States imposed import tariffs on Chinese goods. Regional stock market indexes subsequently rebounded after local authorities relaxed economic policy to support growth.

Although stock market conditions in Indonesia and the region have already rebounded from the trough recorded in the first semester of 2019, price gains remain relatively restrained compared with conditions at the beginning of the year. Minimal long-term sentiment has been blamed for limited regional stock index movements. Fundamentally, negative sentiment has stemmed from declining corporate profitability in regional stock exchanges due to fallout from the trade war that has undermined world trade volume and impeded global economic growth. Simultaneously, the corporate debt-to-income ratio has increased, thus squeezing investors' profit margins. Both factors have triggered negative valuations in regional bourses, as demonstrated by the Price Earnings Ratio (PER). In June 2019, the PER value of the Jakarta Composite Index (JCI) stood at 19.6, or undervalued, compared with the long-term average of around 23.

By sector, the impact of global economic moderation began to manifest in the first half of 2019. This was confirmed by the heatmap of net income growth for public listed corporations, which began to display more yellow and red hues in the first semester of 2019 compared with conditions in 2018, yet there remains less than half of that recorded in 2015-2016. The agricultural sector was hardest hit in line with sliding international commodity prices, such as crude palm oil (CPO). Moving forward, with the projected global economic downturn and potential for the trade war to escalate, the performance of public listed corporations will need to be monitored.

Table 2.3.1 JCI, SBN and Exchange Rate Volatility and Prices

Rate	Average Volatility				Price Growt			
		Sem I'18	Sem II'18	Sem I'19		Sem I'18	Sem II'18	Sem I'19
JCI	%	15.2	17.0	11.9	%	(8.8)	6.8	2.6
SBN(*yield*)	%	15.4	16.1	10.5	Bps	145.2	23.3	(63.4)
ER	%	4.0	4.0	5.4	%	5.6	0.4	(1.8)

Source: Bloomberg

Table 2.3.2 Heatmap of Income Growth for Public Listed Corporations (Annual Growth EBITDA)

Sector	2014				2015				2016				2017				2018				2019	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
IHSG	5.2	10.0	9.8	5.0	2.9	(1.7)	(0.9)	(8.6)	(10.4)	(7.9)	(5.8)	11.5	16.4	20.8	22.7	18.9	17.7	18.6	22.7	16.8	15.7	14.7
Financial	11.0	10.6	4.9	(0.6)	(2.0)	(6.1)	(2.1)	0.4	(0.2)	3.9	8.7	(1.2)	6.4	19.5	13.1	32.0	24.8	13.6	16.7	14.9	17.8	14.6
Consumption	8.6	7.2	3.2	5.9	11.9	8.1	19.7	(1.3)	(2.6)	(3.7)	(5.4)	9.8	3.7	3.5	3.3	4.0	3.6	6.1	4.8	9.5	12.6	14.9
Infrastructure	1.8	0.6	(0.6)	0.2	0.8	1.4	10.8	13.1	14.3	15.6	8.0	4.2	0.6	(1.3)	(0.7)	2.3	9.5	11.1	9.1	2.8	(2.6)	(1.9)
Basic Industry	21.7	18.7	6.3	(2.8)	(6,4)	(8.3)	(6.8)	(1.0)	6.4	24.4	30.4	25.9	27.8	3.5	(4.0)	(1.7)	6.4	15.0	28.3	40.7	21.0	13.7
Trading	13.8	21.8	4.9	(0.7)	0.7	(1.6)	(1.6)	(14.4)	(23.6)	(23.4)	(16.6)	(0.6)	27.0	22.4	17.0	15.5	9.4	22.1	29.3	19.0	10.9	7.1
Property	22.4	21.9	6.7	11.4	15.5	18.3	9.5	(1.2)	(4.5)	(11.5)	(5.0)	(3.9)	1.0	12.5	23.3	33.4	22.9	8.8	11.8	3.8	(8.2)	(3.0)
Mining	(7.0)	5.3	22.2	(4.1)	(11.6)	(23.0)	(27.9)	(6.6)	(0.8)	(4.3)	(19.1)	(14.7)	1.5	27.1	58.5	50.7	46.8	42.5	46.0	43.8	9.1	3.9
Others Industry	15.2	20.7	10.3	4.2	(1.0)	(3.5)	(1.3)	(5.2)	(2.4)	(2.7)	(3.9)	(0.2)	8.7	7.9	7.9	15.3	9.4	16.5	24.3	25.2	20.5	18.6
Agriculture	9.4	30.0	36.1	31.5	6.5	(7.7)	(21.1)	(30.2)	(27.1)	(27.5)	(22.6)	(18.2)	14.5	37.3	70.3	69.0	13.6	5.9	(6.4)	(8.3)	(10.3)	(24.6)

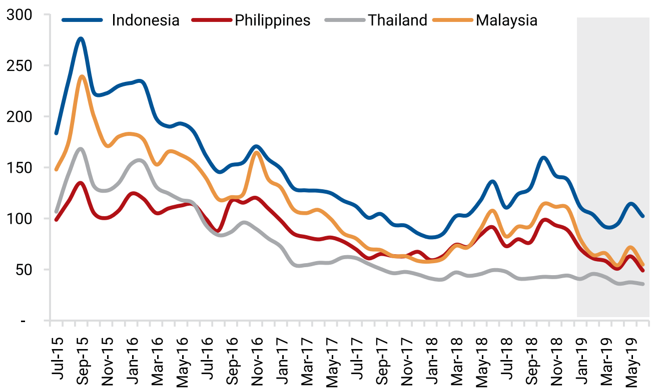
Color Index Description: *Getting older, income growth deteriorates* *Moderate income growth* *Older income growth improves*

Source: Bloomberg, processed

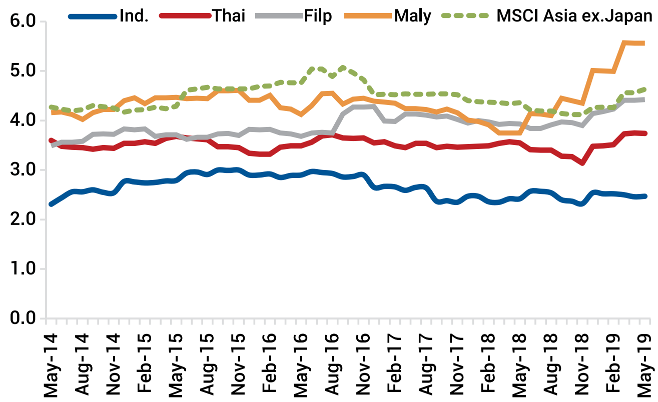
Colour Index:

Darker red indicates lower income
Moderate income growth
Darker green indicates higher income

Graph 2.3.4 CDS in Indonesia and Neighbouring Countries



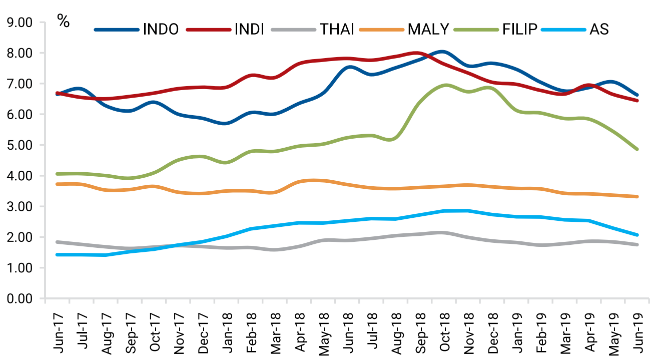
Graph 2.3.6 PER of Stock Markets in Indonesia and the Region



Source: Bloomberg

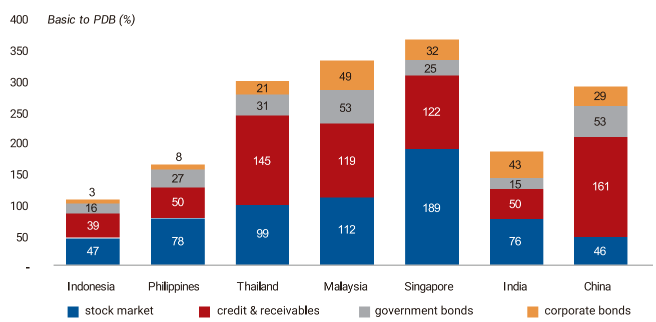
In addition to foreign involvement in portfolio investment, the underdeveloped financial markets in Indonesia are currently experiencing portfolio rebalancing. In 2018, a number of ratios to GDP, as a measure of financial market depth in Indonesia, were relatively low compared to other peer countries, namely 47% for the stock market, 39% for loans and receivables, 16% for government bonds and 3% for corporate bonds (Graph 2.3.7). Such conditions could leave domestic financial markets exposed to global economic shocks. Bank Indonesia deepens the financial markets in conjunction with the Indonesian Financial Services Authority (OJK) and Ministry of Finance through coordination under the auspices of the Coordination Forum for Financing Development through Financial Markets (FK-PPK).

Graph 2.3.5 SBN Yield in Indonesia and Neighbouring Countries



Source: Bloomberg

Graph 2.3.7 Comparison of Financial Market Depth in the Region in 2018



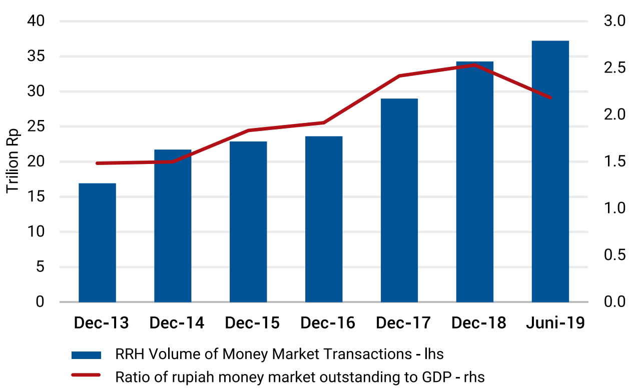
Source: World Bank; Asian Development Bank (ADB)

Bank Indonesia has implemented various measures to accelerate financial market deepening, including efforts to increase transaction volume and outstanding in the money market. Thus far, such efforts have proven effective. The interbank money market, as the primary instrument used by banks to manage short-term liquidity, has continued to enjoy increasing transaction volume (Graph 2.3.8). Meanwhile, FX swaps, as a money market transaction, have experienced increases in terms of transaction volume and outstanding (Graph 2.3.9).

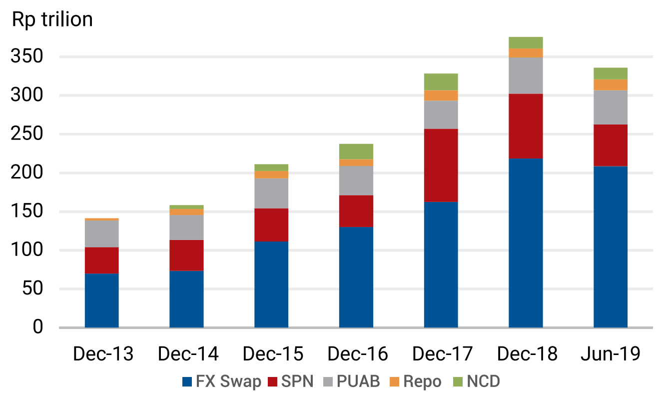
In addition, Bank Indonesia continues to develop other money market instruments/transactions, such as repo transactions and private sector short-term debt securities, in order to increase transaction variety and liquidity in the money market. Rupiah interest rate derivative instruments have been developed to foster hedging activity against rupiah interest rate fluctuations. Furthermore, market players are supporting efforts by Bank Indonesia to increase the credibility of the money market reference rate by replacing the Jakarta Interbank Offered Rate with IndONIA (Indonesia Overnight Index Average).

Through foreign exchange market development efforts and simultaneously contributing to domestic financial market stability, Bank Indonesia continually strives to increase hedging activity against rupiah fluctuations by developing the exchange rate derivative market. In 2018, in addition to refining existing instruments, such as call spread options (CSO) and cross-currency swaps (CCS), Bank Indonesia also enriched hedging instruments through the release of a new instrument, namely Domestic Non-Deliverable Forwards (DNDF). A more detailed explanation of DNDF is presented in Box 2.2. Market players have already demonstrated their willingness to use DNDF instruments. Moving forward, Bank Indonesia expects use of this instrument to increase, thus helping to reduce exchange rate volatility and deepen the foreign exchange market.

Graph 2.3.8 Money Market Performance



Graph 2.3.9 Money Market Structure



Source: Bank Indonesia, Indonesian Central Securities Depository (KSEI)

Boks 2.2 Domestic Non-Deliverable Forward (DNDF) Market Developments

Seeking to expand alternative hedging instruments against currency risk, Bank Indonesia launched Domestic Non-Deliverable Forwards (DNDF) in September 2018. Bank Indonesia Regulation (PBI) No. 20/10/PBI/2018 concerning Domestic Non-Deliverable Forwards (DNDF) serves as a legal foundation for market players to engage in DNDF transactions. Market players are already utilising DNDF instruments, primarily foreign investors and banks, as a means to mitigate exchange rate volatility risk against a backdrop of increasing global uncertainty.

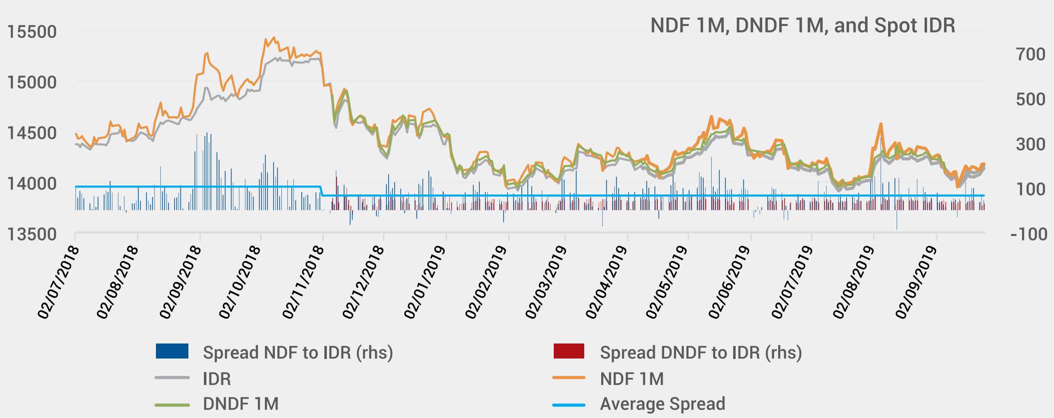
After the introduction of DNDF[6], a subtle change was noted in the selection of hedging instruments by investors and banks. Previously, banks tended to use spot transactions to cover the position of forward transactions, whereas now DNDF instruments are used. That behavioural change has effectively reduced demand-side pressures in the spot market, which had previously been used for hedging purposes. With DNDF instruments, market players who do not require short-term foreign exchange liquidity need not transact in the spot market. In turn, this has alleviated pressures on rupiah exchange rates and reduced excess volatility in the spot market.

In addition to influencing supply and demand, offshore NDF price movements also affect rupiah exchange rate volatility in the spot market. Domestic market players use the offshore NDF price as an indicator of market expectations towards global sentiment that influences conditions in Indonesia. Therefore, the offshore NDF price acts as a reference for spot transactions in the domestic foreign exchange market. Considering that the offshore NDF market is unregulated, NDF price volatility could spiral out of control and facilitate speculation. In contrast, the DNDF market is regulated and prioritises hedging transactions. With the current regulatory framework, the potential for DNDF to be exploited for speculation has been reduced. Over time, the offshore NDF market has begun to use the DNDF price as a reference for NDF market transactions. During the early stages of DNDF market development, Bank Indonesia played a crucial role in providing price guidance for price discovery by holding regular morning auctions between 08:30 and 08:45 WIB for tenders of 1 month and 3 months. The auctions quickly became a reference for offshore NDF prices. Since the release of DNDF, spread between offshore NDF and spot transactions has decreased.

As a new instrument, market players' understanding of DNDF must continuously be improved. To educate market and economic players, Bank Indonesia actively socialises DNDF instruments to the banking industry, foreign investors as well as importers and exporters as part of the central bank's efforts to develop and deepen the domestic financial markets. In addition, to nurture transaction growth between market players, on 17th May 2019 Bank Indonesia relaxed the provisions pertaining to DNDF underlying transactions as contained in Bank Indonesia Regulation (PBI) No. 21/7/PBI/2019 as an amendment to Bank Indonesia Regulation (PBI) No. 20/10/PBI/2018 concerning Domestic Non-Deliverable Forward Transactions. The salient provisions of the new amendment are as follows: (i) underlying transactions are no longer required when selling DNDF up to a value of USD5 million or equivalent per transaction per customer or foreign party; (ii) unwind transactions are permitted without underlying transactions; and (iii) DNDF selling transactions may be final or an estimate with supporting documents.

The availability of DNDF as an alternative hedging instrument for economic players, coupled with the relaxed provisions to stimulate transactions between market players (not only with Bank Indonesia) will dampen exchange rate liquidity and deepen the foreign exchange market. In turn, financial market stability will be maintained, leading to greater financial system stability.

Graph B2.3.1 Rupiah Exchange Rate against US dollar in the Spot Market, 1-month DNDF and 1-month NDF



Source: Reuters, processed

6 *Read more about DNDF in Box 6.2 of the Economic Report on Indonesia 2018, available on the official Bank Indonesia website. www.bi.go.id*


s =200;
fit =39;
MA_1=11;
MA_2=31;
=28.0;
=0.1;
=0.07;
Rp

CHAPTER III

FINANCIAL SYSTEM RISKS AND RESILIENCE

In the first semester of 2019, against a backdrop of global economic uncertainty, the impact of shocks from the global economy and financial markets on the financial system in Indonesia was relatively controlled. Furtherance of the trade war between the United States and China has had indirect consequences on the Indonesian economy. The impact of the trade war has been transmitted to Indonesia's national economy through three channels, namely the trade channel, commodity channel and financial channel. Those three channels have directly and indirectly influenced exporter performance in Indonesia. Despite trade rebalancing and deteriorating corporate performance, particularly amongst manufacturers in Indonesia due to a smaller market share in export destination countries, the impact of the trade war itself remains comparatively limited. In general, highly leveraged corporations with external debt have maintained sound repayment capacity. A granular analysis has shown that corporations exposed to high-risk sectors only account for a small portion of total non-bank corporate external debt.

The decline of corporate activity has had only a minimal impact on bank liquidity. Liquidity indicators point to relatively well-maintained conditions in the banking industry. In addition, various liquidity ratios that remain well above their respective thresholds further point to sound risk management in the banking industry. Liquidity has also become more resilient in the banking sector in line with faster deposit growth as the expansion of new loans has languished. Concerning short-term resilience, the ratio of liquid assets to deposits, Liquidity Coverage Ratio (LCR) and Macroprudential Liquidity Buffer (MPLB) have been maintained above their respective thresholds, with a relatively high loan-to-deposit ratio (LDR). Nevertheless, this has been offset by a solid Net Stable Funding Ratio (NSFR).

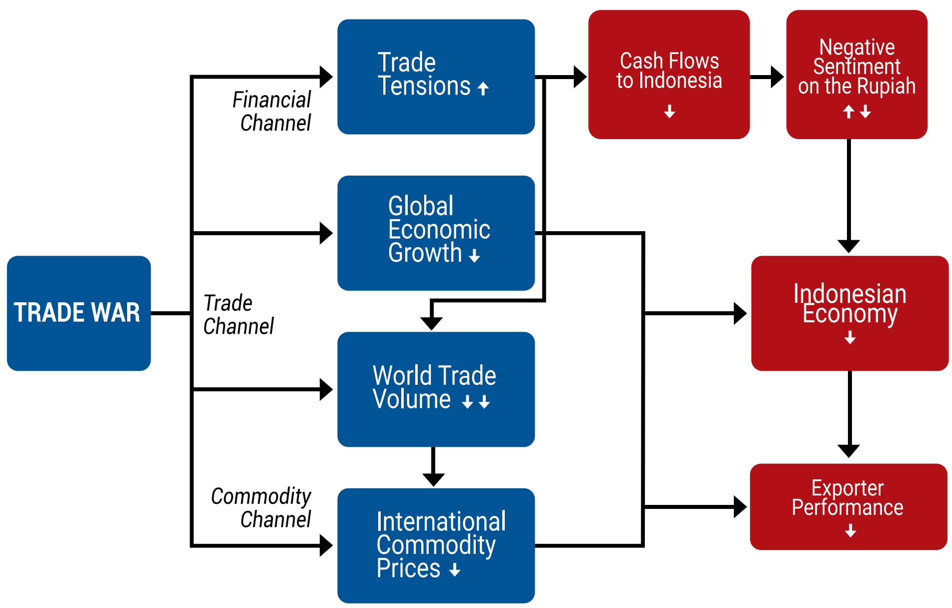
Deteriorating corporate performance has also eroded demand for bank loans despite well-maintained supply-side conditions, as described in the previous chapter. Notwithstanding slower growth of corporate loans, particularly in the mining sector and manufacturing industry, financing allocated to the infrastructure sector prevented further credit declines. Slower credit growth has impacted bank profitability, as confirmed by a narrower profit margin in order to maintain credit growth momentum. Nevertheless, the banking industry has successfully maintained stable efficiency, which negated a further decrease of profitability.

3.1. Relatively Limited Trade War Impact on Corporate Performance

The impact of the trade war on Indonesia's financial system has been transmitted through three channels, namely the trade channel, commodity channel and financial channel. First, the trade channel. Economic moderation and declining world trade volume have restrained global demand for Indonesian goods. Second, the commodity channel. Global economic moderation has lowered various international commodity prices, including oil. Third, the financial channel. Growing trade tensions have increased capital flows from developing economies to advanced economies. The decline of foreign capital inflows to Indonesia has undermined national economic growth. The three aforementioned channels have directly and indirectly impacted exporter performance (Figure 3.1.1).

Despite trade rebalancing and deteriorating corporate performance, particularly amongst manufacturers in Indonesia, due to a smaller market share in export destination countries, the impact of the trade war itself remains comparatively limited. An impact analysis of the trade war on corporate income is discussed in more detail in Box 3.1. The impact analysis concluded that although all sectors have been affected by the trade war, mining and manufacturing have been worst hit. Nonetheless, the impact has been contained. Chapter 2 also described how the corporate sector is confronting such conditions by deleveraging, which has proven effective to maintain income.

Figure 3.1.1 Trade War Impact on Domestic Economy



Boks 3.1 Impact of Ongoing Trade War on Corporate Income

Based on the background described in Section 3.1, this study aims to analyse the impact of the trade war between the United States and China on non-financial corporate performance in Indonesia, from the perspective of income in particular. The impact of the trade war can be measured from the correlation between macroeconomic variables and non-financial corporate income. The sales performance of each respective non-financial corporations in Indonesia was modelled using a panel data approach with fixed effect autoregressive distributed lags expressed as follows:

$$dlsales_{it} = \alpha_i + \beta dlsales_{t\text{-}1} + \textstyle\sum_{j=1}\gamma_j\, gpdbrl_{t\text{-}j} + \textstyle\sum_{j=1}\varphi j polraterl_{t\text{-}j} + \textstyle\sum_{j=1}\gamma j\mathrm{exrate}_{t\text{-}j} + \textstyle\sum_{j=1}\varphi_j comprice_{t\text{-}j} + \varepsilon_{it} \qquad (3.1)$$

Where: *dlsales* is corporate sales growth in the sector *i* at time *t*, *gdpbrl* is real economic growth in Indonesia at *t-j*, *polratelr* is changes in the real policy rate, *exrate* is changes in rupiah exchange rates against the US dollar, and *comprice* is international commodity price inflation.

This study incorporates lag, thus the lag of income/sales growth is the explanatory variable. On the other hand, the macroeconomic variables use a lag of four quarters because the impact of macroeconomic variables on income/sales growth requires a comparatively long period of time to take effect. Revenue/sales data from 543 non-financial public corporations listed on the Indonesia Stock Exchange for the period from the second quarter of 2005 until the fourth quarter of 2018 was grouped into 10 economic sectors, namely agriculture; manufacturing industry; electricity, gas and water supply; trade; transportation; construction; corporate services; mining; social services and others. Sales/revenue data was obtained from Bloomberg, while the macroeconomic variables were sourced from Bank Indonesia.

The panel data estimation results showed that for each sector, economic growth is the main economic variable that positively affects sales. Such dynamics indicate that sales are heavily influenced by the demand-side. On the other hand, commodity price growth increases sales revenue, except in the social services and construction sectors. In general, 70% of the data variation was captured by the model (Table 3.1.1).The table values represent the sum of coefficient and marginal significance of each explanatory variable. Commodity price growth applied the CPO price for the agricultural sector, the oil price for the electricity, gas and water supply (utilities) sector, the coal price for the mining sector as well the Indonesia Export Price Index (IHKEI) for the others sector.

Based on the simulation results of the impact analysis, the trade war that has suppressed world trade volume and undermined global economic growth will, in turn, influence corporate income. Based on future macroeconomic conditions according to two different scenarios, corporate income in nearly all sectors could potentially decline due to fallout from the trade war. The income of non-financial corporations could potentially decline by 0.04%-0.93% at the end of 2019 and by 0.02%-4.92% at the end of 2020 compared to the baseline. The impact is mainly felt in the mining sector due to sliding commodity prices, coal in particular, as well as the manufacturing industry due to dwindling global demand (Table 3.1.2).

Table 3.1.1 Simulation Results of Impact Analysis of Trade War on Corporate Income

Variable	All Sector	Agriculture	Manufacturing	Electricity, Gas & Water Supply	Trade	Transportation	Construction	Corporate Services	Mining	Social Services
Real GDP growth	0.034***	0.019***	0.022***	0.145***	0.027	0.035**	0.085**	0.038**	0.119**	0.053***
BI Rate Riil	0.014***	0.012***	0.008**	-0.04	0.007	0.027	0.016**	0.025	0.043	0.015***
ΔUSDIDR	0.132	-0.132	0.139*	-2.187	-0.163	0.624**	0.148	0.516**	0.715*	0.084
Commodity price	0.128***	0.173***	0.061***	0.399	0.049	0.358*	-0.087	0.004	0.189**	-0.002
R Square	0.605	0.668	0.712	0	0.631	0.723	0.527	0.67	0.639	0.742
No of Obs	15230	630	5599	128	2684	1292	1849	756	1278	383
No of Group	460	20	148	10	83	42	60	35	46	16

*Note: *** Signify on level 1%, ** Signify on level 5%, * Signify on level 10%.*

Table 3.1.2 Simulation Results

Deviation from Baseline	Agriculture	Manufacturing	Electricity, Gas & Water Supply	Trade	Transportation	Construction	Corporate Services	Mining	Social Services
2019	0.27%	-0.93%	0.05%	-0.00%	-0.12%	-0.15%	0.16%	-0.06%	-0.04%
2020	-0.02%	-4.92%	0.06%	-1.20%	-1.22%	-0.56%	2.51%	-3.28%	-0.65%

Source: Bank Indonesia, processed

3.2. Leveraged Corporations Maintaining Adequate Repayment Capacity

Corporate financing sources continued to track a downward trend, primarily due to fewer corporate bond issuances, while financing from loans and external debt has remained relatively stable. Nevertheless, the dominant portion of foreign currency financing not only originates from external debt but also domestic loans and bonds (Graph 3.2.1). Furthermore, the increase of corporate external debt that has occurred over the past year has been used to finance strategic infrastructure projects, increase production capacity and expand market share for exports. In the reporting period, total non-financial corporate external debt stood at USD149 billion, with stable growth maintained at 11.01% (yoy).

External growth debt in two economic sectors has exceeded the national average, namely mining as well as electricity, gas and water supply (utilities). External debt growth in the mining sector has increased significantly to 33.05% (yoy) from 25.72% in the second semester of 2018, totalling USD31.38 billion (21% share). On the other hand, external debt growth in the utilities sector reached 24.70% (yoy) in the reporting period to a total of USD32.28 billion (22% share), down slightly from 24.88% (yoy) in the previous semester. Meanwhile, the manufacturing industry continues to dominate external debt at USD35.3 billion (24% share) despite growth contracting -1.15% (yoy) in the reporting period compared with 1.13% (yoy) growth in the second semester of 2018 (Graph 3.2.2).

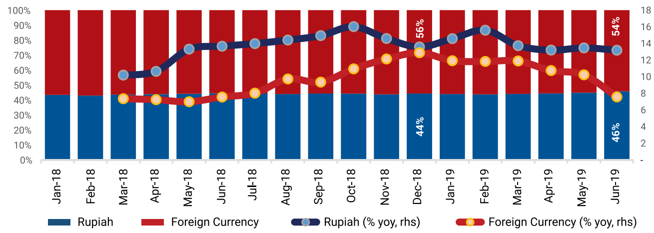
Rapid development over the past few years in Indonesia has created growing demand for international financing. The development includes construction of power stations, road infrastructure, seaports and airports as well as imported raw materials. On the other hand, a number of private corporations are expanding their market share internationally, which also entails a relatively large outlay.

Bank Indonesia requires leveraged domestic non-bank corporations to undertake hedging[1] activities in order to prevent currency volatility risk, particularly at corporations exposed to foreign currency financing as well as importers. This Bank Indonesia regulation has become increasingly relevant amidst widespread global economic uncertainty, triggered by the US-China trade war, monetary policy in advanced economies and structural economic issues in emerging markets. Notwithstanding, vulnerable corporations because of their exposure to high-risk sectors as a corollary of global conditions account for a negligible portion of total non-bank corporate external debt.

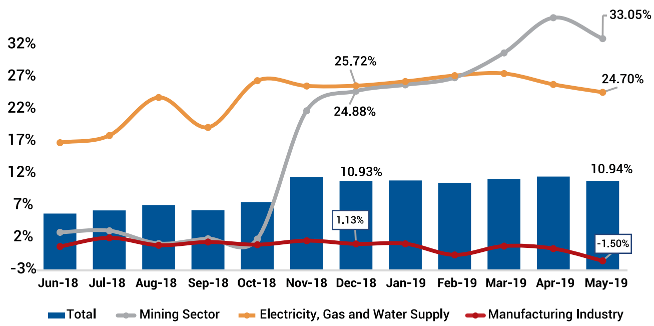
Based on BI data, as of the first semester of 2019, a total of 2,554 non-financial corporations were exposed to external debt maturing within 3-6 months, of which 2,267 (88.8%) had already initiated hedging activity with an average hedging ratio of 90.35% and 2,259.

(88.45%) had already met the liquidity ratio for the upcoming three months, averaging 86.28%. Only a handful portion of corporations (11.2%) have thus far failed to meet the hedging ratio. Using more granular data, most corporate external debt was dominated by long-term debt, accounting for 83%, thus alleviating the immediate debt burden (Graph 3.2.3).

Graph 3.2.1 Composition of External Debt

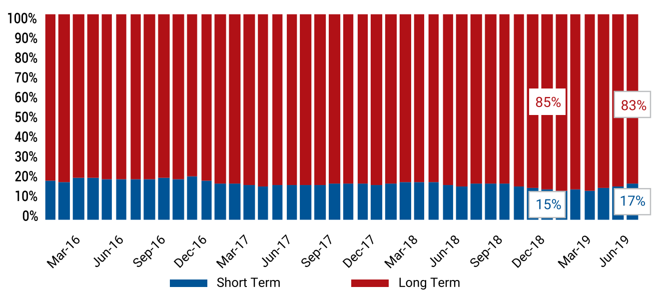


Graph 3.2.2 Corporate External Debt



Source: Bank Indonesia, KSEI, Bloomberg, processed

Graph 3.2.3 External Debt by Original Maturity



* Notes:
Short Term: < 1 year, Long Term: > 1 year

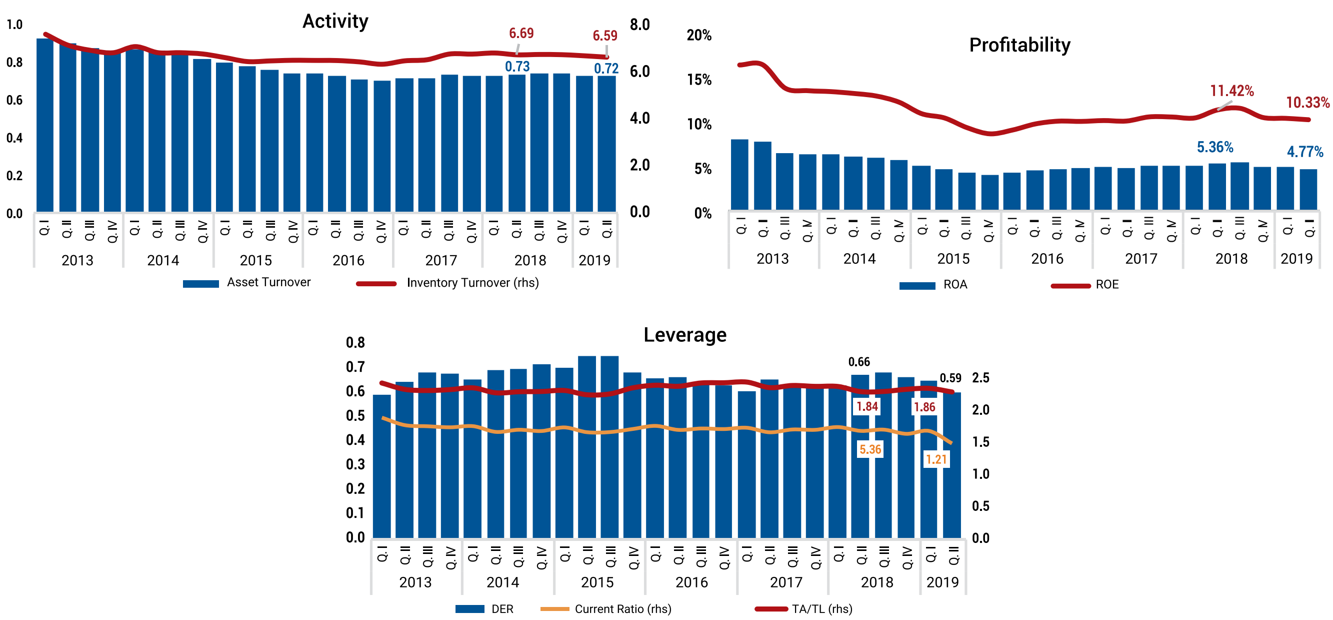
[1] *Bank Indonesia Regulation (PBI) No. 16/21/PBI/2014 concerning the Application of Prudential Principles is applicable to leveraged nonbank corporations with external debt as follows:*
a. Hedging Ratio: Negative balance between Foreign Currency Assets and Foreign Currency Liabilities maturing up to 3 months;
Negative balance between Foreign Currency Assets and Foreign Currency Liabilities maturing in 3-6 months;

b. Liquidity ratio set at 70% by comparing the foreign currency assets and foreign currency liabilities maturing up to 3 months

Despite deteriorating slightly, the performance of leveraged corporations exposed to foreign debt was relatively well maintained. Exchange rate depreciation that has persisted since 2014 spilled over to affect corporate financial performance, particularly corporates with a dependence on imported raw materials and foreign currency financing. Furthermore, weaker global demand due to the trade war between the United States and China, coupled with dwindling domestic demand, has exacerbated pressure in the corporate sector in terms of financial management. The financial data of public listed corporations leveraged with external debt in the reporting period pointed to a general softening of corporate activity, as confirmed by declining asset turnover and inventory turnover. Less activity has compounded financial pressures in the corporate sector, as reflected by profitability ratios (return on assets and return on equity) compared to the respective positions last year despite a moderate increase recorded in the second quarter of 2019. Nevertheless, corporate sector risk has been relatively well contained based on the lower leverage trend, as evidenced by a decline in the Debt-to-Equity Ratio (DER) from 0.66 in the second semester of 2018 to 0.58 in the first semester of 2019 (Graph 3.2.4).

By sector, agriculture and construction have been hardest hit. Persistently weak global demand for major commodities, such as Crude Palm Oil (CPO), has undermined prices, while inward-looking trade policies amongst several of Indonesia's trading partners have suppressed corporate performance, especially in the agricultural sector. Meanwhile, lower public purchasing power in terms of property, houses in particular, as well as infrastructure project completion in 2019 have weighed on the financial performance of the construction sector (Table 3.2.1).

Graph 3.2.4 Financial Performance of Public Listed Non-Financial Corporations



Notes: Total observation sample of 431 non-financial corporations.
Source: Indonesia Stock Exchange, Bloomberg, processed

Table 3.2.1 Corporate Financial Performance Indicators

No.	Sektor	ROA		ROE		Sales Growth		DER		Current Ratio		TA/TL		Asset TO		Inventory TO	
		Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19	Jun-18	Jun-19
1	Agriculture	2.87%	0.66%	5.79%	1.33%	2.76%	-1.71%	0.81	0.74	1.33	1.11	1.95	1.96	0.57	0.59	6.47	6.25
2	Mining	7.13%	4.67%	15.73%	11.08%	52.09%	10.93%	0.83	0.79	1.73	1.57	1.80	1.69	0.61	0.66	18.03	17.26
3	Manufacturing	6.99%	7.04%	14.21%	14.29%	13.32%	10.21%	0.60	0.47	1.45	1.15	1.97	1.97	0.89	0.90	5.69	5.72
4	Electricity, Gas and Water Supply	4.99%	6.11%	9.89%	11.99%	9.29%	23.87%	0.70	0.63	1.94	2.16	2.07	2.02	0.49	0.56	8.51	8.98
5	Construction	3.95%	2.96%	9.36%	7.24%	36.70%	-6.61%	0.71	0.78	1.41	1.35	1.68	1.71	0.39	0.31	3.60	3.10
6	Trade	6.80%	5.88%	13.93%	12.05%	20.45%	6.43%	0.46	0.39	1.55	1.50	1.94	1.98	1.43	1.39	8.15	8.05
7	Transportation	3.12%	2.60%	7.59%	6.61%	6.60%	7.71%	0.90	0.86	0.65	0.66	1.65	1.64	0.58	0.59	51.31	48.44
8	Corporate Services	3.09%	8.40%	5.13%	14.28%	36.23%	13.36%	0.40	0.52	1.47	1.81	2.33	2.46	0.84	0.72	6.64	7.41
9	Social Services	2.19%	1.54%	3.83%	2.63%	5.61%	13.12%	0.42	0.30	2.16	1.67	2.41	2.40	0.38	0.42	5.39	5.64
	Aggregate	5.36%	4.77%	11.42%	10.33%	17.22%	7.35%	0.66	0.59	1.36	1.21	1.86	1.86	0.73	0.72	6.69	6.59

Notes: Total observation sample of 431 non-financial corporations.
Source: Indonesia Stock Exchange, Bloomberg, processed

Leveraged corporations with exposure to external debt nevertheless maintained adequate repayment capacity. The risks associated with increasing non-financial corporate external debt were effectively contained, as confirmed by slight improvements in principal and interest repayment capacity, represented by the debt service ratio (DSR)[2] and interest coverage ratio (ICR)[3]. In the first semester of 2019, DSR stood at 70.47%, improving from 75.05% in the same period of the previous year. Congruently, ICR was maintained at 2.93 in the first semester of 2019 (Graph 3.2.5).

Chapter 2 has already explained how ICR was maintained in the second quarter of 2019 despite an increasing number of corporations with lower repayment capacity. In terms of Debt at Risk (DaR)[4], however, the respective shares of short- and long-term debt with an ICR < 1.5 have declined (Graph 3.2.6).

By sector, corporate services achieved the strongest DSR and ICR improvements in line with lower corporate leverage in the sector over the past year. In contrast, the electricity, gas and water supply (utilities) sector experienced a lower repayment capacity as the prices of several commodities have failed to recover as a result of global economic moderation. Nevertheless, corporate repayment capacity has been maintained within the DSR<100 threshold (Table 3.2.2).

The impact of the trade war must be used to evaluate corporate strategy in response to the challenges and opportunities that could potentially disrupt performance. Corporate sector competitiveness must be increased in order to compete with other products from competing countries. The opportunity to replace Chinese exports of certain products is one strategy option. A strategy to unlock access to new markets would entail trade promotion. Dependence on certain products, especially plantation-based products such as Crude Palm Oil (CPO), as well as mining products, coal in particular, represents a challenge for the corporate sector in terms of developing potential alternatives not currently impacted by the trade war or global economic slowdown. A sound strategy would be to develop such products into viable substitutes of value-added products that have thus far been imported to Indonesia.

Graph 3.2.5 Non-Financial Corporate

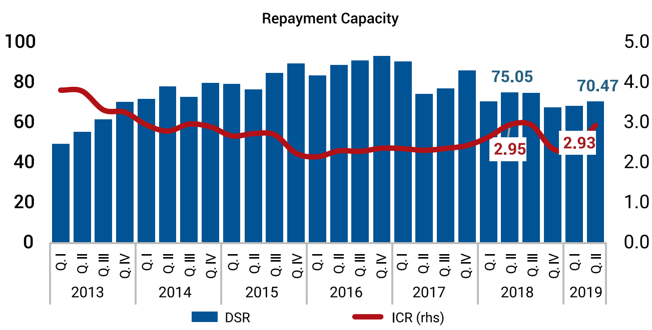
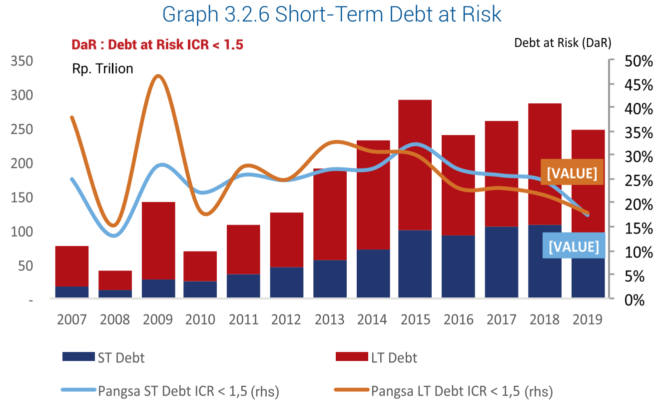


Table 3.2.2 Corporate Repayment Capacity by Sector

No.	Sector	DSR (%)		ICR	
		Jun-18	Jun-19	Jun-18	Jun-19
1	Agriculture	119.73	68.23	1.61	0.64
2	Mining	37.65	41.16	3.59	3.18
3	Manufacturing	100.16	91.26	3.56	3.53
4	Electricity, Gas and Water Supply	90.93	33.51	4.24	1.44
5	Construction	100.51	92.52	2.97	2.62
6	Trade	78.69	47.80	2.88	3.31
7	Transportation	71.25	63.33	1.36	1.71
8	Corporate Services	49.70	23.05	2.55	5.38
9	Social Services	20.52	45.13	4.91	4.38
	Aggregate	75.05	70.47	2.95	2.93

Notes: Total observation sample of 431 non-financial corporations.
Source: Indonesia Stock Exchange, Bloomberg, processed

Graph 3.2.6 Short-Term Debt at Risk



2 DSR: principal + interest / EBITDA. EBITDA is earnings before interest, tax, depreciation and amortization.
3 ICR: EBIT / interest. EBIT is earnings before interest and tax.
4 DaR: ST Debt ICR< 1.5 / Total ST Debt: LT Debt ICR< 1.5 / Total LT Debt

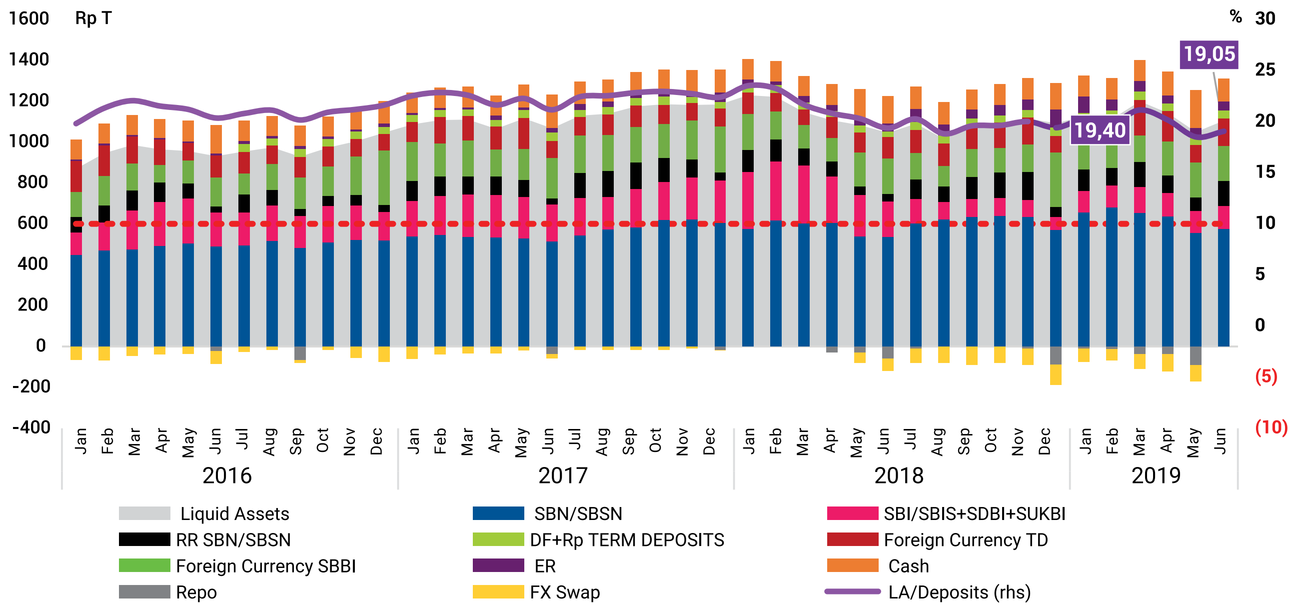
3.3. Languishing Corporate Activity has Minimal Effect on Bank Liquidity

In the first semester of 2019, declining corporate activity had a relatively minimal impact on bank liquidity, which was maintained stable and above the threshold at 19.05%, down just slightly from 19.4% in the previous semester (Graph 3.3.1).

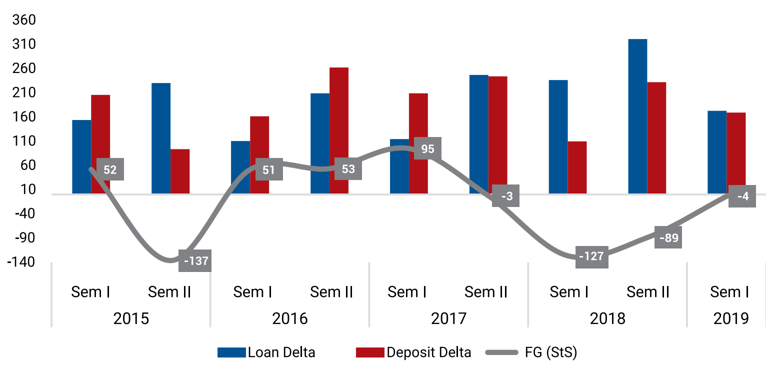
A relatively minimal funding gap helped to bolster stable bank liquidity. In the first semester of 2019, the funding gap stood at just Rp4 trillion compared to Rp89 trillion at the end of 2018 and Rp127 trillion in the same period of the previous year (Graph 3.3.2)[5]. Conditions have changed dramatically since the first semester of 2018, when the liquid assets to deposits ratio fell to just 3% due to the large funding gap (Graph 3.3.3).

The loan-to-deposit ratio (LDR) in the first semester of 2019 was also stable, increasing slightly from 94.04% to 94.28%. Slower credit growth amidst a comparatively low Net Claim on Government (NCG) was offset by increasing deposits (Graph 3.3.4)[6]. In the first semester of 2019, NCG stood at its lowest position in three years. The NCG trend has changed dramatically over the past three years, returning to a similar trend as that recorded in 2015, with relatively low expansion in the first half of the year due to servicing government external debt in the first semester of 2019 (Graph 3.3.5). Banks cover the funding gap by issuing securities, which increased in the first semester of 2019 (Graph 3.3.6).

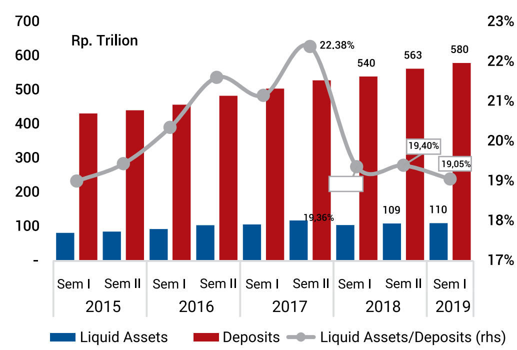
Graph 3.3.1 Liquidity Ratios and Composition of Liquid Assets



Graph 3.3.2 Delta of Loans, Deposits and Funding Gap

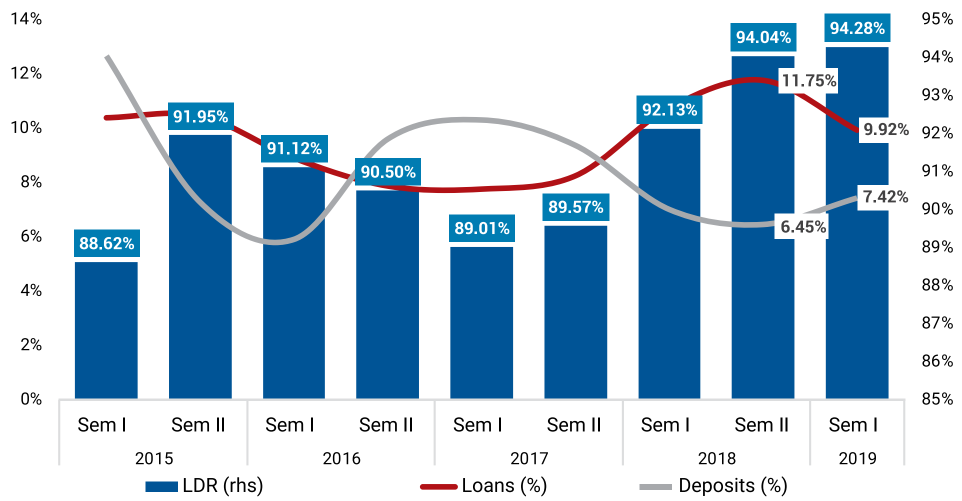


Graph 3.3.3 Liquid Assets and Liquid Assets to Deposits

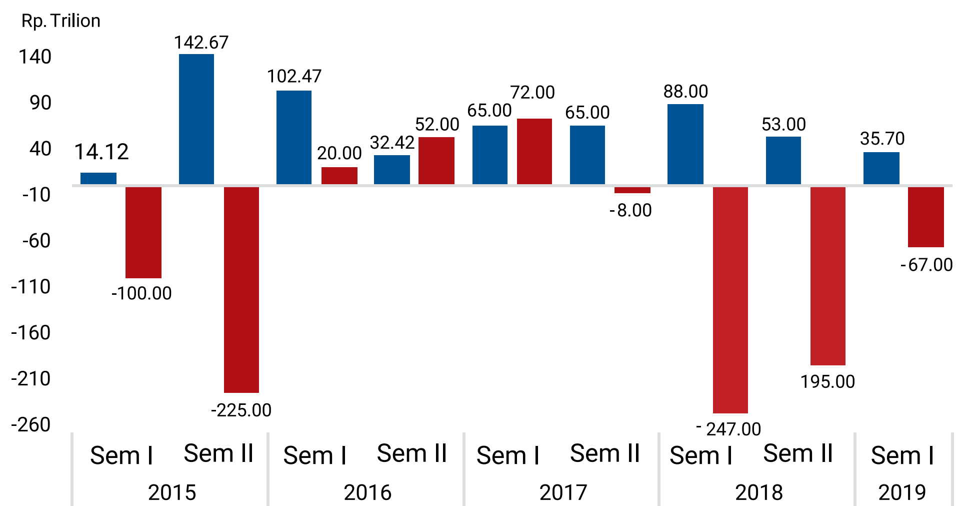


5 *The funding gap is the difference between deposit growth and credit growth (known as a funding surplus if positive).*
6 *Net claim on government is the net claim of the monetary system on the central government.*

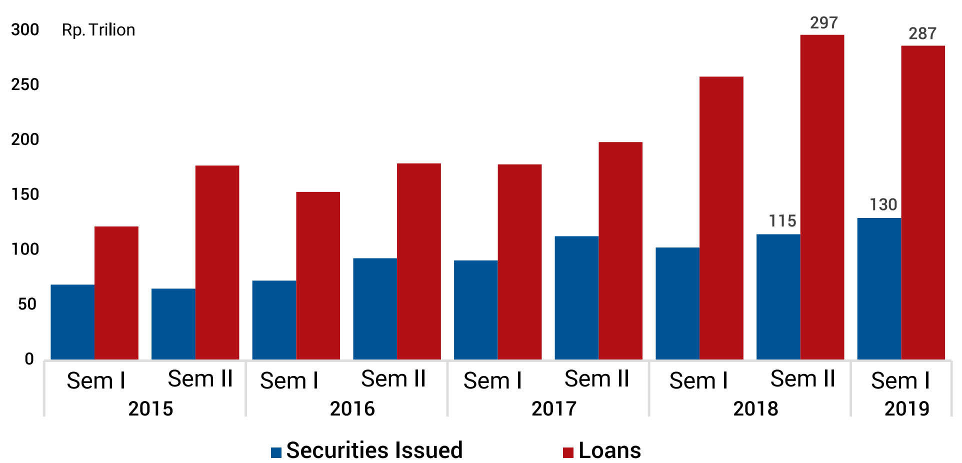
Graph 3.3.4 Deposit Growth, Credit Growth and LDR



Graph 3.3.5 NCG and BI Foreign Exchange Operations

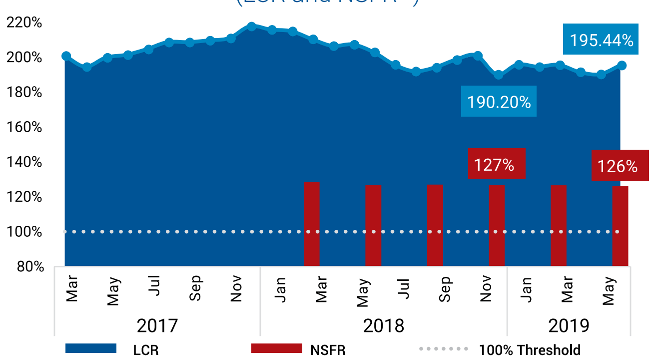


Graph 3.3.6 Securities Issued and Loans

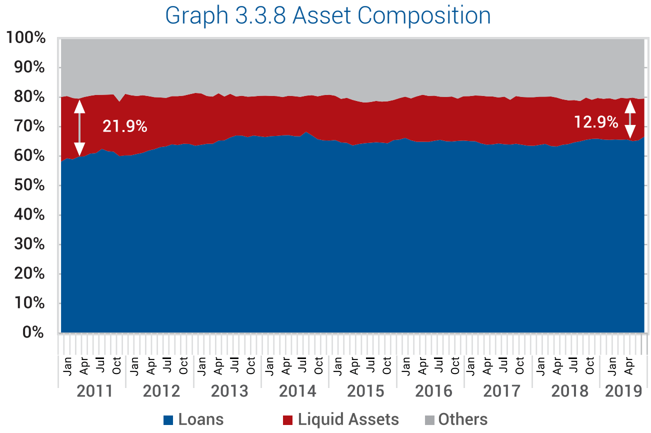


Furthermore, the Liquidity Coverage Ratio (LCR)[7] and Macroprudential Liquidity Buffer (MPLB)[8] also pointed to maintained liquidity resilience (Graph 3.3.7). Meanwhile, the relatively high long-term LDR was offset by a Net Stable Funding Ratio (NSFR)[9] of 100%. Based on the long-term trend, the liquidity buffer in the banking industry has been eroded in line with the dwindling proportion of liquid assets to total assets. Such developments can be explained by an increasing share of loans to total assets coupled with a decline of liquid assets during funding gap periods. Notwithstanding, the banking industry successfully maintained the liquid assets to deposits ratio above 10% (Graph 3.3.8). Based on the long-term funding trend, the share of deposits was observed to decline consistently with the increase of non-retail funding, such as securities, loans and capital. This also affected the rising LDR trend (Graph 3.3.9 and Graph 3.3.10).

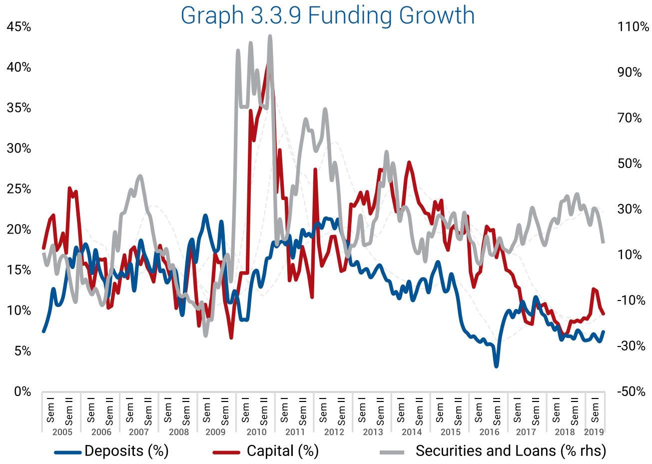
Graph 3.3.7 Short- and Long-Term Liquidity Resilience (LCR and NSFR[10])



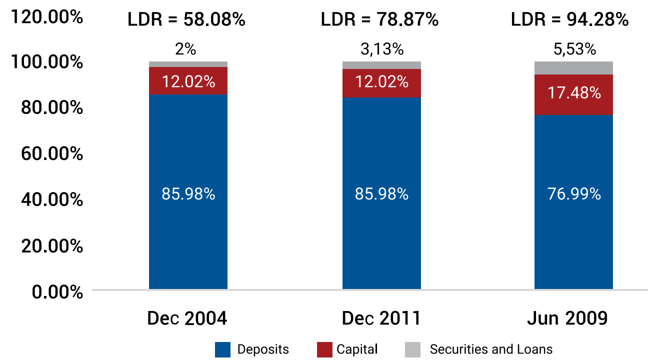
Graph 3.3.8 Asset Composition



Graph 3.3.9 Funding Growth



Graph 3.3.10 Changes in Funding Composition



3.4. Lower Corporate Performance has Reduced Demand and Slowed Credit Growth

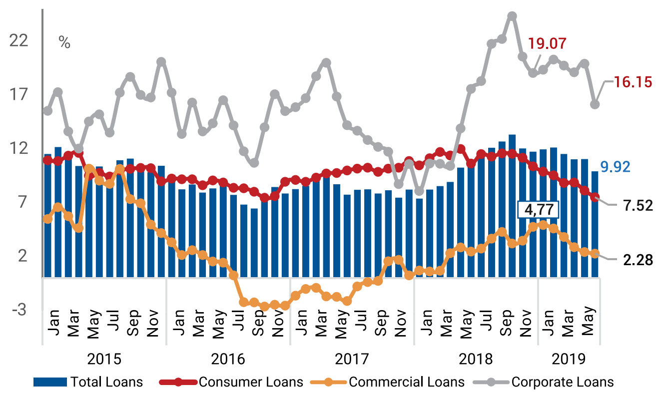
In the first semester of 2019, growth of outstanding loans disbursed by the banking industry tracked a decelerating trend, primarily weighed down by corporate loans. Growth of corporate loans slowed from 19.07% (yoy) in the latter half of 2018 to 16.15% (yoy) in the first semester of 2019 (Graph 3.4.1). Slower corporate credit growth was the main drag on overall credit growth (Graph 3.42). Slower credit growth in the corporate and commercial segments was attributable to lower corporate demand as a result of dwindling demand despite relaxed lending standards to maintain the supply side (refer to Box 2.1 - The Banking Industry Relaxes Lending Standards to Stimulate Credit Growth - in Chapter 2).

By sector, weaker corporate performance fed through to slower credit growth, particularly in terms of consumption, trade and manufacturing. A number of factors have led to slower sectoral growth, including the manufacturing industry due to weaker global demand and the trade war as well as agriculture and mining as a result of sliding international commodity prices. Meanwhile slower credit growth in terms of trade, consumption and corporate services was the result of lower public purchasing power in terms of property and motor vehicles (Graph 3.4.3 and Graph 3.4.4).

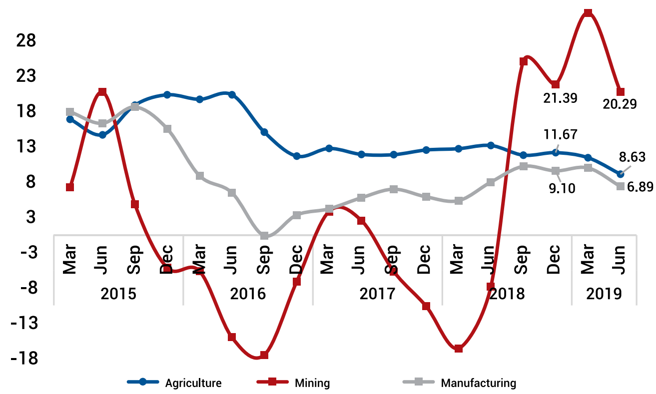
Amidst declining corporate performance, the banking industry effectively contained credit risk by reallocating loans to profitable sectors. Despite a slight increase, the gross NPL ratio was contained at a relatively low level of 2.5%. The ratio of loans with a collectability level of two was relatively stable at 6% of total credit. By bank group and sector, however, small banks experienced higher risks along with certain sectors. Small banks face tight lending competition and are limited in terms of commercial loans. In addition, several sectors experienced a build-up of credit risk due primarily to fallout from the trade war between the United States and China (Graph 3.4.5).

[7] *The liquidity coverage ratio refers to the proportion of high-quality liquid assets to net cash outflow for the upcoming 30 days under a stress scenario. The LCR aims to ensure resilient liquidity during a period of market-wide stress for the next 30 days, in accordance with OJK Regulation (POJK) No. 42/POJK.03/2015 concerning Liquidity Coverage Ratio Policy for Commercial Banks.*

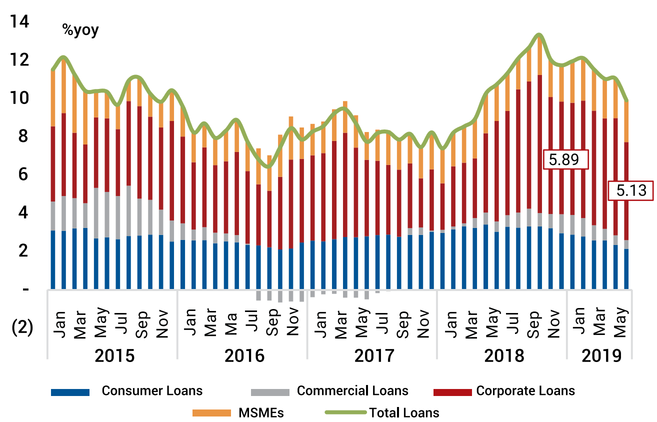
Graph 3.4.1 Corporate, Commercial and Consumer Loan Growth



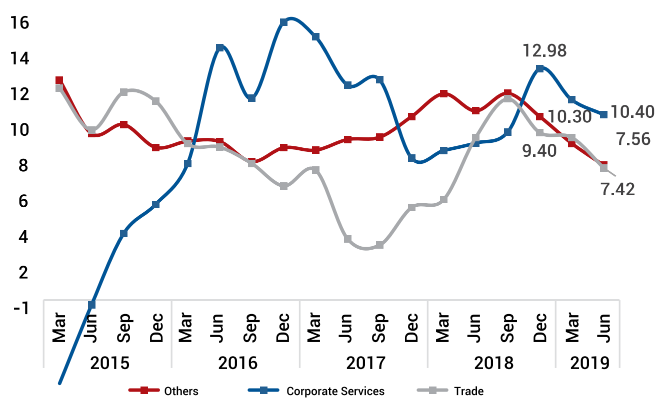
Graph 3.4.3 Sectoral Loans influenced by Global Demand and Commodity Prices



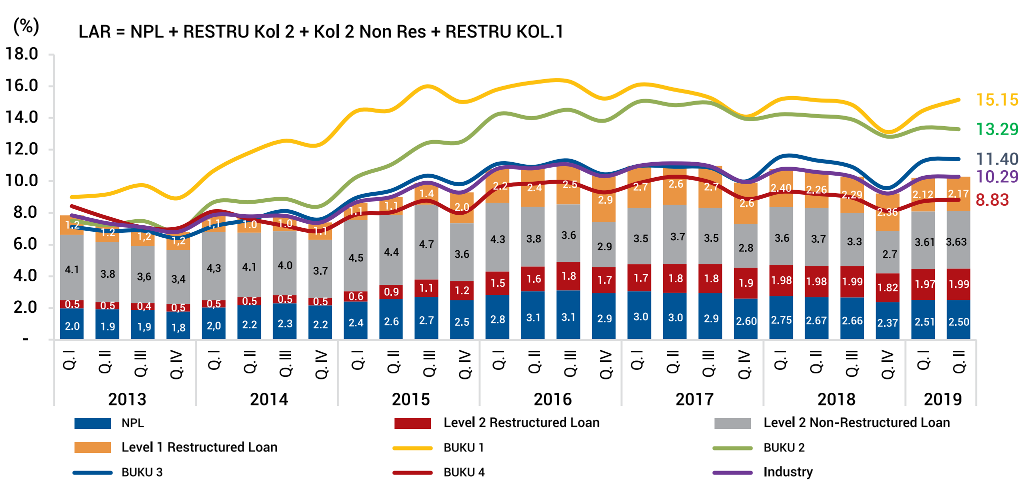
Graph 3.4.2 Composition of Corporate Loans



Graph 3.4.4 Sectoral Loans influenced by Public Purchasing Power



Graph 3.4.5 NPL by BUKU Bank Group



[8] The Macroprudential Liquidity Buffer (MPLB) is a refinement of the previous Secondary Reserve Requirements, which is expected to help mitigate liquidity risk in the banking industry because liquidity risk could potentially amplify other risks into systemic risk. Similar to the previous secondary reserve requirements that were applicable to conventional commercial banks, the MPLB is a certain percentage of deposits in rupiah currently set at 4%. A full review of MPLB policy is presented in the 31st edition of the Financial Stability Review, September 2018.

[9] The Net Stable Funding Ratio (NSFR) refers to the proportion of Available Stable Funding (ASF) to Required Stable Funding (RSF). The minimum NSFR threshold for the banking industry is 100%. NSFR aims to ensure that banks maintain adequate stable funding (for more than one year) appropriate to the asset composition and administrative account in accordance with OJK Regulation (POJK) No. 50/POJK.03/2017 concerning the Net Stable Funding Ratio (NSFR) for Commercial Banks.

[10] Pursuant to OJK Regulation (POJK) No. 42/POJK.03/2015 and No. 50/POJK.03/2017, BUKU 3 and 4 banks as well as foreign banks are subject to the LCR and NSFR requirements.

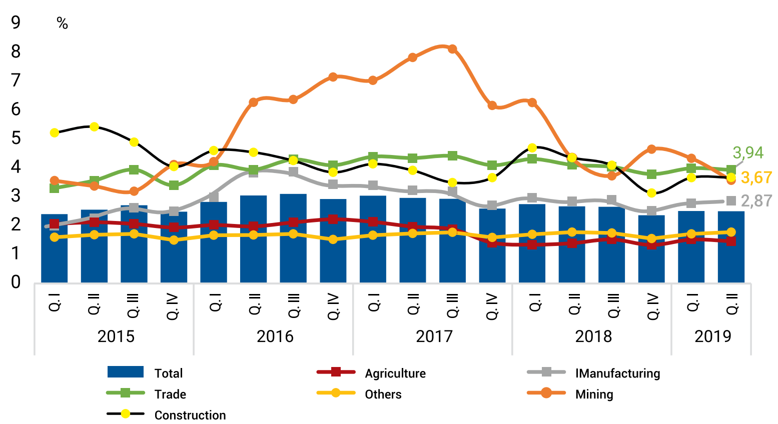
In the first semester of 2019, the banking industry maintained NPL ratios below the 5% threshold for all economic sectors despite increasing slightly compared with conditions in the second half of 2018. By sector, the highest NPL ratios affected trade, construction and mining. The dominant sectors, namely manufacturing and others (consumption), experienced an accumulation of credit risk. The escalation of credit risk in the manufacturing industry was primarily concentrated in the iron and steel subsector, plastics industry and clothing industry, for which the products struggle to compete on the domestic market with imported Chinese goods. In terms of the trade sector, credit risk primarily increased in the food and beverages retail subsector and domestic trade of other construction materials. Concerning the others sector (consumption), the risks were observed to increase on housing loans for residential properties measuring 22-70m2, properties larger than 70m2 as well as multipurpose loans (Graph 3.4.6).

Moving forward, level 2 loans that could potentially become non-performing loans (NPL) due, amongst others, to dwindling corporate performance, primarily as a result of global factors, demand attention. Consequently, risk mitigation shall remain an ongoing concern as the banking industry continues to apply prudent lending standards[11], while prioritising quality credit growth. The banking industry will focus on increasing lending to infrastructure-based sectors (construction, telecommunications as well as electricity, gas and water supply) as well as alternative sectors, including education and healthcare supporting sectors as well as those unaffected by the trade war and global economic moderation.

3.5. Bank Profitability Maintained on Increasing Efficiency

Lower lending rates coupled with slower credit growth have reduced total interest income in the banking industry. Meanwhile, in terms of deposit accumulation, relatively high demand for liquidity, as confirmed by a higher Loan-to-Deposit Ratio (LDR), compelled the banking industry to stimulate deposit growth by raising deposit rates (Graph 3.5.1). The interest rate hike was triggered by higher interest rates on demand deposits and term deposits with a tenor of more than three months, contrasting the lower interest rates already applicable to savings deposits and short-term tenors, mirroring market expectations of a lower policy rate (Table 3.5.1). Banking industry propensity to raise interest rates on longer tenors was influenced by the preferences of large depositors for higher interest rates than SBN yield, amidst expectations of a policy rate reduction (Graph 3.5.2).

Graph 3.4.6 NPL Ratio by Sector



Graph 3.5.1 Interest Rates by Deposit Type

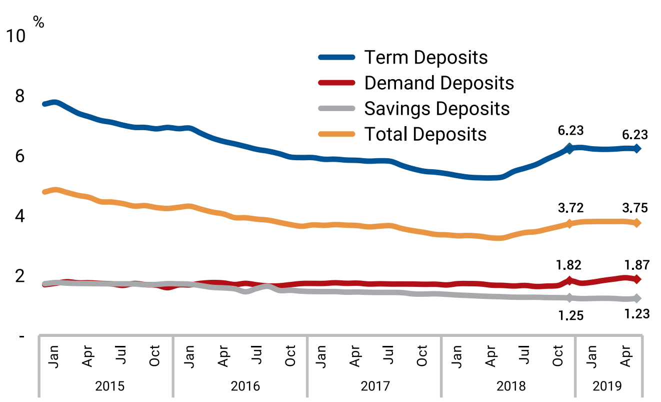


Table 3.5.1 Deposit Rates by Tenor

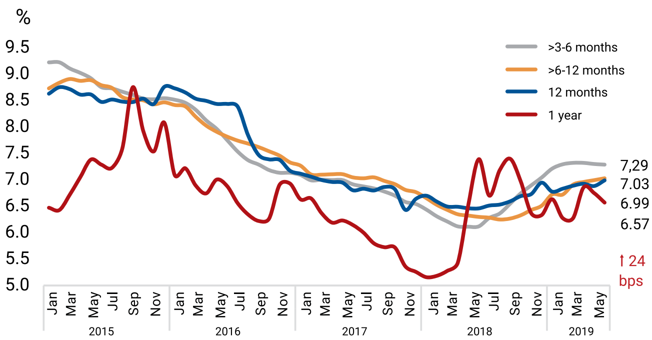
Tenor	Jun-18	Dec-18	Jun-19	Δ yoy (bps)	Δ ytd (bps)
'till 1 month	5.70	6.93	6.71	123	(21)
>1 - 3 month	5.80	6.83	6.76	103	(7)
>3 - 6 month	6.12	7.04	7.29	92	24
>6 - 12 month	6.30	6.51	7.03	21	52
>12 month	6.46	6.94	6.99	49	4

11 *Based on expectations of the Lending Standards Index in the first semester of 2019.*

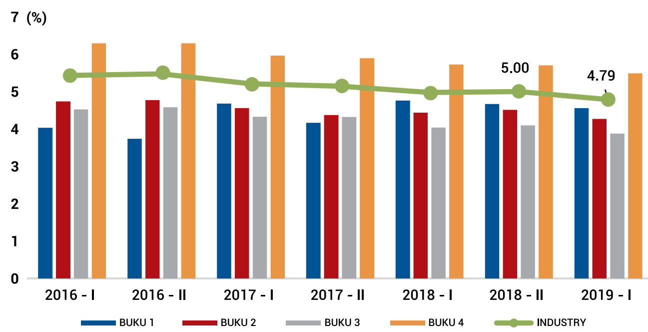
The opposing directions of interest rates, with decreasing lending rates and increasing deposit rates, narrowed the intermediation spread (Graph 3.5.3). Furthermore, profit margins in the banking industry fell to 4.7% in the middle of 2019 compared with 5% in the second semester of 2018 (Graph 3.5.4). On the other hand, the lower Net Interest Margin (NIM) was offset by more efficient overhead costs (OHC), as reflected by a relatively stable BOPO efficiency ratio of 80.4% (Graph 3.5.5), which prevented a further profitability decline in the first semester of 2019.

Operational efficiency gains in the banking industry primarily stemmed from an increase of operating income and a decline of operating expenses, primarily in the form of provisions for impairment losses. The increase of operating income, which originated from increases in net income from spot and derivative transactions, prompted greater efficiency. The increase of interest operating income was influenced more by rising credit volume. Greater overhead cost efficiency in the banking industry affected every component, except payroll expenses, which increased to remunerate dividend and bonus payments to directors and commissioners as well as production services in the first semester of 2019 (Table 3.5.2). Regarding the long-term trend, however, lower overhead costs stemmed primarily from payroll expense efficiency gains due to the rapid digitalisation of banking products and services, as well as the mergers of several banks accompanied by staff

Graph 3.5.2 Comparison of Rupiah Deposit Rates and SBN Yield

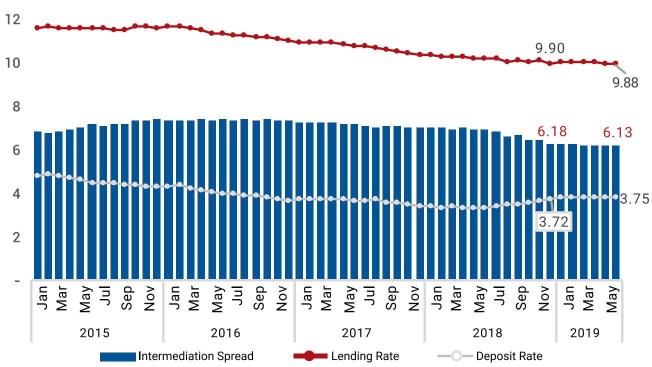


Graph 3.5.4 NIM by BUKU Bank Group



*) Source: Financial Services Authority (OJK), processed

Graph 3.5.3 Interest Rate Spread



Graph 3.5.5 BOPO Efficiency Ratio and Overhead Cost to Total Assets

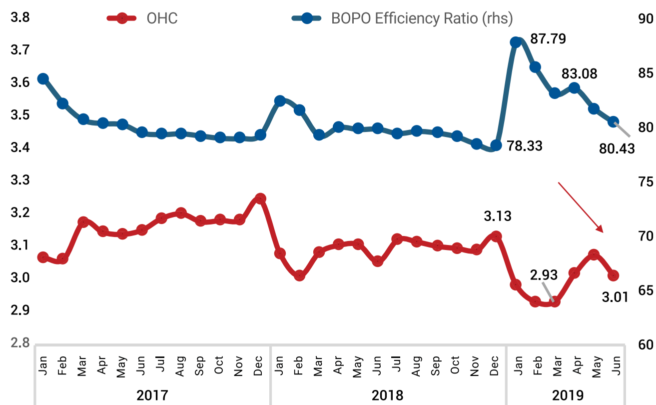


Table 3.5.2 Percentage of Overhead Cost Componenets to Total Assets

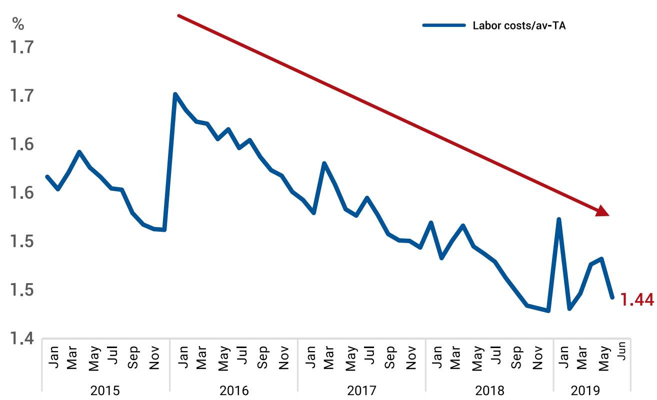
OHC Component	Jun-18	Dec-18	Jun-19	Δ yoy	Δ ytd
Goods and Services (Non-TSI & TSI)	0.55	0.60	0.56	0.01	(0.04)
Payroll	1.49	1.43	1.44	(0.04)	0.01
Maintenance	0.10	0.11	0.11	0.00	(0.01)
Fixed Asset Depreciation	0.17	0.17	0.17	(0.00)	(0.00)
Insurance Premium	0.20	0.20	0.17	(0.03)	(0.03)
Promotion	0.10	0.12	0.10	0.00	(0.02)
Leasing	0.18	0.18	0.17	(0.01)	(0.02)
Others	0.27	0.32	0.30	0.03	(0.02)
Total OHC	3.06	3.13	3.01	(0.04)	(0.12)

rationalisation (Graph 3.5.6). Provisions for impairment losses were also increased in line with escalating credit risk, yet a correction to provisions for impairment losses was recorded at the beginning of 2019, which provided additional operating income. The increase of net income from spot and derivative transactions also supported efficiency gains in the banking industry.A more efficient banking sector has contributed to maintain profitability amidst slower credit growth, as confirmed by a return on assets (ROA) recorded at its highest level in three years (Graph 3.5.7). Profitability was maintained at more than 2%, as indicated by a return on assets (ROA) in the banking industry of 2.47% in the first semester of 2019, down slightly from 2.5% in the second semester of 2018 (Graph 3.57).

The banking industry also maintained resilience with the support of a relatively large capital base together with contained credit and liquidity risks. Bank capital resilience remained solid, as reflected by an upward Capital Adequacy Ratio (CAR) trend to reach 22.53% in the first semester of 2019 (Graph 3.5.8). In terms of composition, bank capital was still dominated by Tier 1, namely the highest quality capital that can be converted immediately to absorb risk.

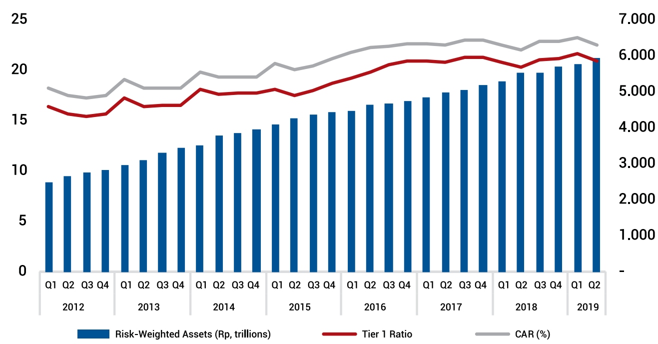
The banks' strategy to hold lending rates was implemented to maintain credit growth amidst increasing competition for quality depositors, while contributing to maintain national economic growth momentum. The banking industry is expected to maintain profitability by increasing efficiency and optimising non-interest income sources. Moving forward, credit risk pressures, competition for deposits and enforcement of PSAK 71 Accounting Standards could impair attempts to increase bank profitability[12]. On the other hand, the banks are required to implement a strategy and anticipatory measures against tighter competition for deposits, such as utilising alternative non-deposit funding sources in addition to a buffer of liquid assets, while increasing efficiency and optimising financing sources.

Graph 3.5.6 Trends in Labor Costs

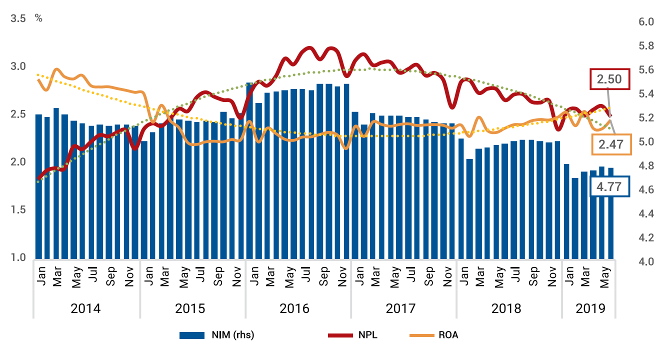


Note: Percentage of Labor Costs to Average Total Assets

Graph 3.5.8 Banking Industry CAR



Graph 3.5.7 Payroll Expenses



[12] *PSAK 71 Accounting Standards concerning financial instruments were adopted from IFRS9 Financial Instruments issued by the International Accounting Standard Board (IASB) on 1st January 2016 and effective from 1st January 2018. PSAK 71 regulates a change in the requirements relating to financial instruments, such as classification and measurement, revaluation and hedging.*

BANK INDONESIA


5

CHAPTER IV

MACROPRUDENTIAL POLICY RESPONSE

During the first semester of 2019, considering prevailing economic dynamics, Bank Indonesia adopted an accommodative macroprudential policy stance, while continuing to maintain financial system stability. The latest developments of Indonesia's financial cycle point to additional space for credit expansion. Therefore, Bank Indonesia adjusted the upper and lower bounds of the Macroprudential Intermediation Ratio (MIR). In addition, consistent with the current expansionary phase of the financial cycle, Bank Indonesia held the Countercyclical Capital Buffer (CCyB) at 0%.

Amid the pressures of weakening global economy, macroprudential policy faced a number of complex challenges. Although the bank intermediation function succumbed to slower growth, financial system resilience was effectively maintained. In the first semester of 2019, bank intermediation grew 9.92% (yoy), down from the 11.05% (yoy) realised at the end of 2018. Despite decelerating, loans were still the primary source of domestic financing. In terms of resilience, financial system performance indicators, in general still awake. Bank Indonesia policy to safeguard financial system stability through its macroprudential jurisdiction manifested in efforts to strengthen surveillance and the economic assessments conducted, while strengthening synergy and coordination with other relevant authorities/institutions.

Bank Indonesia has also continued to perform reviews and implement financial market deepening, while exploring the possibility of developing new financial instruments to support market efficiency and boost financial inclusion. Such efforts include the possibility of increasing funding from investors and existing instruments, such as utilising the funds accumulated by the insurance and pension fund industries. The development of new funding instruments has also been studied to provide alternative non-traditional financing sources. In addition, various efforts remain ongoing to meet global financial reform commitments that aim to increase the integrity of Indonesia's financial system.

Bank Indonesia policy to safeguard financial system stability through its macroprudential authority manifested in efforts to strengthen surveillance and the economic assessments conducted, while strengthening synergy and coordination with other relevant authorities/institutions. Bilateral and multilateral coordination at the national level with other financial authorities is achieved through the Financial System Stability Committee. Internationally, Bank Indonesia continues to represent Indonesia at global financial reform negotiations and cooperate with other financial authorities to maintain financial market development momentum in Indonesia amidst the adoption of international regulatory standards.

4.1. Accommodative Macroprudential Policy

A Bank Indonesia assessment of economic and financial system conditions concluded that efforts to provide space in the banking industry through accommodative macroprudential policy, as part of risk management, were required while contributing to economic financing. Accommodative macroprudential policy manifested in an adjustment to the Macroprudential Intermediation Ratio (MIR) in order to accelerate growth, unrestricted Loan-to-Value (LTV) / Financing-to-Value (FTV) ratios on the first mortgage facility as well as liquidity flexibility in the Macroprudential Liquidity Buffer (MPLB) and a Countercyclical Capital Buffer (CCyB) maintained at 0%.

MIR Adjustment

In March 2019, Bank Indonesia adjusted the upper and lower bounds of the Macroprudential Intermediation Ratio (MIR), thus signalling to the banking industry to utilise its capacity to stimulate credit growth. The adjustment was a further refinement to the expansion of MIR components in 2018 to include wholesale funding in the form of securities on the financing side. The additional financing option through securities provides additional space for the banking industry to accelerate the intermediation function beyond lending. Congruently, and to support accommodative macroprudential policy, Bank Indonesia raised the MIR limits from 80-92% to 84-94%.

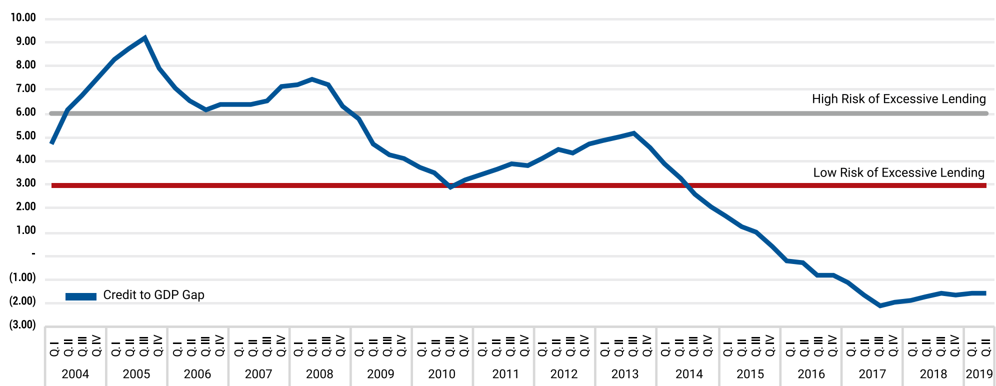
Based on an evaluation of the MIR instrument, there remains a number of banks with the potential to increase their intermediation function. The evaluation also took into consideration other prudential aspects, including liquidity ratios (liquid assets to deposits and loan-to-deposit ratios), which remained above the respective thresholds and also credit risk (NPL ratio) that was effectively contained. Another aspect taken into consideration was that banks maintaining a Capital Adequacy Ratio (CAR) in excess of 14% were not subject to the MRI requirements.

The MRI adjustment was accompanied by rigorous monitoring and periodic evaluations to check for indications of risk-taking behaviour in the banking industry in terms of the financial cycle (procyclicality). If procyclical behaviour is detected, Bank Indonesia evaluates the MIR target range in order to prevent a build-up of systemic risk. Although the newly adjusted MIR only became effective on 1st July 2019, the MIR had already increased from 92.62% in March 2019 to 94.82% in June 2019.

Holding the Countercyclical Capital Buffer (CCyB) at 0%

In the first semester of 2019, Bank Indonesia held the countercyclical capital buffer (CCyB) at 0%[1]. The decision was taken to hold the CCyB based on an assessment of financial system stability that detected no excessive credit growth, as reflected by the primary indicator, namely the credit-to-GDP gap, that remained below the threshold. Such conditions were confirmed by the supporting indicators, including macroeconomic indicators, banking indicators and asset prices.

Graph 4.1 Credit Gap to GDP



Source: Bank Indonesia

[1] *The CCyB represents additional capital held as a buffer to absorb potential losses in the event of excessive lending. Bank Indonesia evaluates the CCyB at least once every six months*

Furthermore, a CCyB of 0% is in line with accommodative macroprudential policy. The policy does not impede the banking industry from lending and contributing to national economic growth. This is in line with Indonesia's current financial cycle, which indicates additional space to stimulate credit growth. Nevertheless, Bank Indonesia will continue to periodically assess the CCyB every six months in order to anticipate any potential increase of systemic risk. Procyclical credit growth could potentially trigger a build-up of systemic risk, thus lending must be maintained in line with demand in order to avoid excessive credit growth, supported by adequate capital.

Bank Indonesia Sukuk as Collateral for the Short-Term Liquidity Loan/Financing
Bank Indonesia has issued Bank Indonesia Sukuk (SukBI) as an instrument of monetary operations that is compliant with Islamic principles. SukBI have an underlying asset in the form of a physical asset or financial asset owned by Bank Indonesia. A number of central banks in other countries have also issued sukuk as a monetary instrument, namely Bank Negara Malaysia and the Central Bank of Bahrain. Furthermore, SukBI are used for Musyarakah Muntahiya Bit Tamlik contracts.

In addition to reformulating the operational framework of monetary policy, SukBI issuances also serve to accelerate Islamic financial market deepening by complementing the term structure and nurturing trade in the secondary market. SukBI also represent an alternative instrument for Islamic blanks to place their funds, particularly those with excess liquidity, while simultaneously strengthening liquidity management in the Islamic banking industry. Therefore, SukBI are a liquid and tradable instrument that may be considered a liquid asset in the banking industry.

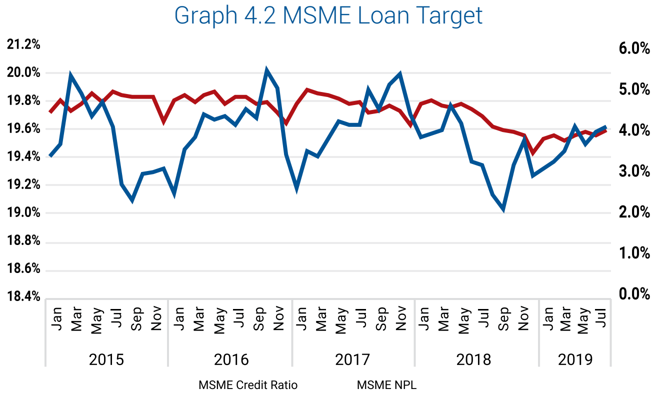
he release of SukBI necessitated a number of amendments to existing BI regulations, including the short-term liquidity loan (PLJP) for conventional commercial banks and the short-term liquidity financing (PLJPS) for Islamic banks, by including SukBI as collateral for the short-term facilities. Currently, SukBI has been included as high-quality collateral (as a security) in addition to Bank Indonesia Certificates (SBI), Bank Indonesia Sharia Certificates (SBIS), Bank Indonesia Certificates of Deposit (SDBI) and government securities (SBN) as well as securities issued by other legal entities. SukBI purchased on the secondary market may be used as collateral for PLJP by conventional commercial banks as well as SukBI held by an Islamic business unit of a conventional commercial bank. The value of SukBI collateral has been set at 100% of the PLJP ceiling based on the resale value of the SukBI. The same is true for PLJPS.

Lower Reserve Requirements as part of the Policy Mix
In June 2019, Bank Indonesia lowered the rupiah reserve requirements for conventional commercial banks as well as Islamic banks/Islamic business units by 50 basis points. The monetary policy move was taken to maintain adequate liquidity in the banking system in order to increase economic financing as part of the policy mix instituted by Bank Indonesia. The lower reserve requirements are in line with accommodative macroprudential policy that has provided additional space for the banking industry to increase intermediation. The additional liquidity is expected to increase bank capacity to lend.

Expanding Financial Access through MSME Credit Ratio
Bank Indonesia continues to expand financial access by increasing loans disbursed to micro, small and medium enterprises (MSME), which provide a significant contribution to Indonesia's national economy in terms of total business units as well as labour absorption. To that end, Bank Indonesia constantly strives to increase financial access for MSMEs. One way is by enforcing a minimum MSME credit ratio. At the end of 2018, the MSME credit ratio was set at 20% of total credit for the entire banking industry.

In the first semester of 2019, the banking industry maintained a MSME credit ratio in excess of the target set by Bank Indonesia. Lending to MSMEs has continued to rise, with the banking industry effectively containing the associated credit risk. In June 2019, the MSME credit ratio, including non-oil and gas export financing for foreign banks and joint-venture banks, reached 20.46%, accompanied by a gross NPL ratio for MSME loans recorded at 3.85% (Graph 4.2). That achievement was supported by a number of individual banks that had already met the minimum MSME credit ratio. Notwithstanding, a number of other banks continued to face infrastructure constraints, while pursuing a business model with a focus on corporate financing. Such banks have implemented a number of initiatives to overcome the most binding constraints, such as by applying a supply chain financing strategy, developing and launching new products in conjunction with other lending institutions as well as building organisational capacity and developing competent human resources.

Graph 4.2 MSME Loan Target



Financial System Supervision and Surveillance

Bank Indonesia has held the loan/financing-to-value (LTV/FTV) ratios as well as the Macroprudential Liquidity Buffer (MPLB) since both instruments were modified in the second semester of 2018. Notwithstanding, Bank Indonesia has continued to monitor all indicators used to evaluate the impact of both instruments on the financial system. A more detailed description of MPLB instrument development in relation to repo flexibility with Bank Indonesia is presented in Box 4.1.

Bank Indonesia constantly strengthens its surveillance and assessments using comprehensive risk measurement methodologies accompanied by accurate granular data and information. Macroprudential supervision is performed to map instability risk in the financial system that could lead to systemic risk. Widespread interconnectedness remains a key underlying factor for systemwide financial system supervision in order to mitigate the systemic risks that emerge, with a specific focus on systemically important banks and large corporations with a significant influence in the financial system. National/Regional Balance Sheet analyses have been developed to identify financial imbalances that could potentially trigger systemic risk. Furthermore, regular discussions as well as data and information exchanges are held with other relevant authorities and institutions as well as the government.

Aspects of macroprudential supervision are also constantly strengthened through efforts to prevent and handle crises under the crisis management protocol (CMP) framework. Crisis simulations are regularly conducted internally at Bank Indonesia as well as with other authorities in order to increase technical preparedness, including the internal and external coordination mechanisms during a crisis period. In the first semester of 2019, an internal crisis simulation was held at Bank Indonesia as well as with other relevant authorities under the auspices of the National Crisis Simulation.

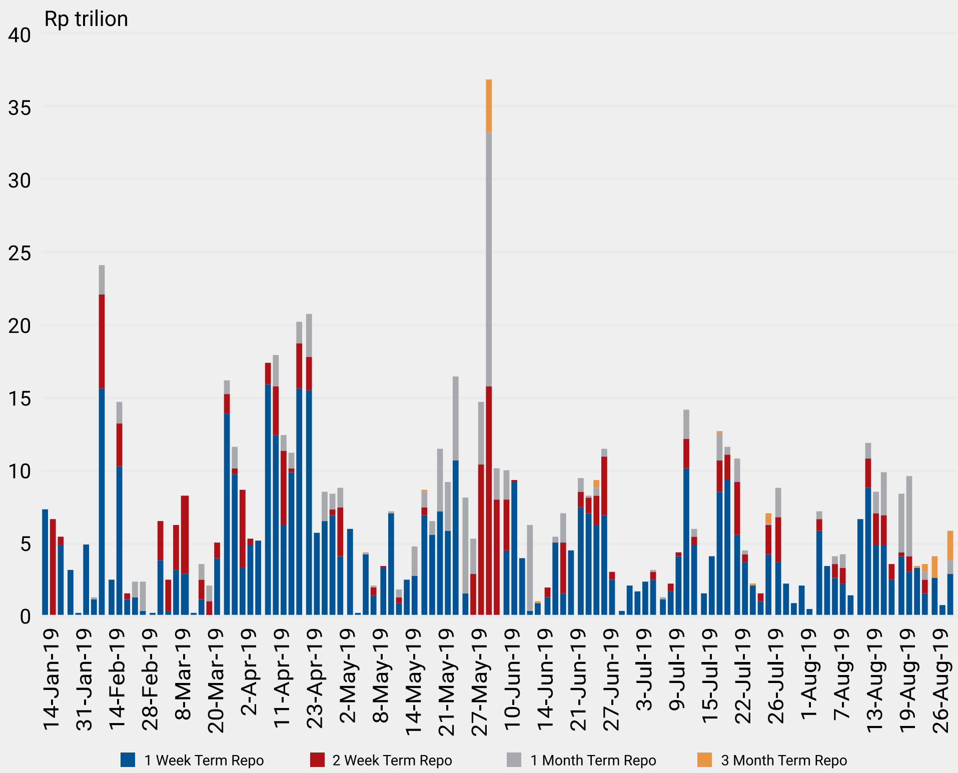
Boks 4.1 MPLB Flexibility for Banks to Utilise Regular Term Repo

The challenge of liquidity management in the banking industry increased in 2019 in line with growing demand for liquidity to stimulate bank lending and expand economic financing. On the other hand, bank funding sources have faced constraints, influenced by various autonomous factors, including global uncertainty in terms of foreign capital flows, potentially higher seasonal demand for currency during Ramadan and the yearend festive period, as well as changes in government expenditure, revenues and financing in 2019.

Seeking to ensure adequate liquidity and increase money market efficiency, while strengthening monetary policy transmission, Bank Indonesia strengthened its monetary operations strategy on 24th January 2019 and then introduced two-sided monetary operations on 6th May 2019. Monetary operations were strengthened by increasing the frequency of scheduled term repo auctions to daily auctions, which is expected to support MO effectiveness and ensure adequate liquidity in the money market, while simultaneously supporting financial market deepening efforts.

In addition, Bank Indonesia also relaxed the Macroprudential Liquidity Buffer (MPLB) to shore up banks facing collateral constraints. The relaxed MPLB allowed banks to participate in term repo auctions without reducing the MPLB ratio. Both policies, namely regular term repo and MPLB flexibility, are mutually synergistic and reinforcing. The regular and scheduled term repo auctions provide the banking industry with assurance to engage in repo transactions with Bank Indonesia as required. The policy is also indicative of Bank Indonesia's efforts to redistribute liquidity. Adequate liquidity in the money market would help dampen liquidity risk in the banking industry, culminating in greater financial system stability. Therefore, regular term repo auctions are supported by MPLB flexibility by relaxing the threshold from 2% to 4%, effective from the end of 2018. In addition, Bank Indonesia also announced in June 2019 a 50bps reduction to rupiah reserve requirements, effective from 1st July 2019.

Graph B4.1.1 Term Repo Auction Volume in 2019



The release of BI term repo allows banks to hold certain securities, including SBI, SBIS, SukBI and SBN/SBSN, for repurchase at Bank Indonesia in order to meet their liquidity requirements. By relaxing the MPLB threshold from 2% to 4%, the banking industry has greater liquidity management flexibility.

Bank uptake of BI term repo has tracked an upward trend, especially during periods of tighter liquidity, such as during Eid-ul-Fitr in May 2019. This was confirmed by increases of term repo volume (reaching Rp98 trillion), the number of banks using term repo (35 banks), as well as the number of banks utilising MPLB flexibility (3 banks). In general, all BUKU bank groups have sufficient space to utilise term repo, as indicated by a MPLB ratio in excess of 4%. Nevertheless, the distribution of MPLB is mixed across the different bank groups. In terms of value, BUKU 4 banks have dominated use of term repo (up to 2.5% of rupiah deposits), followed by BUKU 2 and 3 banks. On the other hand, BUKU 1 have been most inclined to utilise MPLB flexibility.

The surge of term repo during Eid-ul-Fitr (May 2019) was primarily triggered by a significant funding gap of Rp111 trillion as a result of subdued deposit growth, influenced by a temporary currency outflow, amidst a seasonal increase of disbursed loans. The transient increase in the funding gap affected all BUKU bank groups. Nonetheless, term repo policy provided greater liquidity management flexibility in the banking industry, thus facilitating credit expansion despite a temporary outflow of currency during Eid-ul-Fitr.

Figure B4.1.1 MPLB Scheme

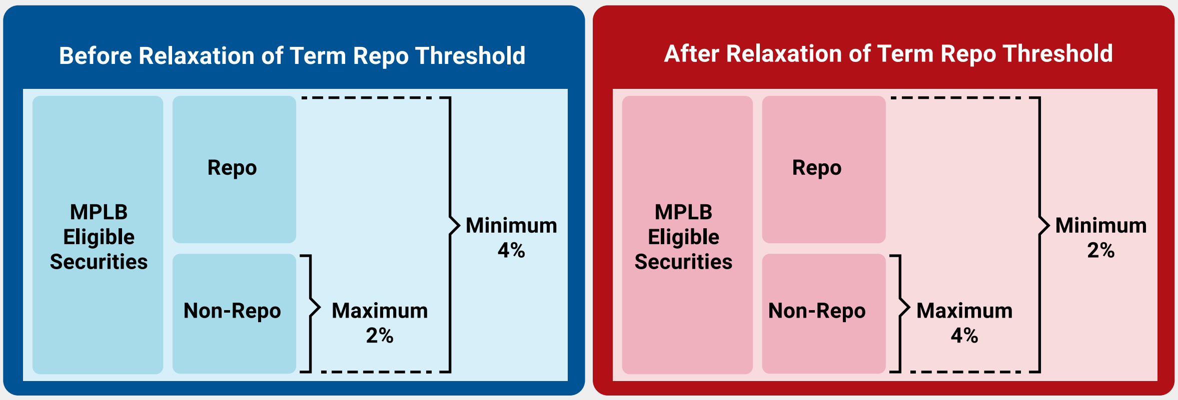
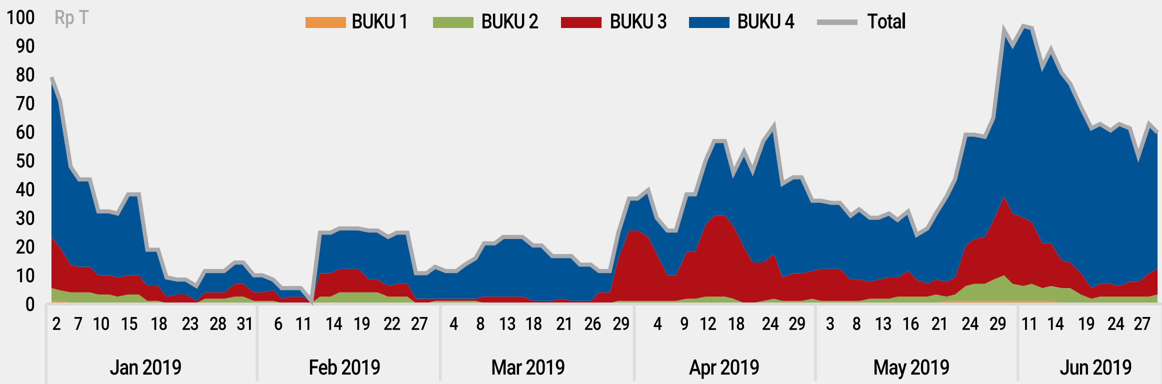


Table B4.1.1 MPLB Distribution

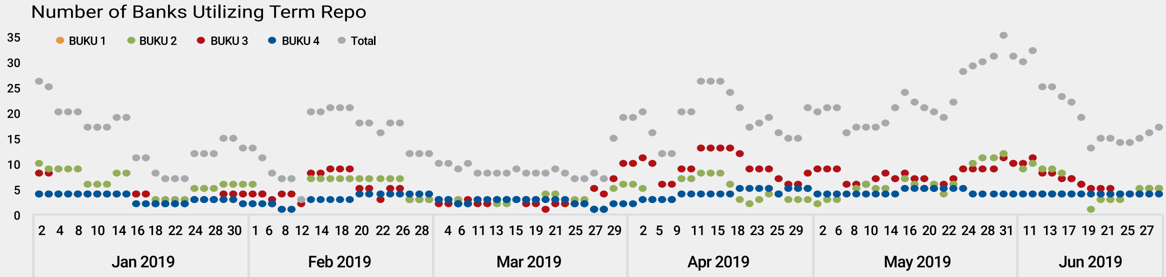
Bank Group	MPLB Ratio		
	<4%	<8%	>=8%
BUKU 1	-	6	15
BUKU 2	-	10	48
BUKU 3	-	2	24
BUKU 4	-	-	6

Graph B4.1.2 Term Repo Utilisation

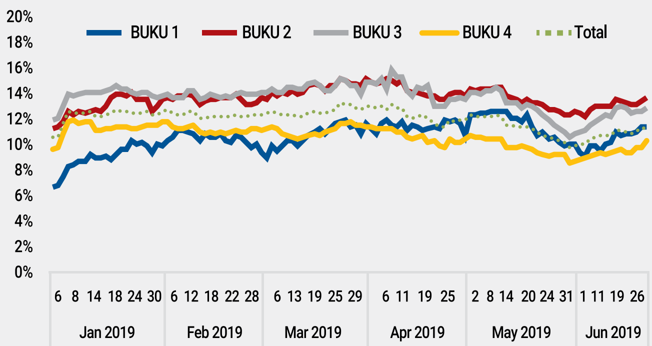
Utilization of BI Repo Term



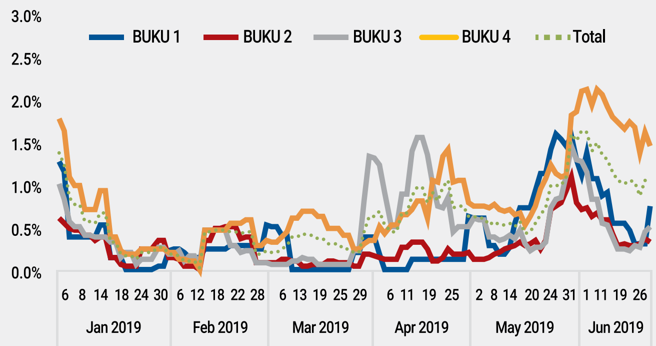
Number of Banks Utilizing Term Repo



Graph B4.1.3 MPLB Ratio Developments

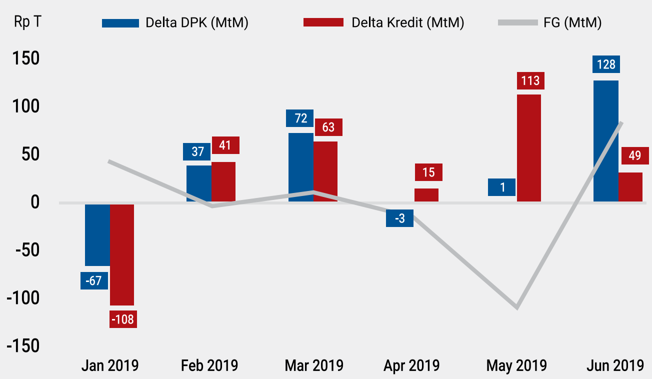


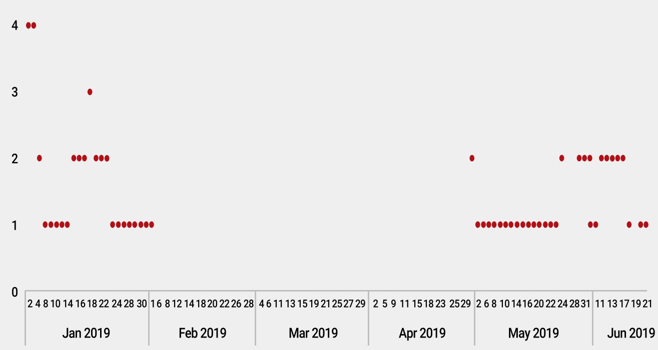
Ratio PLM (SSB Non Repo)



Ratio PLM (SSB Repo)

Graph B4.1.4 Deposits, Loans and Funding Gap





DPK Data, credit and funding gap

Number of Bank using flexibility of term repo

4.2 Role of Institutional Investors to Support Development Financing

Bank Indonesia has also performed various studies and undertaken efforts relating to financial market deepening. One such study investigated the potential of institutional investors to support development financing and simultaneously deepen Indonesia's financial markets. In this section, Bank Indonesia highlights insurance and pension fund institutions, which have large potential to contribute to economic financing. Meanwhile, in terms of Islamic finance, Bank Indonesia has studied the potential of Cash Waqf-Linked Sukuk (CWLS) to support economic development in the public interest that is compliant with Islamic principles, as presented in Box 4.2.

The availability of financing sources is a key factor supporting development continuity. The financial market is one place that provides various financing instruments. As with traditional markets, in addition to instruments as commodities to be traded, the financial market also functions as an intermediary platform where sellers (requiring funds) can meet buyers (with funds). In general, corporations require funds as economic agents in various business fields. Meanwhile, investors are diverse, from individual investors to institutional investors. In terms of total funds, institutional investors tend to have more funds and dominate the domestic financial markets.

Institutional investors enjoy a large financing capacity. Institutional investors include insurance firms, pension funds, hedge funds and the banks. In general, the funds invested by institutional investors are the pooled funds of their members. For instance, the contributions accumulated by pension funds and insurance premiums collected by insurance companies. This means that institutional investors have a large financing capacity, which could be used for market development in a country. The larger the capacity (assets/funds) of the institutional investor, the more funds can be absorbed by the financial market. Therefore, institutional investor capacity often determines financial market effectiveness in terms of providing financing sources.

In Indonesia, institutional investors (banks, pension funds, insurance and guarantee companies) are dominated by the banking industry, with total assets reaching Rp8.243 trillion in June 2019, accounting for 84% of total assets of institutional investors as an aggregate. In contrast, the respective shares of insurance companies and pension funds are relatively small at just 13.05% and 2.85%. The dominance of the banking sector could potentially limit financial market growth considering that the domestic banking industry continues to operate conventionally, namely by relying on a saving-lending business model. As of June 2019, the loan-to-deposit ratio (LDR) of the banking industry reached 94.28%. In addition, bank deposits are typically short-term, which could trigger a potential mismatch if used to extend long-term financing. Consequently, institutional investors must be strengthened to provide long-term financing with relatively longer-term funding sources.

In general, insurance companies and pension funds could become institutional investors and support economic financing because their funding sources are relatively long term, which could also be invested in the long term. Nonetheless, capacity remains limited because the insurance premiums and pension contributions collected remain low, thus restricting investment potential. Such conditions are reflected in the relatively low value of insurance and pension fund industry investments compared with bank loans. Therefore, integrated and sustainable efforts are required from various parties to increase the involvement of the public and employees in the insurance and pension fund industries.

Based on the experience of other countries, in this case Malaysia, the material size of institutional investors is a function of pension fund management centralised through public pension funds (Kumpulan Wang Persaraan – KWAP) for civil servants and the Employee Provident Fund (EPF) for private sector employees. Through centralised pension fund management, EPF assets are currently equivalent to 56.4% of Malaysia's GDP. This increases the opportunity for more effective and efficient management through economies of scale. Such a large contribution is also supported by high market penetration. In Malaysia, pension fund penetration currently stands at 95%, namely 14.2 million pension fund members out of 14.9 million employees in total.

Total investment by insurance companies has tracked an upward trend from Rp533 trillion (June 2018) to Rp565 trillion (June 2019), equivalent to around 10.5% of total bank credit (June 2019). The value of total investment remains small yet with strong growth potential as an alternative source of economic financing. Currently, the composition of investment in the insurance industry is dominated by products from the banking industry, financial markets and capital market. Moving forward, however, the insurance industry is expected to allocate more investment to government securities (SBN), bonds, Medium-Term Notes (MTN) and other securities, issued mainly in the primary market by the government or corporate sector, which can be used as funding/financing sources for the government and corporate sector (other than bank loans). There are currently 133 insurance companies registered in Indonesia, consisting of 53 life insurance companies, 74 general insurance companies and five reinsurance companies. In this discussion, the insurance data includes life insurance, general insurance and reinsurance but excludes social and compulsory insurance.

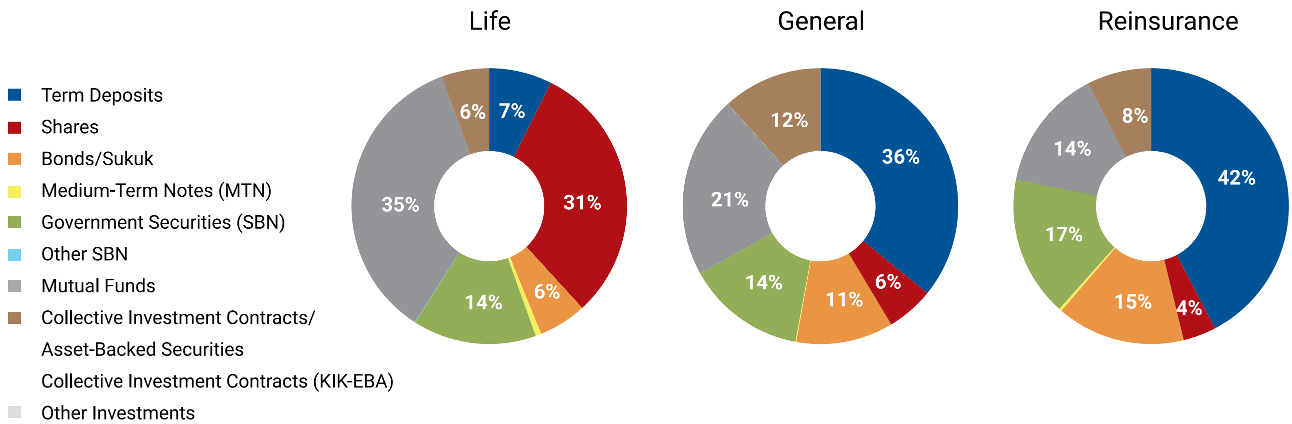
Capital market improvements have increased the return on investment for insurance companies, particularly those with dominant investments in the form of shares and bonds. Claim payments in the life insurance industry tend to be long-term and their customers prefer unit-linked products with an investment component, thus causing the investment composition of the life insurance industry to be dominated by shares and mutual funds (shares and bonds in particular) (Graph4.2.1).

Stronger SBN and corporate bond prices coupled with improving stock prices in the first semester of 2019 increased the return on investment in the life insurance industry to Rp15.20 trillion, growing impressively by 302.51% (yoy). Meanwhile, the composition of investments in the general and reinsurance industries is dominated by term deposits, which have continued to maintain a positive return on investment despite tracking a downward trend on the previous semester. On the other hand, the return on investment in the reinsurance industry has begun to regain upward momentum after declining in the second semester of 2018 due to portfolio placements dominated by term deposits (Graph 4.2.1).

Departing from insurance companies, capital market gains have indirectly influenced the return on investment in the pension fund industry, which is not only affected by investment income but also investment expenses. Customer preferences and the type of pension program influence investment placements in the pension fund industry. Defined benefit plans and defined contribution plans tend to be dominated by SBN placements as well as bonds/sukuk, while financial institution pension funds tend to favour term deposits.

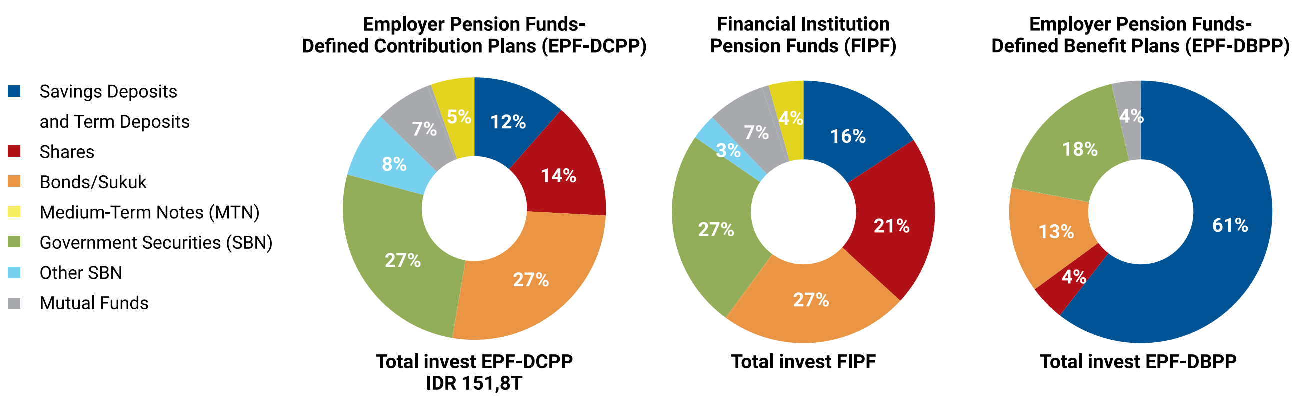
Industrywide, total investment of the pension fund industry increased to Rp273 trillion in the first semester of 2019, with growth accelerating to 8.01% (yoy) from 2.54% in December 2018 and 2.97% in June 2018. Compared to bank loans, investments accounted for around 4.99% in June 2019. The investment portfolio of the pension fund industry is dominated by term deposits and SBN, accounting for 27.29% and 23.65% respectively (Graph 4.8). Similar to the insurance industry, pension fund investments could be used as an alternative source of economic financing, particularly if the allocation can gradually shift towards SBN, bonds/sukuk, MTN and other securities issued by the government and corporate sector in the primary market. Although total investment in the pension fund industry has increased, the return on investment declined 3.11% (yoy) in the first semester of 2019. The main drag on the return on investment stemmed from defined benefit plans and defined contribution plans, which contracted by 61.21% and 26.52% respectively.

Graph 4.2.1 Investment Composition of the Insurance Industry



Source: Financial Services Authority (OJK)

Graph 4.2.2 Investment Asset Composition of Pension Fund Industry



Source: Financial Services Authority (OJK)

Boks 4.2 Cash Waqf-Linked Sukuk (CWLS) as a Non-Traditional Alternative Source of Financing

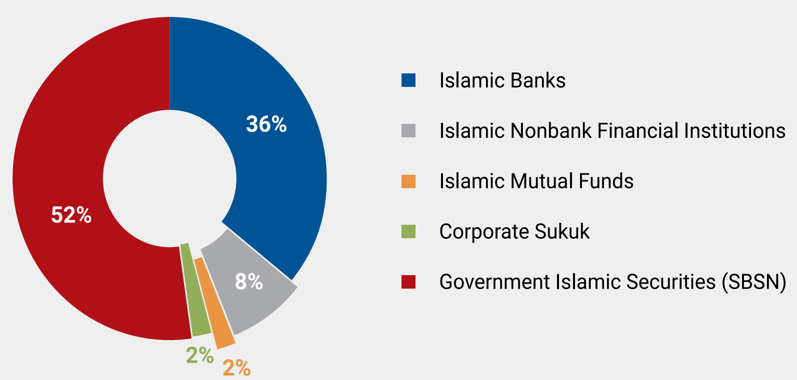
The Islamic financial and economic system places the commercial and social sectors side-by-side because they are mutually reinforcing and supporting. In the commercial sector, sukuk as an investment instrument or form of Islamic financing has been developed with rapidity and is used in various countries, including Indonesia. In the social sector, waqf, cash waqf in particular, has a large opportunity to be more productive and utilised to ameliorate public prosperity. Islamic Social Finance (ISF) is used not only for social purposes but also to increase financial intermediation by utilising idle liquidity to support development financing in the public interest. This is consistent with the fundamental values and principles of the Islamic economy, which strives towards maximising social impact.

Sukuk development in Indonesia has been very positive, as confirmed by developments in the second quarter of 2019. The sukuk market has expanded by accumulating outstanding Government Islamic Securities (SBSN) and corporate sukuk totalling Rp708.1 trillion, growing 5.36% (yoy). By excluding the market share of Islamic stocks, the share of SBSN increases to 52% of total Islamic financial assets, as the dominant component in Indonesia.

Since the first issue in 2008 until the end of June 2019, SBSN issuances have reached Rp1,148.45 trillion, denominated in Indonesian rupiah and US dollars. SBSN have also contributed to national development financing by accounting for an average share of 30% of total SBN financing each year.

Cash waqf potential is massive. Based on the calculations of the Indonesia Waqf Board (BWI), waqf potential in Indonesia currently stands at Rp180 trillion per year[2]. The massive potential of cash waqf could be realised based on Indonesia's leading global position in terms of the World Giving Index in 2018 after being ranked second in the previous period. With a total score of 59%, the score for helping others was 46%, donating materials was 78% and volunteering was 53%[3].

Graph B4.2.1 Islamic Financial Asset Composition



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[2] *As delivered by the BWI Head of Human Relations, Socialisation and Literacy to Republika.co.id on 16th October 2018. https://www.republika.co.id/berita/dunia-islam/wakaf/18/10/16/pgovmd384-potensi-wakaf-tunai-capai-rp-180-triliun.*

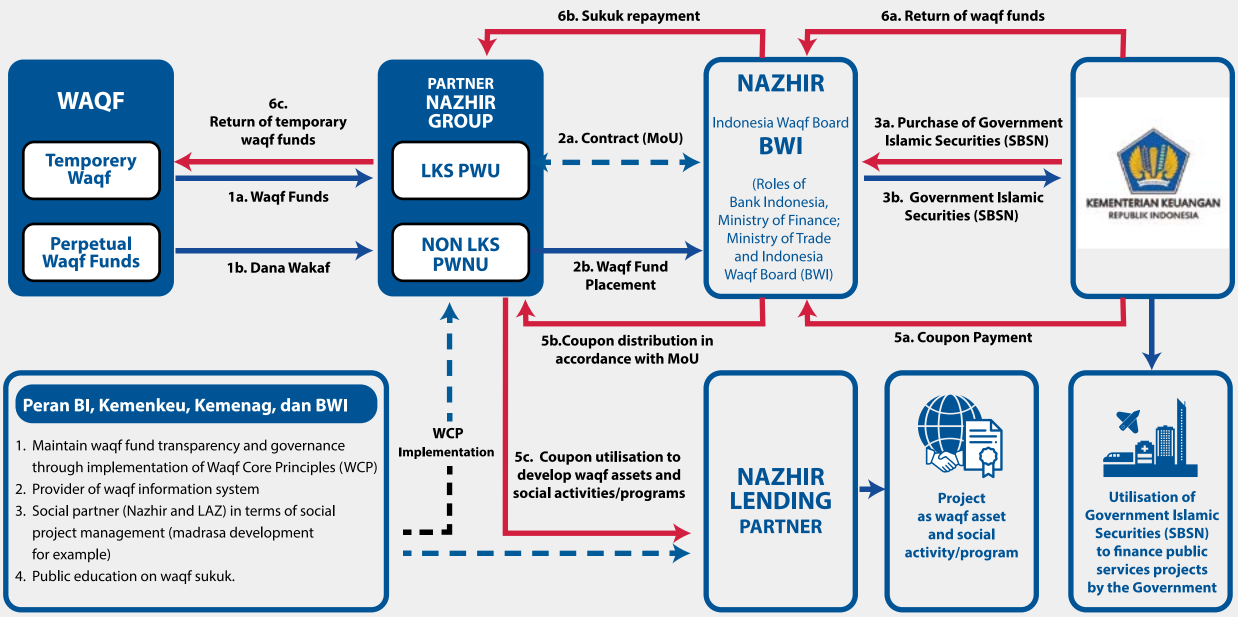
[3] *Charities Aid Foundation (CAF) World Giving Index 2018: A Global View of Giving Trends, published in October 2018.*

One contribution of Islamic commercial and social sector integration is Cash Waqf-Linked Sukuk (CWLS). CWLS is a (domestic or international) cash waqf investment instrument managed by the Indonesia Waqf Board (BWI) or Nadhzir (waqf fund manager) for domestic SBSN, applying a fiduciary scheme to support government programs that develop public facilities. Differing from SBSN, the CWLS scheme facilitates targeted project/investment, for instance infrastructure development linked to the Sustainable Development Goals (SDGs) as well as development of social facilities. The mechanism and an example of CWLS is illustrated in Figure B4.2.1.

of SBSN is used to develop public infrastructure and provide economic benefits for the public. Fifth, the return on SBSN is disbursed through the Nadhzir for social programs/activities, which may also increase the standard of living and public purchasing power amongst those considered mustahik (8 groups of zakat beneficiaries, including the Poor). Therefore, this would maintain consumption and demand, while simultaneously alleviating poverty.

In response to the first and second challenges listed above and in conjunction with various parties, including the Indonesia Waqf Board (BWI), Productive Waqf Forum (Nadhzir) and

Figure B4.2.1 CWLS Mechanism and Example



Source: Bank Indonesia

The CWLS scheme has a number of advantages over conventional/traditional financing schemes as a source of national development financing. First, CWLS increases development financing capacity as a new source of finance that utilises idle funds, rather shifting from other commercial/productive funding sources. Second, CWLS entails an incredibly low cost of funds (CoF) to meet government short-term investment demand, particularly in terms of developing social/public infrastructure. This is because waqf funds do not guarantee a specific return for the waqif (provider of waqf funds). A low CoF has a positive impact on the cost of issuing SBSN and on the state budget burden. Third, CWLS, perpetual CWLS in particular, namely CWLS that is not repaid, is free from credit risk and liquidity risk because no repayment is required. CWLS creates a new investor segment, namely social investors (waqif) who are not seeking to profit from investing in waqf instruments. Fourth, CWLS creates a larger multiplier effect and directly impacts overall prosperity because the return on investment

UNIDA Gontor, Bank Indonesia is continuously conducting socialisation activities, particularly through the Indonesia Waqf Awareness Movement (GISWAF). Meanwhile, in response to the third challenge, Bank Indonesia has initiated and compiled the Waqf Core Principles (WCP) together with the BWI and IRTI-IDB, supported by the International Working Group on WCP, consisting of Awqaf South Africa, Awqaf New Zealand, Awqaf Bosnia-Herzegovina, Awqaf Nigeria and Awqaf Australia.

The inaugural CWLS, series SW-001, has been planned worth Rp50 billion and with a tenor of three years. Bank Indonesia is currently coordinating intensively with the other stakeholders, namely the Ministry of Finance, BWI, LKS-PWU and FWP, towards the inaugural CWLS.

4.3 Synergy and Coordination to Strengthen Financial System Resilience

In order to effectively formulate macroprudential policy and financial sector policy, Bank Indonesia constantly strengthened coordination with the Indonesian Financial Services Authority (OJK) and the Deposit Insurance Corporation (LPS) bilaterally and trilaterally throughout the first semester of 2019. Bank Indonesia regularly coordinates and cooperates with OJK through the Macroprudential-Macroprudential Coordination Forum (FKMM), which aims towards policy and regulatory synergy to minimise potential crosscutting issues, redundancies and inconsistencies. Meanwhile, Bank Indonesia coordinates and cooperates with LPS focusing on preparing and implementing simulations concerning bridge banks and selling government securities (SBN) by LPS to Bank Indonesia, extending the memorandum of understanding and compiling guidelines for BI-LPS task implementation. In addition, Bank Indonesia also collaborated with OJK and LPS to finalise a memorandum of understanding concerning creating and maintaining integrated reporting in the banking sector.

Macroprudential and Macroprudential Policy Coordination between Bank Indonesia and the Indonesian Financial Services Authority

Since the transfer of the bank supervision function from Bank Indonesia to the Financial Services Authority (OJK), coordination and cooperation between the two authorities has been maintained. Routine coordination is facilitated in the form of discussions and requests for inputs regarding draft regulations, discussions on the latest conditions in the financial sector to determine policy at both authorities as well as data/information exchange. The most commonly exchanged data between the two authorities includes liquidity and bank performance ratios, the commercial bank branch network, Banking Information System (SIP) data as well as Finance Company Reporting Information System (SIPP) data.

Striving to improve the integrated data and information exchange mechanism, Bank Indonesia and the Financial Services Authority (OJK) compiled the integrated reporting blueprint plan for full implementation in 2020. Integrated reporting is expected to provide additional convenience for the banking industry in terms of submitting reports to the relevant authorities, while simultaneously preventing redundancies and inconsistencies. Furthermore, both institutions have developed a bank reporting transition mechanism, including sanctions prior to full implementation.

Stronger coordination between Bank Indonesia and OJK not only relates to policymaking but also macroprudential and macroprudential supervision. Periodically, BI and OJK coordinate to determine and update systemically important banks every six months, to prepare and implement joint bank inspections as well as to conduct joint stress tests relating to the banking industry. In terms of the payment system, Bank Indonesia coordinates and holds discussions with OJK concerning the development of digital banking and digital finance as well as other issues, such as fulfilling the Principles for Financial Market Infrastructures (PFMIs) by implementing Central Bank Money (CeBM) for transaction settlement in the capital market, which covers SBN and non-SBN transactions by custodian banks and securities companies.

Coordination between Bank Indonesia and the Financial Services Authority (OJK) through the Macroprudential-Macroprudential Coordination Forum (MMCF) involves technical discussions and high-level meetings (HLM). Recent high-level meetings between the BI Board of Governors and the OJK Board of Commissioners have discussed a number of strategic topics, including rural bank requirements in the payment system, derivative transactions and financial market deepening, as well as synergetic implementation of digital financial services (DFS) by Bank Indonesia and branchless banking towards financial inclusion by OJK. Moving forward, Bank Indonesia and the Financial Services Authority (OJK) will continue to strengthen policy synergy through joint decisions taken at each respective authority.

Coordination between Bank Indonesian and the Deposit Insurance Corporation

Cooperation and coordination between Bank Indonesia and the Deposit Insurance Corporation (LPS) is based on a Memorandum of Understanding signed on 28th June 2016[4]. In the first semester 2019, Bank Indonesia and LPS strengthened cooperation and coordination concerning the purchase of LPS-held government securities (SBN) by Bank Indonesia as a simulation in accordance with the current agreement concerning the sale of SBN by LPS to Bank Indonesia[5].

Regarding the establishment of bridge banks by the Deposit Insurance Corporation (LPS) as one resolution option, Bank Indonesia issued a regulation at the end of 2018 concerning the operational relationship between bridge banks and Bank Indonesia and compiled implementation guidelines as a mechanism for joint activities between internal work units at Bank Indonesia[6]. As a follow-up measure to those regulations, Bank Indonesia, as the payment system authority, together with LPS have compiled implementation guidelines regarding coordination and cooperation procedures for the operational relationship between bridge banks and Bank Indonesia. The implementation guidelines are required to ensure the approval and/or licencing process by Bank Indonesia to bridge banks functions soundly in relation to the Bank Indonesia Payment System, monetary operations (MO) and payment system service providers.

Bank Indonesia and the Deposit Insurance Corporation (LPS) also run bridge bank simulations in order to gauge the effectiveness of task implementation at each respective authority. As a follow-up action to the simulation implemented at the end of 2018, a further simulation was run to evaluate the approval and/or licenses granted by Bank Indonesia to LPS for the establishment of bridge banks. In addition, Bank Indonesia and LPS have discussed extending the Memorandum of

4 Memorandum of Understanding between Bank Indonesia and the Deposit Insurance Corporation (LPS) (No.18/12/NK/GBI/2016)/(MOU-3/DK/2016) concerning Coordination and Cooperation for the Execution of Duties, Function and Authority by Bank Indonesia with the Deposit Insurance Corporation (LPS).

5 Agreement No. 18/13/PKS/DPG/2016)/(PKS-1/KE/2016) concerning the Sale of Securities by the Deposit Insurance Corporation (LPS).

6 Bank Indonesia Regulation (PBI) No. 20/15/PBI/2018, dated 21st December 2018 concerning the Operational Relationship between Bridge Banks and Bank Indonesia.

Understanding between Bank Indonesia and LPS, which expired in July 2019. By extending the MOU, Bank Indonesia and LPS will continue to cooperate by exchanging data and information, implementing joint socialisation programs, developing employee potential, assigning employees as well as finalising the implementation guidelines relating to bridge banks.

Coordination between Bank Indonesia, the Indonesian Financial Services Authority and the Deposit Insurance Corporation

Collaboration and synergy between Bank Indonesia, the Financial Services Authority (OJK) and the Deposit Insurance Corporation (LPS) are reflected in the current agreement to develop and maintain integrated reporting in the banking sector. The commitment of all three institutions is critical for the development of integrated reporting based on metadata to be implemented by the banking industry. The implementation of integrated reporting is targeted for the end of December 2019 and all three institutions have held intensive discussions concerning the regulations, data, mechanisms and reporting system. Following up on the publication of a joint research monograph (BI-OJK-LPS) in 2018, all three institutions initiated joint research in 2019 in line with the tasks and authority of each respective institution as part of research-based policy and also to improve research quality at each institution..

Policy coordination, cooperation and harmonisation with the other authorities would be impossible without the contribution and support of the Bank Indonesia ex-officio board members assigned to OJK and LPS, who ensure that the policy, regulatory and strategic issues affecting Bank Indonesia can receive input from OJK and LPS and vice versa. Moving forward, data and information will continue to be regularly exchanged between the authorities. In addition, Bank Indonesia, in conjunction with OJK and LPS, will continuously coordinate to safeguard policy synergy at each respective institution.

In addition to cooperating with other domestic authorities, Bank Indonesia also coordinates and collaborates with international financial institutions in order to adopt and formulate financial sector policies in accordance with international best practices. The overarching goal is to strengthen the domestic financial system in order to maintain national and global financial system stability.

Membership in the Financial Stability Board

Indonesia's membership in the Financial Stability Board (FSB) ensures Indonesia can contribute and utilise its membership optimally in accordance with its mandate and authority. That includes maintaining the national interest as an emerging market in discussions concerning global financial sector policymaking as well as strengthening domestic financial sector policy in line with recommendations and international best practices.

- At the plenary level, Indonesia is represented by Bank Indonesia and the Ministry of Finance. Membership is expected to strengthen coordination in order to facilitate implementation of the cross-sector recommendations that involve various authorities.
- In terms of the Standing Committee on Assessment of Vulnerabilities (SCAV), Indonesia is represented by Bank Indonesia. Discussions are focused on issues relating to economic vulnerabilities and transmission to the financial sector.
- Membership of the Standing Committee on Supervisory and Regulatory Cooperation (SRC) is represented by Bank Indonesia and OJK, with a focus on macroprudential and microprudential regulation and supervision of the financial sector.
- Membership of the Standing Committee on Standards Implementation (SCSI) is represented by the Ministry of Finance, tasked with monitoring the implementation of cross-sector international G20/FSB recommendations/standards that involve various authorities.
- The three authorities (Bank Indonesia, OJK, Ministry of Finance) are also members of the Regional Consultative Groups (RCG) Asia, which provides common understanding amongst the authorities in Indonesia regarding relevant and emerging strategic issues in the region.
- At the technical level, which structurally falls under the auspices of the standing committee, Indonesia's authorities actively participate as members to support the formulation of initiatives and standards, viewpoints as well as international policy recommendations in the area of financial system stability. The contribution of Indonesia's authorities at the technical level encompasses nonbank financial intermediation, FinTech, cyber risk, financial benchmarks, bank resolution and impact evaluation of the global financial reforms.

Strengthening Indonesia's participation in various international forums requires the full support and commitment of the domestic authorities to ensure an effective and mutually beneficial membership. Such considerations triggered the establishment of a global financial sector reform task force with the involvement of Bank Indonesia, the Ministry of Finance, OJK and LPS as well as other relevant authorities in order to strengthen coordination between domestic authorities in the face of dynamic financial sector issues that cross sectors, for instance preparations for assessments by international institutions, such as the FSB Country Peer Review and IMF Financial Sector Assessment Program (FSAP). In addition, the task force also serves as an inter-institutional information sharing platform concerning emergent strategic issues at international forums that require joint follow-up actions

Membership at Other International Forums

In addition to the FSB, Bank Indonesia and the Indonesian Financial Services Authority (OJK) are also members of the Basel Committee on Banking Supervision (BCBS). BCBS is an international standard-setting body for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters. In addition, Indonesia also participates in regional forums, such as the Executives Meeting of East Asia Pacific Working Group on Banking Supervision (EMEAP WGBS). EMEAP WGBS members include central banks and supervisory authorities from East Asia and the Pacific. The forum facilitates discussions in the area of financial sector regulation and supervision, while facilitating information exchange in terms of global financial reforms from a regional perspective. EMEAP WGBS membership has expanded to include resolution authorities, thus facilitating discussions on financial sector resolution issues. Indonesia is represented by the Deposit Insurance Corporation (LPS).

Consistent with Indonesia's commitment to strengthen macroeconomic stability and financial system resilience through initiatives that support sustainable development, Bank Indonesia will encourage the further participation of Indonesia's authorities at various regional and international forums in the area of sustainable finance to support the Sustainable Development Goals (SDGs), such as the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). Bank Indonesia has also taken measures to strengthen its contribution to the Paris Agreement on Climate Change and the Sustainable Development Goals (SDGs), in line with the government's commitments[7]. This is based on understanding that climate change could potentially exacerbate financial risk, which could impact the financial system and macroeconomic stability more broadly in the medium-long term. Specifically, global commitment to the Sustainable Development Goals (SDGs) as presented in Box 4.3.

Country Peer Review of Over-the-Counter Derivatives

From 2019-2020, Indonesia, as a member of the G20 and FSB, is conducting a Country Peer Review (CPR) of over-the-counter (OTC) derivatives. CPR implementation will involve various relevant institutions, namely Bank Indonesia, the Ministry of Finance, the Indonesian Financial Services Authority (OJK), Deposit Insurance Corporation (LPS) and the Commodity Futures Trading Regulatory Agency (BAPPEBTI). As a member of the G20 and Financial Stability Board (FSB), Indonesia is committed to implementing the global financial sector reform agenda in Indonesia. Global financial sector reforms are a follow-up action to the G20 Leaders' mandate to strengthen the global financial sector by overcoming the fragilities, including supervisory and regulatory gaps that contributed to the global financial crisis in 2008. The commitments of G20 members are periodically monitored and reviewed by the FSB through country peer reviews, amongst others.

The FSB's Country Peer Review is an assessment focused on G20/FSB reform areas still experiencing regulatory, supervisory and other policy gaps that are relevant and important to strengthening domestic financial system stability. The FSB has already designated Indonesia for a country peer review of OTC derivatives in 2019/2020.

The country peer review in 2019/2020 will be the second such assessment for Indonesia.

The first FSB country peer review was conducted in 2013/2014 on the topics of institutional arrangements in the financial sector and the crisis management protocol in Indonesia. The topics were selected based on the transfer of the banking supervision function from Bank Indonesia to the Indonesian Financial Services Authority (OJK) along with the formulation process of the Financial System Crisis Prevention and Mitigation (PPKSK) Act. Meanwhile, OTC derivatives were selected for the review in 2019/2020 due to OTC derivative market reforms, as one of four priority reform areas stipulated by the FSB, of which implementation continues to face a number of challenges. The other priority reform areas are: (i) strengthening financial institution resilience; (ii) overcoming the too-big-to-fail issue; and (iii) intermediation at non-bank financial institutions previously known as shadow banking.

Bank Indonesia is an active participant of the SFB Country Peer Review, which is expected to help strengthen the regulatory and supervisory legal frameworks for the derivatives market in Indonesia, while advancing policy harmonisation amongst domestic authorities in order to facilitate financial market deepening. This is required to accelerate OTC derivative reforms as part of the G20/FSB recommendations, including the establishment of central clearing counterparties (CCP), electronic trading platforms (ETP), reporting access to trade repositories, the imposition of margin requirements and higher capital expenses for derivative transactions not settled through clearing.

Coordination and cooperation across authorities in Indonesia has been an ongoing concern since the end of 2018 in preparation for the country peer review. Close coordination through regular intensive meetings and communications has been one of the keys to success considering that OTC derivative reforms are cross sectoral, involving Bank Indonesia, Financial Services Authority (OJK), Ministry of Finance and BAPPEBTI.

Publication of the country peer review is expected to present balanced findings not only concerning the implementation gaps but also the challenges and constraints faced by developing economies in terms of adopting the OTC derivative market reforms, particularly in terms of shallow markets and underdeveloped financial market infrastructure compared with conditions in more advanced economies.

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7 *Government commitment in Indonesia to the Paris Agreement on Climate Change is contained in Act No. 16 of 2016 and the Sustainable Development Goals (SDGs), followed by promulgation of Presidential Decree No. 59 of 2017.*

Boks 4.3 Global Commitment to the Sustainable Development Goals (SDGs)

The issue of sustainable development has become a hot discussion topic at various regional and international forums, reflecting efforts to realise country commitments to the Paris Agreement on Climate Change (PACC) and Sustainable Development Goals (SDGs). The long-term goal of the Paris Agreement is to keep the increase in global average temperature to well below 2° C above preindustrial levels; and to pursue efforts to limit the increase to 1.5° C. The SDGs are a global development agenda agreed and ratified by members of the United Nations General Assembly on 25th September 2015. The SDGs are a collection of 17 global goals and 169 targets as a global action plan for the upcoming 15 years until 2030 that aim towards no poverty, reducing inequality and protecting the environment. The SDGs are universal, implying that all countries have a moral imperative to achieve the goals and targets. As a G20 member, Indonesia is committed to implementing the PACC and SDGs in accordance with Act No. 16 of 2016 and Presidential Decree No. 59 of 2017.

As the central bank, Bank Indonesia plays a strategic role in accordance with its monetary, macroprudential and payment system mandate and authority to support achievement of the PACC and SDGs, which will contribute to macroeconomic and financial system stability. This may be achieved by strengthening the FSS tools and surveillance framework that integrates aspects of climate and environmental-related change as a source of increasing financial risk. Climate and environmental-related risks could trigger physical risk and transition risk. Physical risk is the impact of economic and financial costs that could potentially arise from increasing climate change in terms of frequency and intensity on lower asset prices and/or increasing liabilities. Transition risk emerges during a period of transition towards a low-carbon economy (LCE), including the impact of changing policy design to mitigate and adjust the impact of climate change on financial assets and liabilities. In the medium-long term, financial risks could amplify pressures on financial system stability and macroeconomic disruptions, which could subsequently intensify pressure in the financial markets through feedback loops if not addressed appropriately.

Globally, there is growing awareness of the central banks' roles in terms of mitigating financial system vulnerabilities from climate and environmental-related risks that could potentially disrupt the economy. The central bank can promote sustainable development through green financing as part of macroprudential policy in order to achieve broader financial stability. To that end, central banks are required to develop policy instruments towards the implementation of green financing, such as Green LTV, which would relax loan covenants for environmentally friendly borrowers.

Currently, the dominant area of sustainable development, and the focus of various international institutions and/or standard-setting bodies, is mitigating risk at microfinance institutions. Meanwhile, climate and environmental-related risks, requiring a more holistic approach to the financial system stability framework, have not been discussed at length, which is why discussions at various international forums in 2019 have begun to focus on climate and environmental-related risks in the context of financial system stability.

Regionally, EMEAP WGS has established an Interest Group (IG) on Sustainable Banking, with a work plan for 2019-2020 that aims to reach a common perspective amongst the members and decide policy direction, best practices and the approaches of each respective EMEAP member country. In ASEAN, Bank Negara Malaysia has established a task force on the roles of central banks in addressing climate and environmental-related risks, of which Bank Indonesia is a member. The task force was formed to initiate studies on the role of central banks in mitigating climate and environmental-related risks, amongst others by identifying the importance of central bank participation and limitations in such areas, while initiating a regional stock-take initiative of the climate and environmental-related risks in the financial sector as well as highlighting the follow-up areas and challenges and non-binding best practice recommendations to support a sustainable ASEAN.

At the international level, FSB plans to deepen its analysis of the climate and environmental-related risk transmission channels to the financial system with a focus on the potential amplification of risk and cross-border impacts. The goal is to identify the impact of climate and environmental-related risks on financial system stability, which differs from more general vulnerabilities. The analysis is expected to help meet the Network for Greening the Financial System (NGFS) recommendations, particularly in terms of integrating climate risk into the FSS monitoring framework, as presented in the report published by NGFS.

In addition, the FSB has established a Task Force on Climate-related Financial Disclosures (TCFD) implemented by the private sector. TCFD aims to provide recommendations on reliable, clear and efficient financial and non-financial disclosures concerning the climate that are consistent for comparison and help the lending decision-making process. The recommendations will be reported by the TCFD to the FSB for approval in September 2020. The TCFD is currently considering future areas to develop guidelines and scenario-based analysis of climate and environmental-related risks. Standard setting bodies (SSBs), such as the International Organisation of Securities Commissions (IOSCO) and the

International Association of Insurance Supervisors (IAIS) have also initiated several programs to support sustainable development. Meanwhile, the Basel Committee on Banking Supervision (BCBS) continues to share information with NGFS to map the future focus areas in relation to climate and environmental-related risks. IOSCO has the Sustainable Finance Network that encourages its members to exchange their experiences concerning regulatory initiatives and approaches in the area of sustainable development. As a preliminary measure, the network conducted a survey and stock-take of the financial market authorities in each member jurisdiction as well as other international institutions.

In the insurance sector, the International Association of Insurance Supervisors (IAIS) published a report in July 2018 on the impact of climate-related risks in the insurance industry. The report illustrated the impact of climate-related risk on the insurance sector and potential future implications, as well as how such developments are relevant to insurance sector regulations and supervision. In conjunction with the Sustainable Insurance Forum (SIF), as a global network for insurance regulators and supervisors, IASI will publish a report on TCFD implementation and international best practices for climate and environmental-related risk management in the insurance sector.

Witnessing the growing global commitment to a sustainable economic and financial system, Bank Indonesia will continue to actively support and participate in regional and international forums. Furthermore, Bank Indonesia will also strengthen its green tools and policies in order to develop a sustainable financial ecosystem that is required to maintain macroeconomic stability and financial system stability in the long term.


Rp
12,98
10,30
7,56
9,40
7,42

CHAPTER V

CHALLENGES, OUTLOOK AND POLICY DIRECTION

Bank Indonesia expects to maintain financial system stability in the face of ongoing global and domestic economic developments. Bank Indonesia will continue to coordinate with other relevant authorities in order to ensure sufficient space for financial institutions to increase the intermediation function in the financial system, thus contributing to sustainable economic growth. The trade war between the United States and China is predicted to continue and overshadow global economic performance. Global economic moderation is expected to amplify downside pressures on commodity prices as a result of dwindling demand. Meanwhile, several monetary authorities are forecasted to hold low policy rates in response to flatter economic growth. At the end of 2019, the domestic economy is projected to grow 5.08%, down slightly compared with growth in the first semester of the year. Economic growth in the latter half of 2019 will be driven by stronger investment in relation to completion of various National Strategic Projects (NPS). Paying due regard to global and domestic economic developments, Indonesia still expects to maintain financial system stability. Indonesia's financial system remains resilient to absorb the risks. Meanwhile, there remains adequate space for financial institutions to increase intermediation.

Based on the prevailing conditions and dynamics outlined above, Bank Indonesia will maintain accommodative macroprudential policy as required to sustain economic growth, while maintaining financial system stability. To that end, Bank Indonesia will continue to ensure sufficient room for financial institutions to utilise their intermediation capacity. On the funding side, macroprudential policy will be directed towards increasing bank financing capacity by expanding the scope of funding components in the Macroprudential Intermediation Ratio (MIR). In terms of lending, macroprudential policy will be directed towards supporting the major domestic economic sectors as well as green sectors to support sustainable economic growth. Meanwhile, Bank Indonesia will continue to evaluate other macroprudential policies periodically, including coordination and synergy with other authorities to formulate and ensure optimal policies that underpin national economic growth, while maintaining financial system stability.

Bank Indonesia will also continue to observe and monitor recent developments regarding digital financial services. In this case, both sides of the coin require attention, namely how to best utilise recent developments to support the function of the financial system and improve the customer experience as well as how the risks that emerge from implementing digital technology can be mitigated and, thus, financial system stability can be maintained.

5.1. Financial Stability Maintained on Adequate Financial System Resilience

The ongoing trade war between the United States and China is expected to continue suppressing global economic performance through to the end of 2019. Global economic moderation in the first semester of 2019 is predicted to persist in the second half of the year. In response, authorities in most advanced economies are anticipated to maintain dovish monetary policy, which will push capital flows to emerging markets.

Economic moderation is predicted in the United States, Europe, China and Japan, as reflected by the downward manufacturing PMI trends recorded. Meanwhile, the global economic slowdown will trigger downside pressures on international commodity prices. Global crude oil and metal prices will experience pressures in line with weaker global demand. As the main global consumer of metals, economic moderation in China will edge down prices. In addition, a potential no-deal Brexit could further suppress the global economy.

Ongoing trade tensions and global economic moderation are predicted to reduce world trade volume. In June 2019, the United States introduced 25% import tariffs on Chinese goods, from various minerals used in the manufacturing industry to leather goods, worth USD200 billion. The tariffs have stifled world trade volume, considering that international trade is dominated by the United States and China, accounting for 26% of total international exports. In the first quarter of 2019, actual world trade volume (WTV) growth slumped to 0.5% from 1.6% realised in the previous quarter. Slower WTV growth triggered a 0.9% correction in the WTV outlook to 2.5% in 2019.

In the second quarter of 2019, the World Economic Outlook (WEO) downgraded its global economic growth projection by 0.1% compared with the previous projection to 3.2%. The downward bias was primarily attributable to weaker growth in emerging market countries, such as Mexico, Brazil, Russia, China and India. In addition, economic moderation in Japan has also contributed to the revised global economic growth projection.

The dovish policy stance adopted by various monetary authorities around the world in the first semester of 2019 is expected to persist in the latter half of the year. The US Federal Reserve is anticipated to lower the Federal Funds Rate (FFR) twice by 25bps, with the Reserve Bank of Australia and Bank of Korea expected to follow suit. A number of other central banks are holding low policy rates, including the European Central Bank (ECB), Reserve Bank of India (RBI). Bangko Sentral ng Pilipinas (BSP), Bank Negara Malaysia (BNM) and Bank of Thailand (BOT). In addition, the Bank of Japan is expected to maintain a negative rate.

Sentiment triggered by low policy rates in several advanced economies, together with less global financial market uncertainty after both sides of the trade war entered dialogue at the end of June 2019, could potentially trigger foreign capital inflows to emerging market countries until the end of 2019. In June 2019, emerging markets recorded a net inflow, reversing the position recorded in May 2019. In Indonesia's case, foreign capital inflows increased after Standard and Poor (S&P) upgraded Indonesia's credit rating to investment grade at the end of the first semester of 2019. Capital inflows to emerging market countries are expected to continue on the back of accommodative policy in advanced economies that is increasing global liquidity. On the other hand, a number of risk indicators in emerging market countries have improved, thus supporting the outlook for capital inflows.

A number of global issues and challenges in the first half of 2019 have spilled over into the domestic economy. The domestic economy grew 5.05% in the first half of the year, down slightly from 5.07% in the first quarter. The main drag on domestic economic growth has been the ongoing export contraction together with sluggish investment growth.

Bank Indonesia projects domestic economic growth of 5.08% at the end of 2019, supported by stronger investment performance. The completion of several national strategic projects in the second semester of 2019 will boost investment performance, particularly in the construction sector. Policy support from Bank Indonesia in the form of accommodative monetary and macroprudential policies will maintain space for economic players to invest. Nonetheless, consumption is expected to decelerate in line with the trend of lower informal wages, including slower growth of social aid program (bansos) disbursements after frontloading in the previous semester. The export contraction is predicted to persist despite early signs of improvement. Meanwhile, imports are forecasted to contract in line with lower domestic demand and declining exports. Government revenue will be restrained by economic moderation, with lower fiscal spending projected compared with conditions in the previous year.

Bank Indonesia will maintain accommodative macroprudential policy, while continuing to observe and pay due consideration to financial system developments. Despite the various global and domestic economic challenges faced, Bank Indonesia expects financial system stability to be maintained with adequate space for expansion. The capital buffers implemented by financial institutions are adequate to absorb the risks that may emerge from operating activities as well as the potential risk triggered by intermediation growth.

Adequate liquidity will be maintained at financial institutions to increase intermediation growth. In terms of policy, accommodative monetary and macroprudential policies in the first half of 2019 are expected to maintain financial system stability in Indonesia, while simultaneously facilitating expansion of the intermediation function in the financial system.

In general, bank resilience, as the most dominant financial institution in the financial system, was maintained. The banking industry reported a Capital Adequacy Ratio (CAR) of 22.53%, well above the minimum threshold. Furthermore, low credit risk was also maintained, as reflected by a gross NPL ratio of 2.5%, well below the 5% threshold. Bank capacity to expand the intermediation function also remained solid. Liquidity in the banking industry has remained high and above the minimum threshold. The ratio of liquid assets to deposits stands at 19.05%, while the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) were recorded at 208.47% and 126% respectively, exceeding the 100% minimum. Meanwhile, the influx of capital has increased liquidity capacity in the banking industry. The Financial Condition Index (FCI)[1], as a measure of domestic financing availability, has also eased since the beginning of the year. Accordingly, there remains adequate room to increase financing growth. Furthermore, the financial cycle is currently positioned at the early stages of an expansionary phase, with no indications of heightened risk-taking behaviour in the financial system. A 25bps policy rate reduction in June 2019, coupled with macroprudential policy that redefined the upper and lower limits of the Macroprudential Intermediation Ratio (MIR), are also expected to stimulate optimal bank intermediation. Considering the latest global and domestic economic developments as well as domestic financial system conditions, Bank Indonesia projects credit and deposit growth in 2019 at 10-12% and 8-10% respectively, which are in line with the initial projections made at the beginning of 2019.

There remain a number of potential constraints to achieving the projected credit and deposit growth. On the credit side, restrained corporate demand for loans as expected to persist. On the other hand, most banks have revised down their credit growth projections in the Bank Business Plan (BBP). The banking industry has downgraded its growth projections, primarily affecting sectors exposed to global economic moderation, such as the manufacturing industry, trade, and consumption. A number of other sectors will continue to prop up credit growth, however, including electricity, transportation and social services, in line with infrastructure project implementation. Meanwhile, capital inflows to emerging markets combined with Indonesia's upgraded credit rating will support financing activity in the capital market. Furthermore, financing activity amongst FinTech companies is also expected to increase.

In terms of deposits, declining corporate performance could potentially impede corporate deposit growth, thus undermining overall deposit growth. In terms of individuals, low interest rates could trigger a shift towards higher yielding instruments. Meanwhile, maintained capital inflow, albeit limited, will help to maintain deposit growth.

Table 5.1 Actual and Projected Global Growth

Description	WEO July 2019			Deviation from CEO April 2019	
	2018	2019*	2020*	2019*	2020*
Global GDP	3.6	3.2	3.5	-0.1	-0.1
Advanced Economies' GDP	2.2	1.9	1.7	0.1	0
US	2.9	2.6	1.9	0.3	0
Euro Area	1.9	1.3	1.6	0	0.1
Japan	0.8	0.9	0.4	-0.1	-0.1
Emerging Market Economies' GDP	4.5	4.1	4.7	-0.3	-0.1
China	6.6	6.2	6	-0.1	-0.1
India	6.8	7.0	7.2	-0.3	-0.3
Brazil	1.1	0.8	2.4	-1.3	-0.1
Mexico	2.0	0.9	1.9	-0.7	0.0
Russia	2.3	1.2	1.9	-0.4	0.2
South Africa	0.8	0.7	1.1	-0.5	-0.4
Consumer Price Index					
Advanced Economies (AE)	2	1.6	2	0	-0.1
Emerging Market Economies (EM)	4.8	4.8	4.7	-0.1	0
World Trade Volume	3.7	2.5	3.7	-0.9	-0.2

*Projected

Source: IMF World Economic Outlook Update

[1] *FCI is an indicator adapted from the International Monetary Fund (IMF), comprised of various indicators including Interest Rate Valuation, Asset Price Valuation and Risk Appetite.*

5.2. Accommodative Macroprudential Policy Maintained, while Monitoring Financial System Developments

Supporting the economic growth projection and maintaining financial system stability, Bank Indonesia will continue to apply accommodative macroprudential policy that provides space for the banking industry to absorb the risks and maintain the intermediation function. Macroprudential policy will be instituted as part of Bank Indonesia's policy mix. Prudential aspects will be prioritised in order to maintain financial system stability against the threat of global and domestic spillover risk. In addition, the phase of the financial cycle as well as bank capacity will also be considered when formulating policy.

Seeking to increase bank intermediation capacity, Bank Indonesia will orient macroprudential policy towards strengthening intermediation by expanding the funding components in the Macroprudential Intermediation Ratio (MIR). MIR was refined by exploring other eligible funding sources. The current funding sources include deposits and securities issued but Bank Indonesia is currently reviewing other funding sources for inclusion in MIR policy.

Efforts to strengthen intermediation will also be directed towards the major domestic economic sectors as well as green sectors. Furthermore, Bank Indonesia will promote green financing to support sectors with minimal risk and sustainable criteria. To stimulate financing allocated to green sectors, incentives are required in the form of instruments that can be used to catalyse bank intermediation in green sectors.

Bank Indonesia we also continue to prioritise financing extended to MSMEs as the backbone of the national economy. Bank financing allocated to MSMEs will be encouraged. Bank Indonesia will continue to apply the maximum MSME loan ratio with a number of refinements, including financing to inclusive sectors or sectors with strong MSME linkages. In addition, banks lacking MSME sector expertise yet determined to contribute to MSME development require an exit strategy to meet prevailing requirements. Bank Indonesia will continue to review the various instruments available to banks lacking MSME expertise in order to meet prevailing regulations. The various refinements planned for macroprudential policy are expected to stimulate quality intermediation in the financial system. In conjunction with other authorities, Bank Indonesia will continue policy coordination and synergy to support national economic development, while maintaining financial system stability.

5.3. Policies relating to the Digital Economy and Finance

Recent developments in terms of financial services using digital technology demand attention. If the term 'digital financial system' is introduced to identify parts of the financial system that already utilise digital technology, two sides require attention. On one hand, the digital financial system encompasses parts of the digital economy that involve economic activity exploiting technological advancements to: 1) create new capabilities in terms of increasing productivity and providing new opportunities for the public to increase their income; 2) manage economic resources efficiently to produce economic value added, culminating in balanced and sustainable economic growth; and 3) ameliorate quality-of-life by providing economic convenience. On the other hand, however, the risks associated with digital technology implementation demand attention in order to avoid triggering systemic risk that could cause financial system instability or reduce the integrity of the national financial system.

One of the main questions that has emerged recently is concerned with when economic agents attempt to implement various aspects of technological advancement in their economic activities, what is the best design for an interconnected system driven by the internet of things? In the economic literature, we are taught to use resources efficiently and distribute resources appropriately, which is one solution. The Application Program Interface (API) concept is not new, yet has been revitalised in this current era through the prolific use of gadgets and mobile devices as well as demand for interconnectivity through the internet of things (IoT). API is a technology that facilitates the exchange of information or data between two or more software applications. In other words, API enables two or more computer applications to understand the data/information exchanged. API technology could be used to build interconnectivity into the digital financial system. Not only is data transferred during a financial transaction, yet other sources of data and information may be jointly used.

Data has become a valuable commodity in this era of the Industrial Revolution 4.0. Data that can be distributed appropriately is expected to increase the capacity of agents in the digital financial system to innovate, assuming that such agents have the same access to various sources of data and information. Nevertheless, the use of API requires approval from the data owner (customer) who provides data for utilisation by other providers of digital financial services. If the customer has agreed, the other agents in the financial system can utilise the data through access to API.

Through interconnectivity accompanied by customer approval, each party can use the data further in the interests of business in order to improve customer experience and satisfaction in terms of using digital financial services. In this case, the overarching goal of the digital financial system is to increase participation through data utilisation in order to accumulate more funds for inclusive allocation in the economy. Consequently, financial services will become more accessible to various parties in the digital financial system, thus stimulating the economy. In addition, greater acquisition of new technology is also expected through the transfer of technology from one party to another through various interactions as a form of benevolent spillover effect.

Thus far, Bank Indonesia has reviewed potential interconnectivity between the banking industry and FinTech, also known as Open Banking. In several countries, financial digitalisation through the open banking model is a new trend that supports data openness and transparency policy. Data openness is critical to inculcate market discipline, transparency, know your customer (KYC) principles and anti-money laundering (AML), while also facilitating the development of innovative new products and services, as well as improving bank competitiveness and the user experience.

For example, to support information transparency amongst payment services providers, the European Union has issued the Payment Service Directive 2 (PSD2) that contains market rules and business conduct rules. Furthermore, consumer protection is also a topic of the refinement in the PSD2 rules. Consumer protection rules may also be used to stimulate the development and use of innovative online and mobile payments. PSD2 supports open banking through an open banking initiative in conjunction with FinTech to increase competitiveness and improve the user experience. Meanwhile, Australia has implemented Consumer Data Rights (CDR) policy, stipulating that customers have full authority over the use of their private data. CDR implementation in Australia has increased information transparency in the financial (banking), energy and telecommunications sectors.

The new policy direction is encouraging other countries to apply similar data openness policies, including Japan, Hong Kong, Singapore, Malaysia and several other countries. Open banking is expected to facilitate interconnected data openness and support bank intermediation as well as other financial products and services. Furthermore, the entities involved are not limited to the banking industry, yet also nonbanks such as non-bank financial institutions, FinTech, e-commerce and others.

Bank Indonesia is continuing to review the most appropriate forms of open banking suitable to financial system conditions in Indonesia. In this case, the most appropriate open banking design would accelerate the development of digital financial services with optimal benefits to boost the intermediation function and contribute to national economic growth. This must be offset, however, by various aspects to ensure the sustainability of financial institutions, to mitigate the risks associated with digital technology and interactions with other financial system risks, and to maintain the integrity of the financial system in Indonesia..

Bank Indonesia has undertaken various efforts to support digital economic development and contain the risks. Some of those efforts are explored in Box 5.1: National Standard QR Code (QRIS), Box 5.2: Cyber Risk Demands Bank Attention, and Box 5.3: Bank Indonesia Strengthens Supervision as FinTech Flourishes.

Boks 5.1 National Standard QR Code (QRIS)

Indonesia's payment system vision for 2025 requires innovation to support development of the digital economy and finance. One innovation recently developed and enjoying strong uptake is digital payment services based on the QR Code. QR code development has flourished in terms of payment services due to more efficient payment channels, such as electronic data capture (EDC). Bank Indonesia is confident that such payment services will create greater economic efficiency, accelerate financial inclusion and advance micro, small and medium enterprises (MSME).

In addition, Bank Indonesia asserts that QR code payment services require standardisation through national QR code standards. In Indonesia, various payment system service providers have issued payment services based on QR code, including Link Aja, GoPay, OVO, Go Mobile CIMB Niaga and Sakuku BCA. Such conditions have potentially created inefficiencies due to a lack of interoperability and interconnectivity. Therefore, national QR code standards are required to anticipate technological innovation and increase payment system efficiency. Through the use of QR code standards, providers of goods and services (merchants) no longer need to offer various types of QR code from different issuers. In addition, end-users will no longer require various applications to initiate payments using QR Code.

The National QR Code Standard for Payments (QRIS), launched on 17th August 2019, is the QR code standard for Indonesia's payment system developed by Bank Indonesia in conjunction with the Indonesia Payment System Association (ASPI). Initially, QRIS implementation will be prioritised for the micro segment, or MSMEs, due to the small investment required. QRIS transactions utilise funding sources in the form of deposits and/or card-based payment instruments, such as debit cards, credit cards and server-based electronic money. QRIS adopted European Master Visa Co (EMV Co) standards to ensure interoperability between providers, instruments and countries. EMV Co standards have also been adopted in various other countries, including India, Thailand, Singapore, Malaysia and South Korea.

QRIS implementation, which embodies the spirit of UNGGUL (UNiversal, GampanG, Untung and Langsung or Universal, Simple, Beneficial and Direct), aims to create transaction efficiency, accelerate financial inclusion and advance MSMEs, thus contributing to national economic growth momentum. QRIS UNGGUL contains special meaning. First, Universal, implying that QRIS is inclusive for all social strata and can be used for domestic and international payment transactions. Second, Gampang, meaning that the public can transact easily and securely on their device or gadget. Third, Untung. QRIS payments are beneficial for sellers and buyers alike due to transaction efficiency through one QR Code for all device-based payment applications. Fourth, Langsung. Transactions using QRIS are direct due to real-time processing that supports a smooth payment system.

There are currently two QR code models as follows:

1. Merchant Presented Mode (MPM): The QR Code is presented by the merchant for the customer to scan. According to this model, the QR code can be static or dynamic. A static QR code is fixed, it does not change and is typically displayed as a sticker or in an acrylic placeholder. As the name suggests, a dynamic QR code is dynamic and changes over time, typically printed at the EDC or point of sale.

2. Customer Presented Mode (CPM): The QR code is presented by the customer for the merchant to scan. Based on this model, a dynamic QR code must be used because each QR code is generated by the user for every transaction.

Initially, Bank Indonesia launched the MPM QRIS specification, backed by interconnectivity specifications. Next, Bank Indonesia plans to launch the CPM QRIS specification.

Supporting QRIS implementation, Bank Indonesia issued Board of Governors Regulation (PADG) No. 21/18/PADG/2019 concerning Implementation of National Quick Response Code Standards for Payments on 16th August 2019. The PADG regulates the scope of QR code use for payments, QRIS implementation as a national standard as well as reporting and supervision. National QRIS implementation will become mandatory on 1st January 2020 in order to provide a transition period for payment system service providers to prepare for the new standard. Any users of existing QR codes for payments before the QRIS regulation becomes effective are required to change to QRIS no later than 31st December 2019.

Mandatory QRIS use for all payment transactions is also applicable for payment transactions in Indonesia facilitated by QR codes backed by funds and/or payment instruments issued outside the territory of the Republic of Indonesia. In such cases, administrators of payment instruments issued outside the territory of the Republic of Indonesia are required to cooperate with an issuer and/or acquirer in Indonesia in the form of a BUKU 4 bank.

Despite providing greater convenience, QR based payment services are not without risk, particularly in terms of transaction security and stability. Therefore, QRIS implementation will be conducted gradually in compliance with prudential principles.

Boks 5.2 Cyber Risk Demands Bank Attention

Seeking to expand customer services, the banks continuously innovate their operating activities, amongst others, digital banking in the form of mobile/internet banking and e-money (wallet and QR), including collaboration (open banking) with FinTech and e-commerce. The implementation of digital banking provides a number of customer benefits through greater transaction convenience, cost efficiency and competitive prices. The evolution of digital banking requires the bank operating system to become more open to various other operating systems within and external to the banking industry. Such operating systems employ different security standards, which increases risk exposure, cyber risk in the banking industry in particular, considering the rapid innovation and development of new technology in the operating system, which are not always offset by adequate capacity to manage the risks that may emerge as a result of such innovation and development.

The Financial Stability Board (FSB) defines cyber risk as a combination of the probability of cyber incidents occurring and their impact. Cyber risk at one bank could be transmitted into systemic risk that impacts financial system stability due to the banks' role as financial institutions and payment system operators. As a financial institution that depends on customer trust, cyber incidents occurring at one bank could undermine public confidence in the bank involved or even the banking industry as a whole. Cyber incidents in the payment system facilitated by Bank Indonesia (Real-Time Gross Settlement and the National Clearing System), online transactions and card-based transactions as well as facilitated by other parties (SWIFT, National Payment Gateway - NPG, Prima and Link) could be the result of a cyber-attack on a bank that has failed to protect each endpoint of its operating system.

The banking industry's role in mitigating cyber risk is critical in order to maintain financial system stability. For each digital product and service developed, the bank must also develop systems and procedures to identify, protect, detect, respond and recover from cyber incidents. The banks must also pay due regard to governance and the availability of competent human resources to support effective cyber risk management. Meanwhile, the banks must employ information technology procedures, mechanisms and solutions to mitigate cyber risk at each endpoint as a result of interconnectedness between the bank's systems and other systems, including the marketplace, e-commerce and FinTech.

Some of the security solutions available to the bank in order to mitigate cyber risk include security monitoring, data loss prevention (DLP), a detection and blocking system, network segmentation and encryption. Security monitoring falls under the auspices of Security Information and Event Management (SIEM), which can monitor cyber risk across all applications and networks. Nonetheless, SIEM must be complemented with incident procedures, response and recovery as well as adequate reporting. For the smaller and less complex banks, security can be monitored using a Managed Security Service Provider. The security solutions applied by a bank must maintain data integrity to ensure trusted data accuracy. Data integrity in the banking industry must be maintained against cyber-attack/fraud in order to provide customer protection and maintain public trust. To that end, the banks are required to use data encryption and apply data loss prevention (DLP) solutions that prevent leaks, loss and corrupt data at endpoint actions, network traffic and storage. An intrusion detection system/intrusion prevention system to detect and overcome cyber-attacks must also be developed and evaluated periodically. In addition, network segmentation is required in order to restrict access and strengthen the defences of critical customer data.

In addition to information technology infrastructure as a solution to cyber-attacks, procedures and awareness amongst bank employees and customers are also critical to improve the cyber defences of the banking industry. Customer service operating procedures as well as supporting applications must be designed to increase system anticipation of cyber-attacks. To ensure effectiveness, periodic supervision, monitoring and audits are required concerning the procedures and supporting systems. In addition, the banks are also required to offer various education programs to increase risk awareness of cyber-attacks amongst bank employees and customers.

Cyber risk management maturity in the banking industry is determined by risk appetite, complexity and business scale, strategy as well as the vision and mission. Therefore, standard regulations are required to create a secure and reliable banking industry in terms of anticipating cyber-attacks. Cyber risk regulations in the banking industry involve various authorities, namely the Indonesian Financial Services Authority (OJK), as the financial institution supervisory authority, Bank Indonesia, as the facilitator and payment system authority, as well as the State Cyber and Cryptography Agency, as the national authority on cyber security. Clarification and harmonisation concerning the scope of regulations requires the attention of all authorities in order to avoid regulatory conflict and redundancy as well as to ensure all authorities are on the same page in terms of cyber risk.

Collaboration between banking industry players and the relevant authorities could also be used to build awareness, anticipation and the response to cyber risk. Collaboration could be facilitated by the establishment of an Information Sharing Platform that aims to increase the cyber management capabilities of the banking industry. Cyber risk or incidents and management could be shared amongst industry players in order to prevent the same risks occurring at other banks as well as to reduce contagion risk from a cyber-attack. In addition, cyber risk management could be improved through forums or discussions between banking industry players and the relevant authorities. Interconnectedness between financial institutions engaged in cyber activity should motivate further collaboration in order to improve cyber risk management, thus avoiding any adverse impact for institutions connected in the cyber network due to cyber risk mitigation measures.

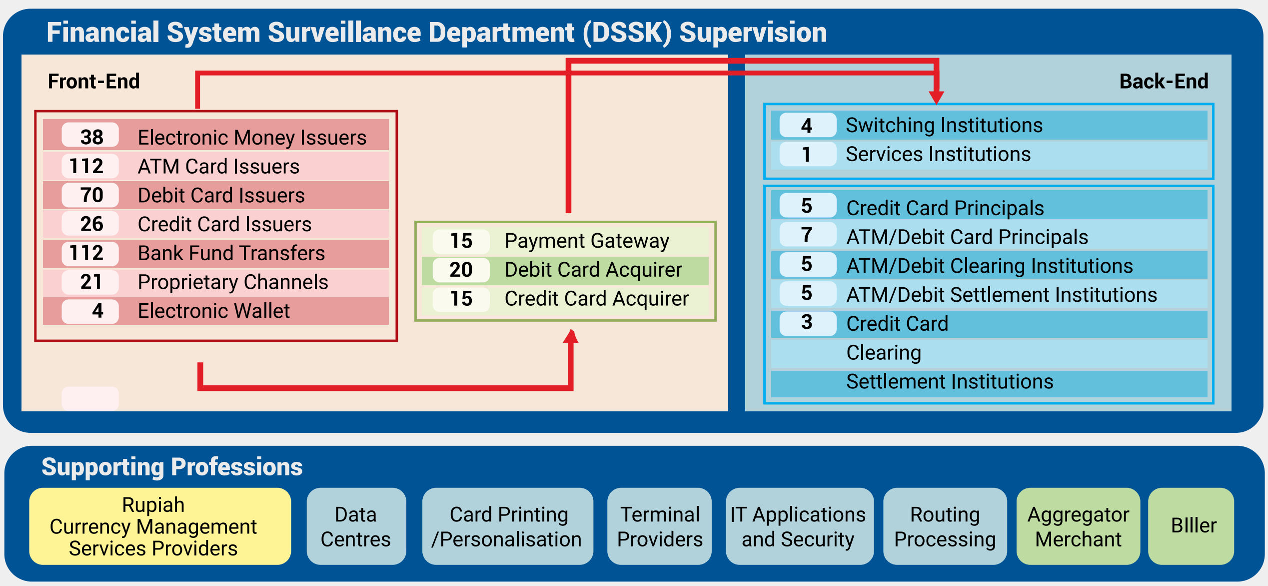
Boks 5.3 Bank Indonesia Strengthens Supervision as FinTech Flourishes

As FinTech payment services continue to mushroom in the form of digital financial services, Bank Indonesia has developed a supervision framework for the FinTech sector. The object of FinTech supervision by Bank Indonesia is all licensed and approved payment system service providers (PJSP) in accordance with Bank Indonesia Regulation (PBI) No. 19/12/PBI/2017, dated 29th November 2017, concerning Financial Technology Operators. The goal of supervision is to ensure FinTech players apply consumer protection, risk management and prudential principles to product development in order to maintain monetary stability, financial system stability as well as an efficient, smooth, secure and reliable payment system.

The Financial Stability Board (FSB) has classified FinTech into four categories based on innovation type: Payments, Clearing and Settlement; Deposits, Lending and Capital Raising; Market Provisioning; as well as Investment and Risk Management. Referring to the FinTech categories defined by the Financial Stability Board (FSB), FinTech operators in Indonesia that are the object of Bank Indonesia supervision are involved with Payment, Clearing and Settlement, including mobile payments, web-based payments as well as digital currency. Currently, Bank Indonesia is not supervising digital currency providers because digital currency has not been recognised as legal tender in the customs territory of the Republic of Indonesia.

Bank Indonesia classifies business players in the payment system into nine categories, namely: principal, switching, issuer, acquirer, payment gateway, clearing, final settlement, transfer, electronic wallet and other payment system services stipulated by Bank Indonesia. Payment system service providers must be licensed and are the object of Bank Indonesia supervision. Implicitly, FinTech businesses are classified into one of the nine categories. In addition to payment system service providers, there are also businesses that exploit technology to maintain business continuity at payment system service providers, otherwise known as supporting services. Supporting services include, terminal providers, application developers, data centres, fraud and risk management, router processing and so on. Supporting services that involve FinTech are also the object of banking industry supervision. Surveillance and inspections are regularly conducted of the payment system service providers and supporting facilities within the holistic payment system ecosystem.

Figure B5.3.1 Scope of DSSK Supervision



Bank Indonesia continuously strengthens the supervision of FinTech payment system service providers based on three aspects as follows:

1. Human Resources
   Improving supervisor competencies through capacity building in terms of cyber security, FinTech and marketplace, as well as providing training on the supervision frameworks and standards. Currently, supervision is conducted by supervisors with a comprehensive understanding of payment system products and the prevalent forms of collaboration, assisted by a group of specialists, particularly in terms of information and technology supervision.

2. Procedures
   To obtain a holistic picture of payment system service providers as the object of supervision, integrated supervision and inspections are currently performed concerning the full scope of licences held by payment system service providers using a risk-based and compliance approach, which has superseded the previous thematic approach. In addition, risk profiling is also used pre-assessment through a matrix to map the inherent risks of each respective payment system service provider, thus ensuring more robust supervision treatment.

3. Infrastructure
   Supervision infrastructure is strengthened through implicit suptech development in the supporting system at Bank Indonesia. Development of the Bank Indonesia Surveillance and Supervision System (BI SSS) will support more efficient and accurate supervision data, thus helping supervisors to assess payment system service providers more quickly in line with progressive business development in the industry.

By strengthening the supervision of FinTech payment system operating activity, Bank Indonesia expects to maintain payment system integrity in Indonesia, thus contributing to financial system stability.

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