

Blueprint for Money Market Development 2025

Bank Indonesia: Building a Modern and Advanced Money Market in a Digital Era



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Money Market in a Digital Era

BANK INDONESIA

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Blueprint for Money Market Development 2025

BANK INDONESIA: BUILDING A MODERN AND ADVANCED MONEY MARKET IN A DIGITAL ERA



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List of Abbreviations

Abbreviation	Meaning
ACCD	Appointed Cross Currency Dealer
ANTASENA	Aplikasi Pelaporan Terintegrasi Berbasis Metadata Nasional (National Metadata-Based Integrated Reporting Application)
BI	Bank Indonesia
BI-7DRR	BI 7-Day (Reverse) Repo Rate
BI-ETP	Bank Indonesia Electronic Trading Platform
BI-RTGS	Bank Indonesia Real-Time Gross Settlement
BI-SSSS	Bank Indonesia Scripless Securities Settlement System
BIS	Bank of International Settlements
CCP	Central Counterparty
CPSS	Committee on Payment and Settlement Systems
CSD	Central Securities Depository
CTP-PLTE	Centralized Trading Platform - Penerima Laporan Transaksi Efek
DNDF	Domestic Non Deliverable Forward
DvD	Delivery versus Delivery
DvP	Delivery versus Payment
ETP	Electronic Trading Platform
FK-PPPK	Forum Koordinasi PembiayaanPembangunan melalui Pasar Keuangan (Coordinating Forum for Development Financing through Financial Market)
FMI	Financial Market Infrastructure
FSB	Financial Stability Board
GFSR	Global Financial Stability Report
GMRA	General Master Repurchase Agreement
GPN	Gerbang Pembayaran Nasional (National Payment Gateway)
IFEMC	Indonesia Foreign Exchange Market Committee
IKNB	Institusi Keuangan Non Bank (Non-Bank Financial Institution)
IMF	International Monetary Fund
IndONIA	Indonesia Overnight Index Average
IOSCO	International Organization of Securities Commissions
FMI	Financial Market Infrastructure
IRS	Interest Rate Swap
ISDA	International Swaps and Derivatives Association
JIBOR	Jakarta Interbank Offered Rate
JISDOR	Jakarta Interbank Spot Dollar Rate
MOF	Ministry of Finance

Abbreviation	Meaning
LBUT	Laporan Bank Umum Terintegrasi (Integrated Commercial Bank Report)
LCS	Local Currency Settlement
LHBU	Laporan Harian Bank Umum (Commercial Bank Daily Report)
LIBOR	London Interbank Offered Rate
LPPU	Lembaga Pendukung Pasar Uang (Money Market Supporting Institution)
LTV	Loan to Value Ratio
NCD	Negotiable Certificate of Deposit
OIS	Overnight Index Swap
OJK	Otoritas Jasa Keuangan (Financial Services Authority)
OTC	Over the Counter
GDP	Gross Domestic Product
PFMI	Principles for Financial Market Infrastructure
PHEI	Penilai Harga Efek Indonesia (Indonesia Bond Pricing Agency/IBPA)
PIDI	Perjanjian Induk Derivatif Indonesia (Derivatives Master Agreement of Indonesia)
PUAB	Pasar Uang Antar Bank (Interbank Call Money Market)
QRIS	Quick Response Indonesia Standard
RPJMN	Rencana Pembangunan Jangka Menengah Nasional (National Medium-Term Development Plan)
SDGs	Sustainable Development Goals
SGF	Sustainable and Green Financing
SID	Single Investor Identification
SIPS	Systemically Important Payment System
SKNBI	Sistem Kliring Nasional Bank Indonesia (Bank Indonesia National Clearing System)
SNA	Special Non-resident Account
SN-PPPK	Strategi Nasional Pengembangan dan Pendalaman Pasar Keuangan (National Strategy for Financial Market Development)
SPN	Surat Perbendaharaan Negara (Treasury Bills)
SPV	Special Purpose Vehicle
SRI	Sustainable and Responsible Investment
SSS	Securities Settlement System
TR	Trade Repository
MSME	Micro, Small, and Medium Enterprise
UNCTAD	United Nations Conference on Trade and Development
WG	Working Group

Foreword by the Governor of Bank Indonesia

Assalamualaikum warahmatullahi wabarakatuh,

We praise the Almighty God for all the blessings and guidance allowing the successful completion of the Blueprint for Money Market Development (BPPU) 2025. As a central bank, money market development has served as a main policy to support the mandate of Bank Indonesia in maintaining price and Rupiah stability. BPPU 2025 constitutes an effort of Bank Indonesia to navigate development of domestic money market to become a modern and advanced money market in the digital era.

Efforts to develop money market face challenges on the domestic and global sides. On the domestic side, money market is relatively shallow as indicated from the limited transaction volume, instruments, and market participants. Meanwhile, on the global side, challenges exist in strengthening financial market infrastructures (FMI) in line with the global financial system reform triggered by the global financial crisis in 2008. Strengthening financial market infrastructures are deemed vital to increase financial system stability and mitigate systemic risks. In addition, a digitalization trend contributes to affect financial market development. Digitalization has tarnished jurisdictional barriers between countries and made domestic money market more open and connected with the global market. Innovations in technology also make the financial market more advanced, for example, the use of artificial intelligence and algorithmic trading in financial market transactions. This digitalization trend is proven to be helpful in increasing transaction volume and efficiency, but at the same time, it also expands the type of risks, such as cyber attacks.

With such challenges, financial market development has become more complex, resulting in the increasing need for synergy and coordination between financial authorities. In 2016, Bank Indonesia, Ministry of Finance, and Financial Services Authority (OJK) established a Coordinating Forum for Development Financing through Financial Market called *Forum Koordinasi Pembiayaan Pembangunan melalui Pasar Keuangan (FK-PPPK)*. This forum has issued a National Strategy for Financial Market Development called *Strategi Nasional Pengembangan dan Pendalaman Pasar Keuangan (SN-PPPK)* as a single policy framework for all financial market development initiatives. To support the achievement of SN-PPPK programs, Bank Indonesia has prepared BPPU 2025 to complete all such initiatives, primarily in the money market.

To conclude, with the Blueprint for Money Market Development 2025, we are confident of realizing a modern and advanced money market which may support monetary policy transmission, financial system stability, and national development financing. It is part of the efforts of Bank Indonesia to support the achievement of a Developed Indonesia with high competitiveness in the global economy.

Wassalamu 'alaikum Warahmatullahi Wabarakaatuh



Foreword by Senior Deputy Governor

Assalamualaikum warahmatullahi wabarakatuh,

We praise the Almighty God for the blessings and grace allowing the publication of the Blueprint for Money Market Development (BPPU) 2025. The BPPU 2025 aims to navigate efforts to achieve a desired state of modern and advanced money market, where money market is deep, inclusive, and contributive. The established modern and advanced money market is indicated from availability of products, increasing participation, efficient price discovery, and availability of modern infrastructures compliant with international best practices. Through a modern and advanced money market, growth may accelerate with availability of financing alternatives through the money market. It means the government, businesses, as well as domestic and foreign investors up to the retail level will be able to do economic and investment activities for strategic development and business.

The need for this Blueprint for Money Market Development 2025 is to support the accomplishment of the vision of a Developed Indonesia, to deepen domestic financial market allowing to serve as a development financing source, and to align money market ecosystem in the digital transformation. Therefore, BPPU 2025 is designed as initiatory measures to achieve a modern and advanced money market.

In the efforts to achieve a modern and advanced money market, five visions of BPPU 2015 are formulated. The first is to build a modern and advanced money market for national economic financing, effectiveness of monetary policy transmission, and financial system stability. The second is to develop products, pricing, and market participants for money market which are diverse, liquid, efficient, and transparent. These two visions are applied through the development of instruments in rupiah money market and foreign exchange market, as well as the development of economic financing and risk management. The third vision is to strengthen reliable, efficient, safe, and integrated financial market infrastructures. The fourth is data digitalization to produce granular, real-time, and secure data through strengthening of financial market infrastructure, both pre-trade and post-trade. The fifth vision is to develop an agile, industry-friendly, and innovative regulatory framework compliant with the international standard through regulatory framework establishment, money market surveillance, and policy harmonization with the relevant authority.

BPPU 2025 is dedicated as an effort to disseminate information on different strategies and policy direction for money market development in Indonesia. Broadly, this book elaborates measures to be adopted to establish a deep, liquid, and contributive money market in order to support the monetary and financial system stability and to play a vital role in providing alternative financing sources for national development.

To conclude, I would like to extend my highest appreciation and deepest gratitude to the BPPU 2025 preparation team. With the support of all parties, including the relevant Ministries/ Institutions and financial market industry in Indonesia, it is expected that all stakeholders will play an active role in creating a modern and advanced money market for a Developed Indonesia. Thank you.

Wassalamu 'alaikum Warahmatullahi Wabarakaatuh.



EXECUTIVE SUMMARY





The Vision of a Developed Indonesia (Indonesia Maju) is the final objective and Indonesia needs a massive financing source to achieve the vision. Efforts to accomplish the vision has been specified by the government in the National Medium-Term Development Plan 2020-2024 in order to make Indonesia a country with middle to upper income per capita by 2025. The fund requirement is significant, amounting to Rp37,447 trillion, and it tends to increase as challenges arise, including funding requirements for national economic recovery due to Covid-19 pandemic. The increasing financing requirement will potentially result in a wider gap in national development and infrastructure financing. It is believed that inclusive, deep, efficient, safe, and liquid financial market plays a significant role in providing alternative financing sources for development and investment, implementing effective monetary policy, and as a risk management tool for market participants. Focus on money market development may serve as a catalyst to reinforce effectiveness of monetary policy transmission and accelerate national financing source alternatives as a foundation for high, inclusive, and sustainable economic growth.

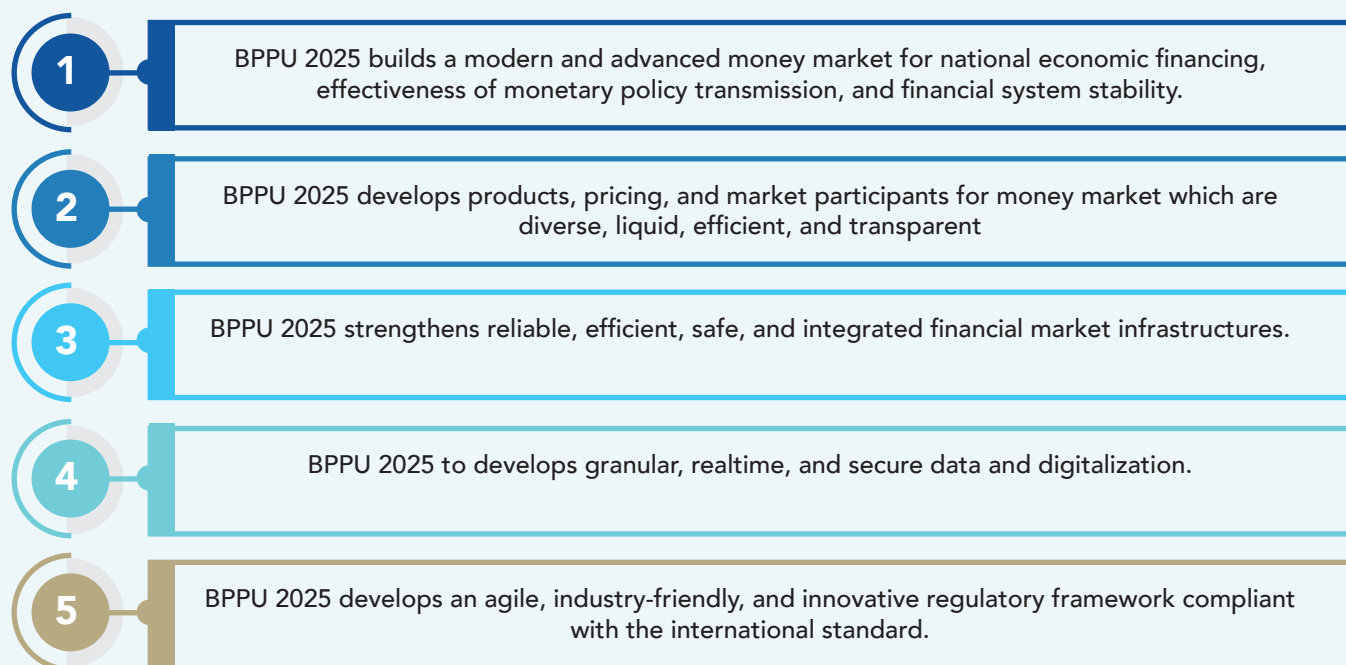
Global reform requirements also create urgency for Indonesia to restructure its domestic money market. Global financial reform after the 2008 crisis emphasizes on strengthening financial market infrastructures to mitigate risks in the financial market. Agendas for strengthening financial market infrastructures are specified in the OTC

derivative market reforms agreed by G20 countries as an effort to increase financial system stability. On the other hand, the increasing role of digitalization in economy has posed various challenges to money market development. The rapidly increasing digital economic growth has transformed traditional financial market and eventually change the tool and medium of transactions in the global money market. The emerging technology, such as artificial intelligence and algorithmic trading, opens opportunities for more efficient transactions in the money market despite the spreading cyber risks. Early preparation to adopt the digitalization trend is necessary for Indonesia to build competitiveness of domestic money market to correspond with other countries.

Responding to those challenges, Bank Indonesia formulates the Blueprint for Money Market Development 2025 (BPPU 2025) as a high commitment to build a reliable and efficient ecosystem for money market development in Indonesia. Five visions of Money Market Development by 2025 have been formulated and determined as guidance on medium to long term policy direction of Bank Indonesia. The visions of BPPU 2025 are embodied through 3 (three) initiatives, all of which will be implemented both directly by Bank Indonesia and through collaboration and coordination with the relevant Ministries/ Institutions and industries. The five visions of BPPU 2025 are: 1) to build a modern and advanced money market to support national economic financing, effectiveness of



VISIONS OF BLUEPRINT FOR MONEY MARKET DEVELOPMENT (BPPU) 2025



monetary policy transmission, and financial system stability; 2) to develop products, pricing, and market participants for money market which are diverse, liquid, efficient, and transparent; 3) to strengthen reliable, efficient, safe, and integrated financial market infrastructures; 4) to develop granular, real-time, and secure data and digitalization; 5) to develop an agile, industry-friendly, and innovative regulatory framework compliant with the international standard. These five visions are further elaborated to various initiatives to be implemented gradually from 2020 until 2025. The three key initiatives are as follows:

Initiative I: Promote Digitalization and Strengthen Financial Market Infrastructures

The first key initiative to promote digitalization and strengthen financial market infrastructures will be achieved through five key deliverables including trading venue and BI-ETP, CCP, BI-SSSS, BI-RTGS, and TR. Financial market infrastructure development road map in the short term is re-prioritized by focusing on acceleration of market operator (MO) and central counterparty (CCP) availability in 2021, and BI-ETP strengthening in 2022. Strengthening financial market infrastructures becomes one of the

key initiatives to encourage achievement of a modern and advanced money market. The primary target is to promote availability of information access, ease of trading, clearing implementation, as well as fast, safe, and efficient settlements. The initiative for development of financial market infrastructures in Indonesia will function as the key foundation for other development initiatives.

Initiative II: Strengthen Effectiveness of Monetary Policy Transmission

The second key initiative will be achieved through five key deliverables including development of repo, OIS, DNDF, LCS, and benchmark rate reform. Development of the five deliverables is focused on four aspects, namely products, pricing, market participants, and infrastructures. Similar to the first key initiative, namely MO, BI-ETP, and CCP, acceleration of financial market infrastructure development must be supported by development of money market instruments focusing on repo, short-term securities, and interest rate derivatives in the form of OIS and its derivatives. In addition, in the foreign exchange market, the development of instruments will focus on DNDF and Local Currency Settlement.

Initiative III: Develop Economic Financing Sources and Risk Mitigation

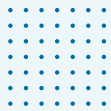
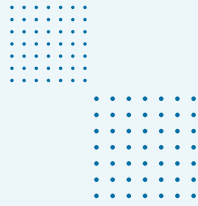
The third key initiative is undertaken by Bank Indonesia through three key deliverables including: (i) development of economic financing sources through asset securitization as well as sustainable and green financing, (ii) risk management through development of long-term hedging instruments to mitigate exchange rate and interest rate risks, and (iii) improvement of retail investor base.

The vision of Blueprint for Money Market Development (BPPU) 2025 will weave economic transformation process in Indonesia through a digital based modern and advanced money market. A modern and advanced money market is characterized by liquid, deep, and inclusive

money market to support monetary and financial system stability, which is believed to improve economic growth. BPPU 2025 embodies efforts of Bank Indonesia to establish a reliable and efficient money market ecosystem with a view to supporting Bank Indonesia mandate to maintain inflation and Rupiah stability. In a helicopter view, BPPU 2025 will interconnect efforts to establish a regulatory framework of money market in Indonesia directing toward digital transformation by optimizing development of integrated financial market infrastructures.

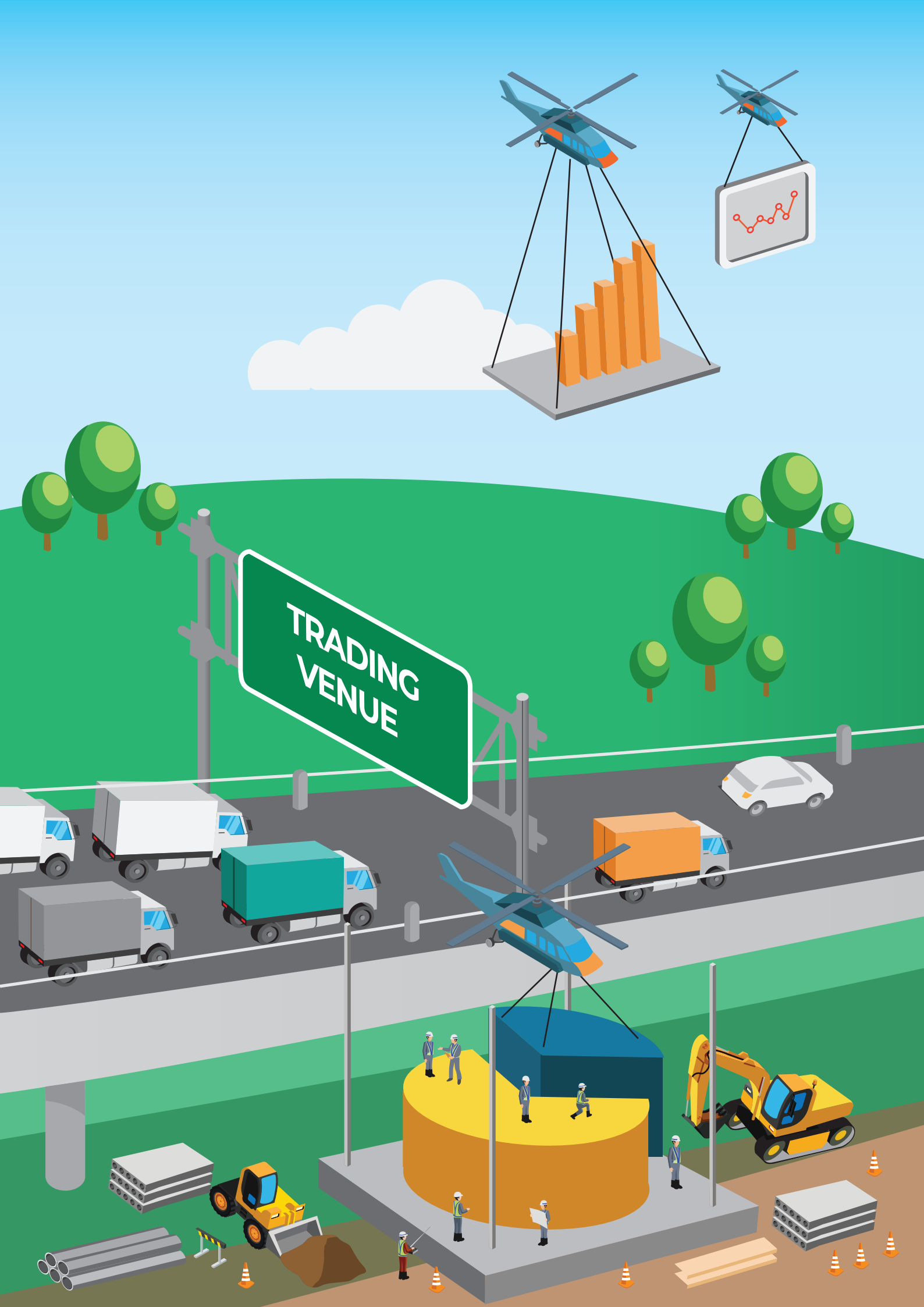
Overall, BPPU 2025 is prepared to welcome the future of a Developed Indonesia through establishment of a modern and advanced money market.





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DEEP, LIQUID,
EFFICIENT, INCLUSIVE,
AND SAFE FINANCIAL
MARKET.

RTGS AND
SSSS

TRADE
REPOSITORY
/TR

CENTRAL COUNTER
PARTY/CCP



CHAPTER I

TOWARD A MODERN AND ADVANCED MONEY MARKET

“Financial market infrastructures play a critical role in the financial system and the broader economy” (CPSS-IOSCO)

Digitalization era with global financial system reform opens new challenges for the financial market. Modernization of financial market infrastructures is a response to financial market transformation. The increasing need for economic financing toward a Developed Indonesia also marks the right moment for the country’s financial market to harmonize its actions to rise to the challenges.

1.1 Strategic Measures

Global economy constantly displays a dynamic power shift. The global economy, which was initially centred on developed countries, is currently moving toward developing countries. Prior to 2020, the economy of developing countries has recorded a rapid growth. The economic growth of developing countries reaches more than 4% on average yearly, while that of developed countries is lower within the range of 2%.

Covid-19 pandemic mounts as one of the most enormous challenges for the global economy recently.

Negative economic growth and the threat of recession are foreshadowing most countries in the world. The economy of developing countries is generally vulnerable to the pandemic impacts. However, the significant roles of policy makers in making structural changes for economic recovery and positive development of Covid-19 vaccine, have developed optimism that emerging countries will recover and remain to serve as the locomotive for the global economy.

As one of the emerging economies, Indonesia is predicted to enter the constellation of key countries in the global economy in the near future.

Indonesia’s consistent economic growth has been proven in the last two decades, showing high post-crisis growth as in 1997

and 2008. Covid-19 crisis has caused a global economic setback, but it undoubtedly creates a momentum for Indonesia to move forward and catch up.

Indonesia has an opportunity to grow strongly after the Covid-19 pandemic crisis. Such optimistic

forecast requires Indonesia to

effectively mitigate Covid-19 health crisis

at high speed and with great accuracy. Different

efforts of the government, such as national economic recovery program and positive development of vaccine trial, have contributed to market optimism.



High, inclusive, and sustainable economic growth is required for Indonesia to be able to face various global challenges and to achieve Indonesia as a developed country. In this

matter, financial market plays a central role in supporting economic growth. A deep financial market may function as an alternative financing source and investment, improve efficiency of transactions in the financial market, and facilitate risk management tools for market participants.



Within the last few years, most business financing comes from bank loans, while non-bank financing trend remains less significant. With the increasing financing

requirement, contribution of non-bank financing alternatives must be immediately optimized.

In this matter, financial market plays a central role as a funding alternative to accelerate the realization of Developed Indonesia.

Development of financial market in Indonesia is now facing various challenges. The level of

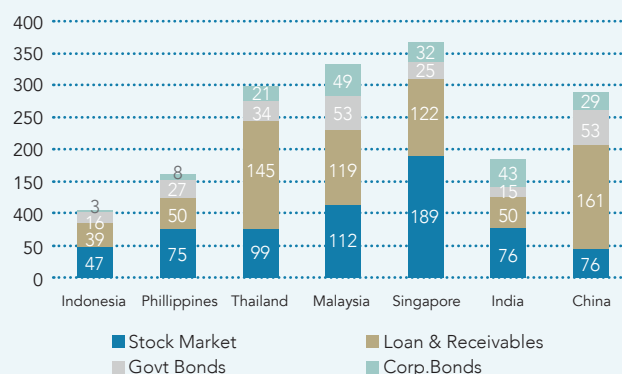
financial market deepening in Indonesia remains relatively below the level of in the peer countries

“Indonesia needs financing of Rp37,447 trillion in the next 5 years. Financial market plays a central role as an alternative for financing source to support economic growth toward a Developed Indonesia.”

To achieve the vision of Developed Indonesia, Indonesia needs a significant financing source. The government has issued a national development plan through National Medium-Term Development Plan (RPJMN) 2020-2024 to achieve status of country with medium to upper income per capita by 2025. The estimation of financing requirement to implement the national agenda within the next 5 years is Rp37,447 trillion. Such funding requirement increases in line with the need for economic recovery due to Covid-19 pandemic. The escalating funding constraint ahead will potentially result in a wider gap for national development and infrastructure financing.

(Chart 1). Based on the IMF GFSR report (2020), the level of financial marketing deepening in Indonesia is below the median of that in emerging countries as shown in Chart 2. This is consistent with IMF data on Financial Development Index, generated from Financial Institution Index and Financial Market Index. Such shallow condition of domestic financial market entails potential risks to the incapability of supporting a rapid economic growth in the real sector.

Chart 1. Ratio of Indonesia's Financial Market to GDP



Source: IMF Global Financial Stability Report

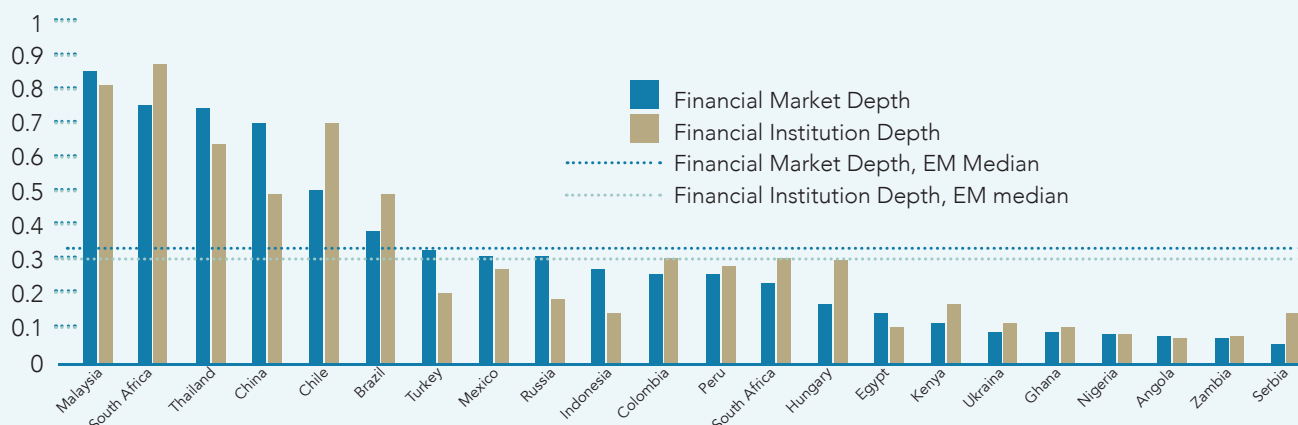
In addition to domestic demands, there has also been challenges of global financial market reform to strengthen financial system stability. One of the financial system reforms after the 2008's global financial crisis emphasized on the improvement of financial market ecosystem, primarily financial market infrastructures (Financial Stability Board, 2010). This reform is known as G20 OTC (Over-the-Counter) derivative market reforms to initiate several programs comprising five elements: (1) all standardised OTC derivative should be traded on an electronic trading platforms or on exchanges, (2) all standardised OTC derivative transactions should be cleared through a central counterparty (CCP), and (3) all OTC derivative transactions should be reported to a trade repository. As an incentive or disincentive framework for the second mandate pertinent to CCP, non-cleared OTC derivatives transactions will be charged with higher (4) capital requirements, and (5) margin requirements.

Current development of global financial market has increasingly prioritized in strengthening financial market infrastructures (FMI). Committee on Payment and Settlement System (CPSS) and the technical committee of International Organization of Securities Commissions (IOSCO) in April 2012 has issued Principles for Financial Market Infrastructures (PFMI), consisting of 24 principles to increase governance and transparency, to support smooth monetary policy transmission and financial system stability. The reason is FMI may also pose concentration of risks, in addition to support the financial system strength. PFMI has become a global reference for FMI development.

In addition to demands for global financial market reforms, digitalization trend currently also affects financial market development, mainly for OTC derivative transactions. BIS study (2019) explains that electronic currency transactions have been increasing through different alternative trading venues. This innovation has resulted in an increasing transaction speed, trading venues, and opportunities for varied transaction execution strategies.



Chart 2. Financial Market Deepening in Indonesia



Source: IMF GFSR Report 2020

Transactions in the financial market have also been more sophisticated through the use of artificial intelligence and algorithmic trading along with the increasingly easy internet access and information disclosure. As a result, financial transactions have become easier and more efficient. The need for speed and efficiency in transactions must be balanced with adequate FMI.

Optimism to enter the constellation of key countries in the global economy requires an enormous support from the financial market sector through the strengthening of regulations and the roles of financial authorities. Synergy cooperation between authorities will promote financial market development and enhance the ability to face any upcoming domestic and global challenges. The presence of authorities is required to maintain alignment of financial market development with stability of the financial system in order to prevent vulnerability due to excessive innovative development.

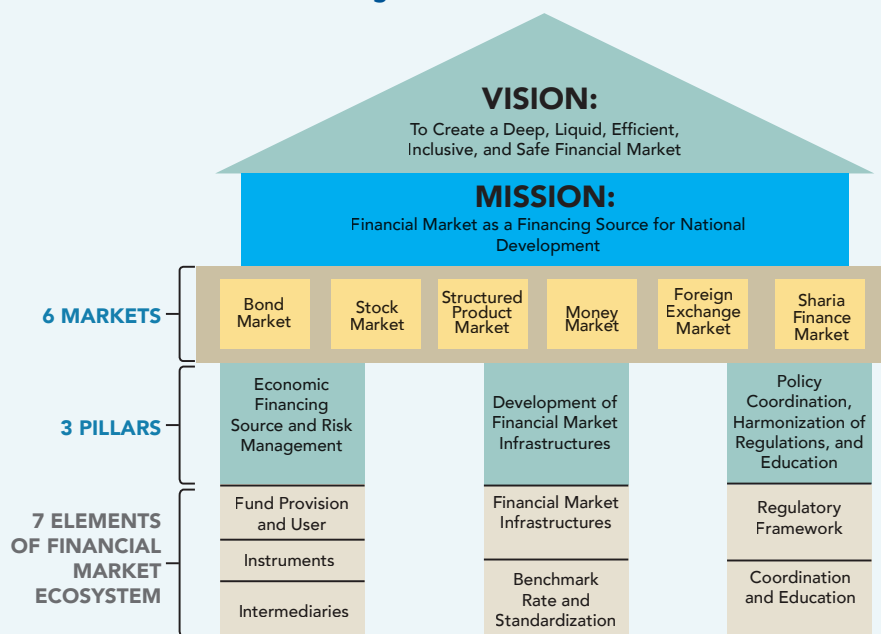
1.2 National Strategy for Financial Market Deepening and Development

Financial market development support from relevant institutions and authorities emphasize the importance of financial market role as a financing source of economic activities. That is why in 2016, financial market authorities in Indonesia (Bank Indonesia, Ministry of Finance, and Financial Services Authority/OJK) established a Coordinating Forum for Development Financing through Financial Market (FK-PPPK), one of the mandates of which is to develop a National Strategy for Financial Market Development (SN-PPPK).

Issued in 2018, SN-PPPK has served as a comprehensive and measured single policy framework for financial market development to accomplish the mission to create a deep, liquid, efficient, inclusive, and safe financial market. The framework developed by FK-PPPK includes three main pillars: (1) economic financing sources and risk management, (2) FMI development, and (3) policy coordination, harmonization of regulations, and education as shown in Figure 1.



Figure 1. Framework of SN-PPPK



Source: SN-PPPK Book (2018)

Pillar I: Economic Financing Sources and Risk Management

A developed financial market is beneficial as economic financing and at the same time, serve as a financial risks management tools. To achieve a developed financial market, demands should be created by expanding investor base to individual and institutional investors, as well as supply enhancement by providing instruments in line with the preferences of investors. Further, this pillar is developed through three elements, namely **(i) fund provider and user, (ii) financial instrument, and (iii) intermediary institution.**

Pillar II: Development of Financial Market Infrastructures

Reliable FMI is necessary for efficient financial market transactions. In addition, market infrastructures must be properly managed in order to mitigate operational risks which may potentially lead to financial systemic risks, as evident in the global financial crisis in 2008, which resulted in the agreement of G20 OTC derivative market reforms and global interest rate benchmark reform. The agreement emphasizes on the importance of having market infrastructures that capable of reducing potential risks, and providing reliable and transparent benchmark rate.

This pillar is developed through two elements: **(i) financial market infrastructure, and (ii) benchmark rate and standardization.**

Pillar III: Policy Coordination, Harmonization of Regulations, and Education

Currently, each authority has formulated policies on financial sector in accordance with their mandate. Coordination between the authorities is necessary to promote more innovations in the financial market. Enhance potential investors literacy is important along with development of financial market elements to explore the potentials of financial market in Indonesia. This pillar is developed through two elements: **(i) regulatory framework, and (ii) coordination and education.**

Through development of the three pillars in SN-PPPK and considering the bigger challenges in the financial market, it is necessary to develop strategic plans and innovations. Strategic plans and innovations to achieve the objective of SN-PPPK is consistently developed by each financial authority, including Bank Indonesia. In this matter, Bank Indonesia develops money market as part of its mandate and authority.

1.3 Bank Indonesia: Money Market Transformation

Scope of Money Market

Financial market is classified by its product characteristics and its tenor. One of the elements of financial market is money market, namely a market related to transactions, borrowing-lendings, or short-term funding up to 1 (one) year tenor in rupiah and foreign currencies, which plays a significant role in monetary policy transmission, achievement of financial system stability, and efficient payment system¹. Money market facilitates market players to manage funds with short term tenor, and it serves as a foundation for a competitive and efficient intermediation system and support other financial markets such as government bonds².

Bank Indonesia is a monetary authority mandated by the law to regulate money market in Indonesia.

To determine and implement monetary policies, Bank Indonesia is authorized to exercise monetary management through open market operation in the Rupiah and foreign currencies money market, as well as foreign exchange market. The scope of money market under the authority of Bank Indonesia also includes money market adhering to sharia principles. In addition to Bank Indonesia, other market participants transact in the money market consisting of the government, banks, financial services institutions, corporations, individuals, and intermediaries like money brokers.

Rupiah money market is commonly used by market participants for rupiah liquidity management through transactions of money market instruments, short-term borrowing and lending, and Rupiah interest rate derivative transactions. Instruments that are available in the money market among others are banker's acceptance, negotiable certificate of deposits, commercial papers, repurchase agreements, call money, central bank bills (monetary operation instruments), and treasury bills. In addition, there are also rupiah interest rates hedging instruments, such as Interest Rate Swap (IRS) and Overnight Index Swap (OIS).

Foreign currency liquidity in the domestic market is managed through instruments in the foreign currency money market. Foreign currency money market usually includes borrowing-lending mechanism in foreign currencies for liquidity management, such as interbank call money market in foreign currencies, or repo in foreign currencies.

Meanwhile, foreign exchange (FX) market pertains to buy and sell one currency against another currency. The transactions include buying and selling of foreign currencies at an agreed price, in cash market or forward market. FX market is generally used for market participants to meet their foreign currency liabilities, hedging, assets or liabilities management, and trading. FX transactions may be classified by their settlement period, namely cash transactions (today, tomorrow, and spot) and forward transactions with settlements in more than 2 days. Derivative transactions available in the domestic FX market among others are forward, swap, option, call spread option, cross currency swap, and domestic non-deliverable forward.

"Bank Indonesia as a monetary authority is committed to strengthen the strategic role of money market as an economic financing source and risk management contributing to the national economy for a Developed Indonesia."

Strategic Role of Money Market

Money market plays a strategic role in the achievement of Bank Indonesia vision to strengthen the effectiveness of monetary policy transmission. As mandated in BI act, Bank Indonesia is mandated to achieve and maintain rupiah stability through monetary policy effectiveness. Bank Indonesia determines BI-7DRR (BI-7 Day Reverse Repo Rate) in 2016 as a policy rate to improve monetary policy implementation. Mishkin (1995) said that there are several mechanisms of monetary policy transmission as shown in Figure 2. Money market primarily plays a critical role in the transmission mechanism through interest rate and exchange rate.

1. BI Regulation No. 18/11/PBI/2016
2. WB & IMF (2001).

To maintain rupiah stability, both inflation and exchange rate, Bank Indonesia conducts monetary operations in rupiah and foreign currencies money market.

Monetary operation in rupiah is aimed to control liquidity in rupiah money market in order to support the monetary policy, which is expected to be reflected on other interest rates used in money market instruments. It is expected that the money market interest rates may affect long-term interest rates as reflected on credit rates, and yields of government bonds and corporate bonds. The credit rates may influence financing of real economy activities which potentially affect prices stability and financial system stability. In addition to rupiah monetary operations, Bank Indonesia conducts FX monetary operations through various policy instruments to achieve price stability as reflected from stable exchange rates.

In addition to enhancing monetary policy transmission, the strategic role of money market is evident in its potential use as an economic financing source and risk management. Mismatch between needs and fund availability for economic development has triggered a

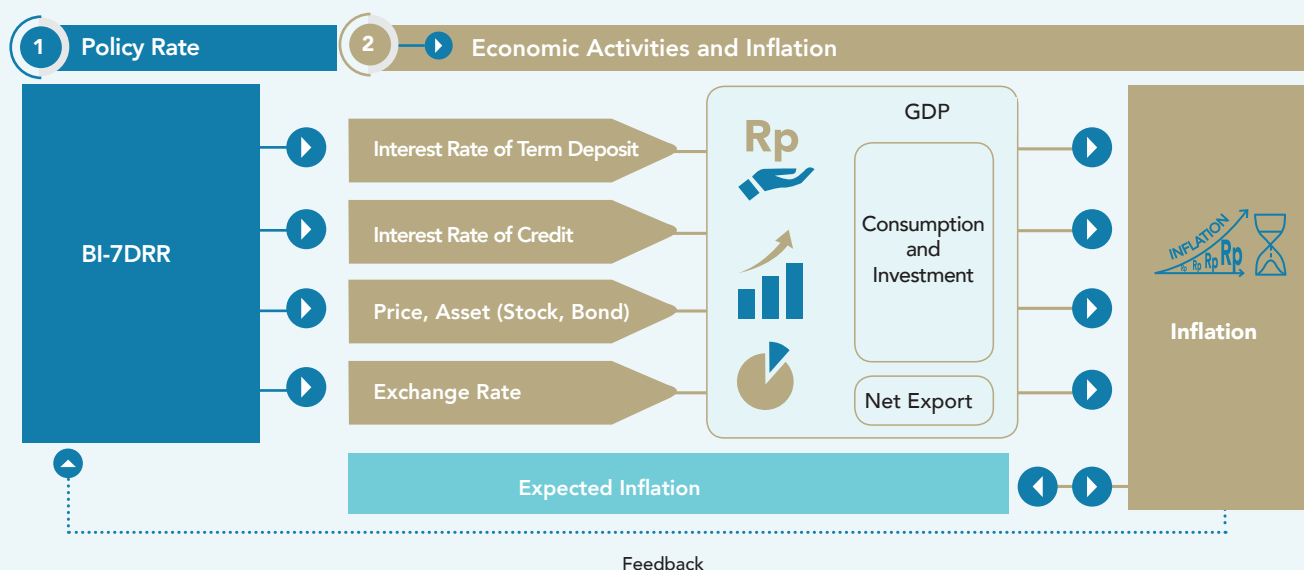
financing gap. With the existence of a developed and efficient money market, a borrower may transact in the money market for liquidity management and receive working capital, and the lender may use the money market for investment diversification. On the other hand, liquid money market also provides flexibility for market participants to conduct risk management through derivative transactions. The risk management is conducted for hedging against the volatility of interest rates and exchange rates.

Toward a Modern and Advanced Money Market

Initiatives on money market development are highly required to create a liquid and efficient money market in order to support monetary stability, financial system stability, and financing source for national development.

The current condition of money market in Indonesia is relatively shallow and less developed. Based on BIS *Triennial Survey* (2019), the daily average of foreign exchange transactions and OTC derivative transactions reached USD6.68 billion or increased from 2016 by USD4.63 billion.

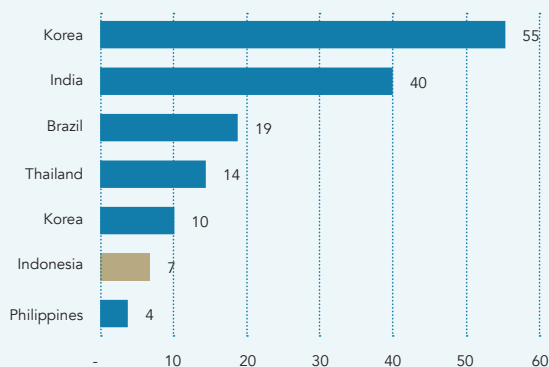
Figure 2. Mechanism of Monetary Policy Transmission



Source: Bank Indonesia

However, among peer countries, transaction volume in Indonesian foreign exchange market is only better than the Philippines (Chart 3).

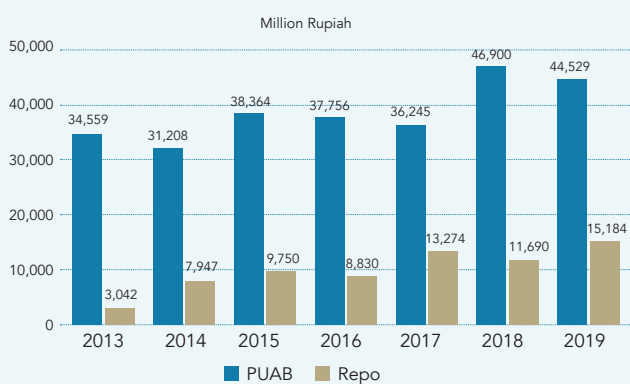
Chart 3. Comparison of Foreign Currency Market Volume in Indonesia and Peer Countries



Source: BIS Triennial Survey (2019)

Similar condition is also observed in domestic rupiah money market. Data on interbank call money market and repo transactions indicates a slightly declining growth, and interbank call money market transactions in 2019 is even lower compared to that in 2018 (Chart 4).

Chart 4. Position of Interbank Call Money Market Transactions and Repo Transactions



Source: Bank Indonesia

This condition is worsened by Covid-19 pandemic in 2020 in line with the increasing excess liquidity in the money market, which has eventually caused the declining transactions in the money market and foreign exchange market. Global uncertainty results in the decreasing risk appetite of market participants.

The shallowness of money market in Indonesia is also reflected from the low level of market accessibility by market participants in Indonesia. Efforts to increase access in the money market is continuously conducted through availability of financial market infrastructures. It is conducted simultaneously with strengthening of instruments to add financing and investment options among others through issuance of negotiable certificates of deposits and commercial papers. The increasing access to financial instruments, supported by financial education and literacy, will boost the increase in financial market inclusivity because access will be easier for market participants, including the MSMEs which need financing instruments and risk management.

The conditions elaborated above reaffirm the importance of comprehensive money market development. Future strategic plans must be able to achieve a modern and advanced money market. This condition is reflected in a deep, inclusive, and contributive money market. The level of money market deepening is reflected from the high transaction volume (liquid), the efficient transaction cost, and the effectiveness of monetary policy transmission. Meanwhile, inclusivity is indicated by accessibility to financial market through availability of financial market infrastructures compliant with international standards and codes. Further, one of the benefits of developed money market in supporting economic growth is providing alternative national economic financing sources.

To achieve a modern and advanced money market, Bank Indonesia issues Blueprint for Money Market Development (BPPU) 2025. This Blueprint is issued to support programs in SN-PPPK and serves as an initiative complementary from financial market development perspective.

Economic Financing



MONETARY POLICY IMPLEMENTATION
(OM Strategy: Liquidity Mgt and FX Mgt)

FX MARKET

RUPIAH MONEY MARKET

Infrastructure Financing



CHAPTER II

BLUEPRINT FOR MONEY MARKET DEVELOPMENT 2025

"Developments in financial markets can have broad economic effects felt by many outside the markets." Ben Bernanke

Blueprint for Indonesia's Money Market Development 2025 (BPPU 2025) provides a solution to respond to challenges toward a Developed Indonesia. Bank Indonesia prepares the Blueprint for Money Market Development 2025 with the aim to build an ecosystem of a modern and advanced money market. The Blueprint is established on five visions as the end-state of the policy direction of money market development in Indonesia.



The end state of a developed Indonesia motivates policy makers in the country to consistently develop policy initiatives and build synergy between authorities.

As an authority in monetary policy, macroprudential policy, payment system, and rupiah circulation, Bank Indonesia believes in the important role of money market development as a catalyst to achieve high and sustainable economic growth in Indonesia. The distinctive feature of a modern and advanced money market, which is capable of positively contributing to the economy of Indonesia, is manifested in a deep, efficient, inclusive, and contributive money market.

A modern and advanced money market can be achieved through a clear and comprehensive road map.

The road map reflects various strategic policy measures taken to bridge the existing condition and the desired state. The desired state of Indonesia's money market is described as a money market condition effectively supportive of monetary policy transmission and serves as a catalyst to development financing source provider. Such achieved state brings considerable benefits for the overall economic development.

2.1 Policy Context

Financial system is the heart of economy. Financial system determines the flow of funds for financing sources to support all economic activities. Financial system is defined as a system consisting of, among others, financial market³, one type of which is money market. Money market development which satisfies liquid, deep, and efficient criteria to facilitate financial transactions, risk management, and alternative financing source, can support national economy effectively and efficiently.

"Various money market innovations and development are expected to serve as a foundation for creating a resilient, efficient, and safe financial market ecosystem and as a catalyst to an inclusive and sustainable national economic growth."

Amid the challenges ahead, it is believed that money market development may become a catalyst to achieve a deep financial market. The most current, inevitable challenge to the money market is a rapid digital economy



3. BI Regulation No.16/11/PBI/2014 on Macroprudential Management and Surveillance defines Financial System as a system consisting of financial institutions, financial market, financial infrastructures, non-financial companies, and households, interacting in funding and/or provision of economic financing.

development or the so-called Industry 4.0. UNCTAD (2019)⁴ uses digital data traffic as a proxy, estimating digital economic growth will continue to soar. Global internet protocol has been constantly displaying an increase from 100 gigabytes per second in 2002 to 46,000 gigabytes per second in 2017, and it is estimated to reach 150,700 gigabytes per second by 2022, or it grows by 30% on average per year.

Such digital economy development has created numerous new opportunities. Digital platform is used not only for trade of goods and services, but also for transactions of different financial instruments, such as mutual funds, bonds, stock with the use of various payment methods. It is also necessary to anticipate when access to technology becomes easier, risks to FMI become higher, thereby making FMI deemed as systemically and critically important. Operational and cyber risks are two FMI risks to be mitigated. Responding to these challenges, policy context of BPPU 2025 functions to navigate digitalization in the financial market, which may pose far-reaching impacts on transaction mechanism. BPPU 2025 aims to plot, organize, improve, and direct financial transaction process including issuance, trading venue, clearing, settlement, reporting, surveillance, asset registration, and other financial services. The impacts of digitalization on market structure, transaction behaviour, business model, and instrument variations must as well be anticipated.

Digital technology utilization in money market is marked by the use of FMI. The FMI should consist of infrastructures with an integrated system, strong interconnection, and capable of providing granular, massive, and comprehensive data.

"BPPU 2025 improves digitalization implementation in money market by developing financial market infrastructures, improving the effectiveness of monetary policy transmission, and providing support to economic financing sources and financial system stability"

4. UNCTAD, 2019, "Digital Economy Report: Value Creation and Capture: Implications for Developing Countries"

In responding to digitalization challenges through FMI development, BPPU 2025 is also aimed to improve the effectiveness of monetary policy transmission in order to support the implementation of BI mandate to maintain price stability: inflation and exchange rate.

Interest rate movement in the financial market in accordance to the direction of monetary policy stance will help achieve monetary policy objectives to control prices and to create strategic environment for development financing. With this regard, interest rate transmission in money market will significantly affect decisions on investments because such interest rate will affect the formation of long-term interest rates on term deposits, credit, and yield curve of bonds, depending on the risks involved. Accordingly, effectiveness of monetary policy transmission requires a liquid, efficient, deep, and accessible money market.

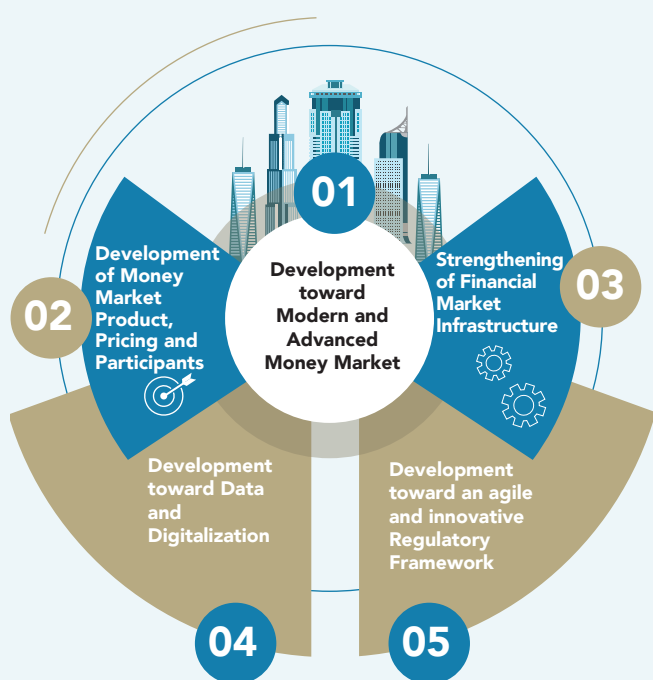
To create a liquid, efficient, deep, and accessible money market condition, an effort to develop financing sources and manage economic risks is required. It aims to reduce the gap between investment needs and fund required for economic development. Oliver Wyman & Mandiri (2015)⁵ said that capital growth of 13% - 16% per year is required for Indonesia to become a G7 country by 2030. Unfortunately, the current financing gap is fully sourced from foreign capital inflows, such as foreign direct investments or portfolio investments, which are vulnerable to various external risks.

Non-bank financial industry is also targeted for development of financing source alternatives. The role of non-bank financial industry as an institutional investor, such as pension fund and insurance, has a great potential for long-term saving, which is an excellent match for long-term infrastructure investment needs. Retail investors accessibility to money market is also a development focus through development of transaction digitalization. The increasing role of money market in providing different hedging instruments also mitigates exchange rate and interest rate risks. In addition, financial market ecosystem must be built to support issuance of asset securitization and eco-friendly financing, such as sustainable and green financing.

5. Oliver Wyman & Mandiri Institute, 2015, "Financial Deepening in Indonesia"

2.2 Vision of Indonesia's Money Market Toward a Developed Indonesia

To achieve a Developed Indonesia, Bank Indonesia prepares a Blueprint for Money Market Development 2025 (BPPU 2025) founded on the following five visions of Money Market Development 2025:



Vision 1: BPPU 2025 builds a modern and advanced money market to increase effectiveness of monetary policy transmission and to support financial system stability and national economic financing.

A modern and advanced money market is deep, inclusive, and contributive, which can create efficient ecosystem to support monetary policy transmission and to contribute to financial system stability

The first aspect of this vision pertains to the key role of a central bank in increasing effectiveness of monetary policy transmission and supporting financial system stability.

By building a modern and advanced money market, it is expected that policies adopted by Bank Indonesia will effectively influence various economic indicators. In terms of prices, it is expected that the policy rate will more effectively influence interest rates on various money market instruments. Credibility of pricing in money market is significantly determined by market demand and supply, and therefore, prices are formed through a sound market mechanism. In terms of quantity, monetary operations may directly affect the amount of money circulating in the financial market and economy, hence their substantial contribution to financial system stability. A modern and advanced money market allows more resilient financial system to become the main buffer in the event of pressures or turbulences. A modern and advanced money market allows short-term interest rates to become a credible reference for formation of interest rates on other financial instruments, including deposit and credit interest rates. A resilient financial system and credible pricing may attract an increasing inclusive participation in money market. It will eventually affect financial system stability, price stability, and economic growth.

The second aspect of the first vision of BPPU 2025 is to build a modern and advanced money market to support national economic financing. This vision navigates a modern and advanced money market to be contributive and beneficial for the national economic financing. According to Guru and Yadav (2019), the presence of a modern and advanced money market, as one of the backbones of national economic financing, may positively affect economic growth. As an emerging economy, Indonesia has numerous national strategic projects requiring various financing sources. On the micro side, different economic sectors also require funding to support business expansion and maintain working capital liquidity. It is expected that a modern and advanced money market can create different financing sources and risk management tools to support a stable and resilient financial system, as part of deep and developed financial market.

Vision 2: BPPU 2025 develops develop products, pricing, and market participants for money market which are diverse, liquid, efficient, and transparent

In line with the first vision of BPPU 2025 to build a modern and advanced money market, this second vision of BPPU 2025 supports the first vision by establishing products, pricing, and market participants for money market which are diverse, liquid, efficient, and transparent. According to Tomasic and Akinbami (2011), it is expected that development of money market ecosystem in terms of products, pricing, and participants will increase trust and support the creation of market resilience.

Efforts to develop instrument variations are dedicated for liquidity management, risk management, and financing through expansion of the scope of underlying, development and improvement of benchmark rate, optimization of the roles of supporting institutions, digitalization of communication, as well as dissemination and education to increase investor base. Development is applied by increasing efficiency and transparency, integrity, governance, consumer protection, and financial market integration, which is believed to increase the number of participants and transaction volume in money market.

This second vision demands an increase in credibility and integrity of financial market to encourage monetary stability and financial system stability. Bank Indonesia is aware that efforts to increase the credibility and integrity of domestic financial market require synergy, cooperation, and collaboration with different stakeholders. Efforts to maintain financial market integrity are devoted through implementation of market conduct, application of code of ethics, and increase in human resource competence through treasury certification.

Vision 3: BPPU 2025 strengthens reliable, efficient, safe, and integrated financial market infrastructures.

This third vision closely relates to the implementation of financial market infrastructures aligned with the requirements of the digital era. Provision of reliable, efficient, safe, and integrated infrastructures aims to ensure all money market transactions are recorded, organized, standardized, and integrated from end to end. Bank Indonesia believes that financial market will not function optimally without the support of reliable infrastructures.

BPPU 2025 VISION **For Developed Indonesia**



The role of Bank Indonesia as the money market authority is to ensure availability of infrastructures, both hard and soft infrastructures, aligned with the digital era requirements and capable of increasing payment efficiency. Financial market infrastructures must also be able to respond to the needs of businesses and market participants pertinent to digitalization and to effectively and efficiently facilitate financial transactions.

Modernization of financial market infrastructures may support market resilience through development of BI-ETP, BI-SSSS, BI-RTGS, and trade repository, and reinforcement of regulatory framework on market operator and CCP. The strategy is based on three key driving factors: **first**, regulator/policy driver, which is the required development by regulators, especially the central bank policies on supervisory technology (suptech); **second**, international development/standard best practice, which is development of risk management compliant with international standards such as PFMI and other relevant standards as guidance for development of Central Counterparty (CCP), fast and efficient security settlement system (SSS), resilient payment system (RTGS), and development of trade repository (TR); **third**, market development referring to phases and dynamics of financial market development in Indonesia, and responding to challenges of market participants, including compliance monitoring with the existing regulations (regulatory technology – regtech).

Vision 4: BPPU 2025 develops granular, real-time, and secure data and digitalization.

The fourth vision requires FMI to be able to answer the challenges of digital era. FMI accommodates not only transactions, clearing, and settlements, but also data digitalization to support policy making. This vision aims to capture granular data on transactions in money market throughout the process of trading to reporting to be an organized, standardized, and integrated end-to-end process.

This vision responds to technology advancement and growth of massive data volume which requires a proper, fast, and accurate data management policy. Accessibility to information technology and digitalization allows dashboard development displaying several parameters of real-time money market condition. The dashboard development will be synchronized with development of big data and data repository of Bank Indonesia.

Data management policy will not function properly without digitalization innovations in FMI. The FMI innovations are needed to respond to digital transformation which has changed economic structure, including in investments activity, in accordance with access openness to the financial market. Different alternative of payment instruments and canals for investment (front-end) through transfer, debit card, and electronic money and through mobile canal, internet, and other sales agents like e-commerce, and financial technology, must be supported by availability of interface (middle-end) infrastructures to connect participants with payment system infrastructures (back-end). Digitalization from pre-trade until post-trade may accommodate the need for mapping of retailers and wholesalers in the market.

The fourth vision of BPPU 2025 is also directed toward efforts to provide granular, massive, real-time, comprehensive, and easily obtained data in an end-to-end manner starting from the transaction until the reporting. Data on money market transactions will be reported and recorded in a trade repository, and the data will enter the repository system at Bank Indonesia. Interconnection between trade repository and data repository at Bank Indonesia will generate data granularity on overall financial market condition, thereby helping the authority to formulate the right policy. This mechanism will utilize the latest technology to help create direct data flows through machine-to-machine.

Vision 5: BPPU 2025 develops an agile, industry-friendly, and innovative regulatory framework compliant with the international standard.

The fifth vision of BPPU 2025 is directed toward efforts to create an enabling regulatory climate for development of digital economy, by considering the interest of industries, innovations, and compliance with international codes. For that reason, regulations must ensure an open and equal access for all economic participants. Strong regulatory framework will smooth out market entry process and reinforce industrial structure.

The fifth vision of BPPU 2025 is directed toward efforts to realize regulations compliant with international standards and to create a conducive market ecosystem.

The global financial crisis in 2008 has created an alert to financial market regulators that the absence of regulations on OTC derivative transactions resulted in non-transparent, risky, and difficult-to-monitor derivative transactions. Consequently, it prevented regulators to take on-target necessary recovery actions. This crisis shows fundamental issues of OTC derivative market.

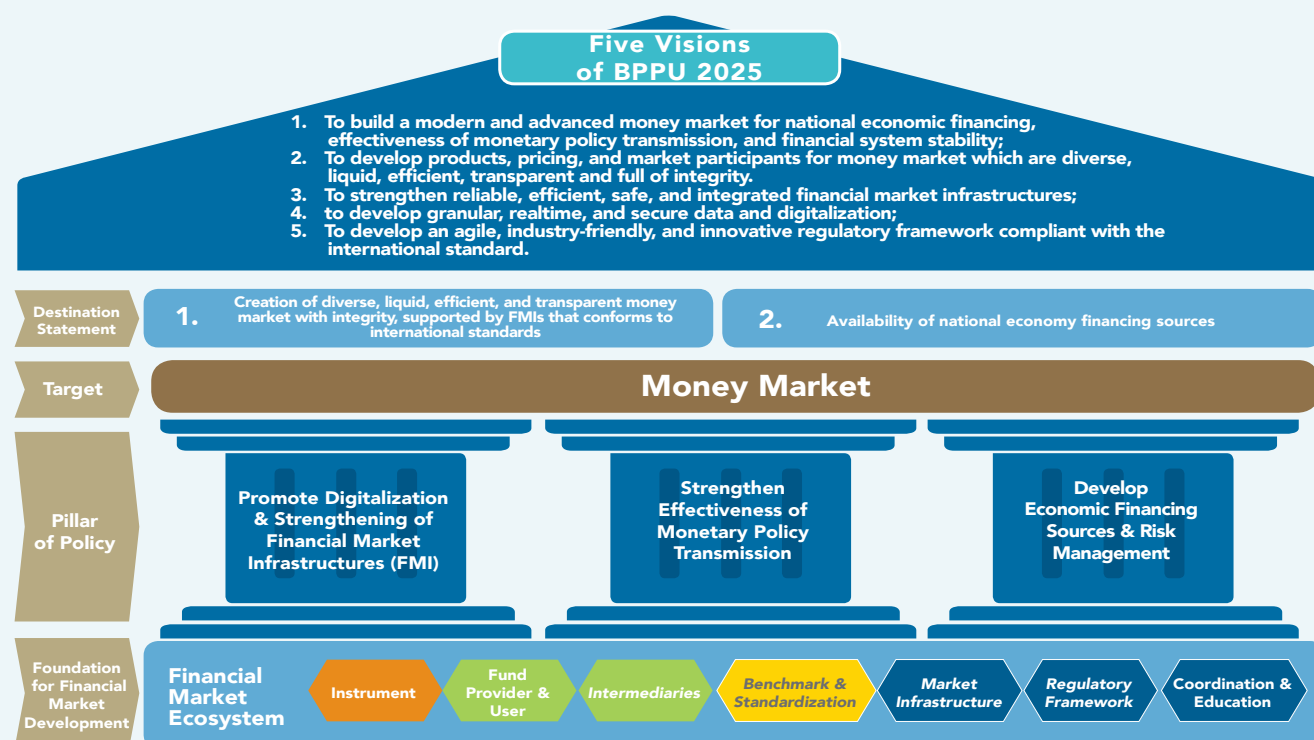
In addition, it is important to have a regulatory framework that capable of increasing synergy between authorities including regulations on insolvency, taxation,

accounting and legal aspects, for instruments in the money market and other financial market. Regulatory harmonization will support money market development, primarily in the aspects of liquidity and efficiency.

Money market oversight must also comply with the PFMI international standard issued by IOSCO. It is believed that application of the principles will make financial market infrastructures safe and efficient. The principles also represent collective interests facilitating each authority to cooperate and increase effectiveness and consistency of regulations, supervision, and oversight considering many cross-jurisdictional financial market infrastructures in operation. Regulations on banks, NBFI, fintech, and financial market participants must be continuously harmonized.

2.3 Policy Initiatives

“BPPU 2025 evidently manifests the contribution of Bank Indonesia in realizing monetary stability, financial system stability, and improving an enabling climate of national development financing.”



Source: Bank Indonesia



Source: Bank Indonesia

The development of the money market 2025 based on the 5 (five) visions above is expected to achieve the main objective, namely a modern and advanced money market characterized by a deep, efficient, inclusive, and contributive money market state in Indonesia. To reach such objective, the visions of BPPU 2025 are implemented by using a top-down approach including three key initiatives to be undertaken by adopting the following methods:

1. Visions 1 and 2 are implemented through the second initiative to strengthen effectiveness of monetary policy transmission and the third initiative to develop economic financing sources and risk management.
2. Visions 3 and 4 are implemented through the first initiative to promote digitalization and strengthening of FMI.
3. Vision 5 is implemented to support efforts to undertake all initiatives on digitalization and strengthening of FMI, effectiveness of monetary policy transmission, development of economic financing sources, and risk management, through regulatory reinforcement.

Initiative I: Support digitalization and strengthening of financial market infrastructures

FMI strengthening serves as one of the key initiatives mainly targeted to support availability of information

access, trading and transaction settlements in a fast, safe, and efficient manner. To achieve the target, BPPU 2025 is implemented, containing various policies to be adopted in strengthening domestic FMI. This blueprint is prepared based on the spirit and commitment to reform money market in responding to the swift dynamics of strategic environment.

FMI digitalization and development involve five key deliverables, namely trading venue and BI-ETP, CCP, BI-SSSS, BI-RTGS, and TR. The main focus of FMI development road map is to accelerate implementation of Market Operator (MO) and Central Counterparty (CCP) in 2021 and BI-ETP in 2022.

The first key deliverable is achieved through strengthening and development of trading venue

by accelerating electronification and implementation of multimatching system and preparation of regulations on mandatory trading through ETP (standardization of transactions). In addition to strengthening market operator in the first key deliverable, trading platform (BI-ETP) will also be strengthened through development of a reliable and user-friendly system focusing on MO (Monetary Operations) and Government Bond auction requirement, and enhancing the capability of the system to accommodate future needs through synchronization of market operator development.

The second key deliverable of FMI digitalization and enhancement is through CCP. The program is implemented by accelerating institution establishment and CCP implementation (including CCP interconnection with BI-SSSS and BI-RTGS) as well as preparing regulations on mandatory clearing (standardization of transactions) and piloting on clearing of standard derivative transaction.

The next key deliverable of BPPU 2025 is achieved through BI-SSSS development by developing a system of monetary instruments and Government Bonds management to be able to accommodate the current and future needs.

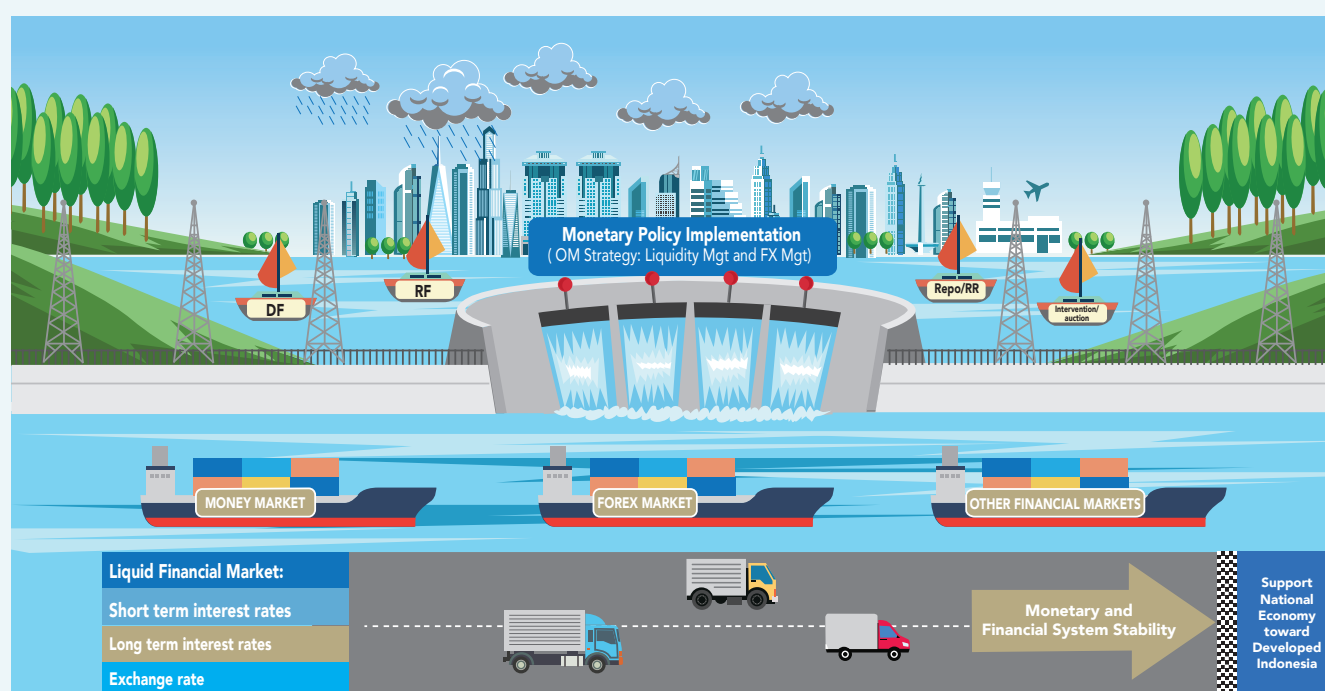
The fourth key deliverable for initiative in FMI digitalization and enhancement is achieved through BI-RTGS strengthening by the development of a safe, efficient, flexible, and innovative system, and strengthening the core aspect including multicurrency feature and interoperability of interconnection with other FMI through the use of standard message format under ISO20022 and non-core aspects such as participation aspect.

Lastly, the fifth key deliverable is achieved through establishment of trade repository. This establishment is conducted by preparing a TR conceptual design, establishing domestic TR according to the international standard (PFMI), as well as regulation on mandatory reporting.

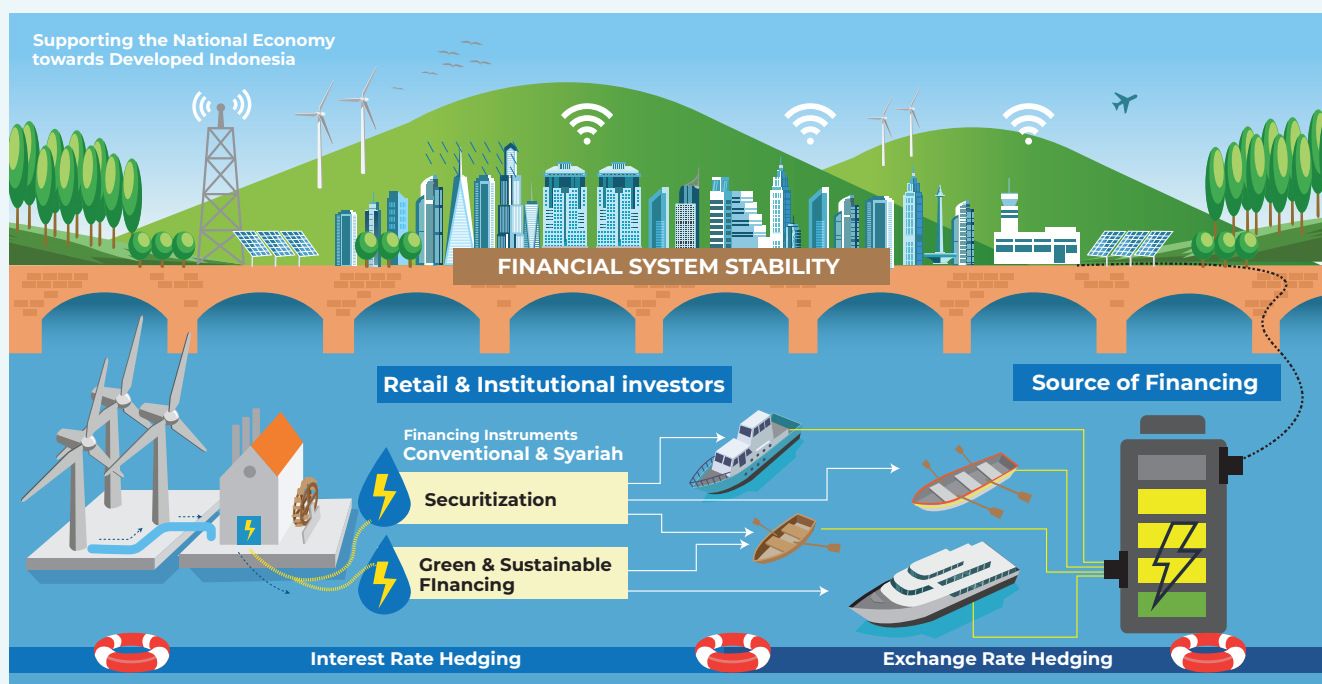
For easier implementation of the key deliverables, FMI road map is required as the main support for the development of instruments and policies in the financial market, and therefore, simultaneously plays a significant role in accelerating financial market deepening.

Initiative II: Strengthen Effectiveness of Monetary Policy Transmission

Bank Indonesia is committed to strengthening effectiveness of monetary policy transmission through money market development through five key deliverables covering repo and its derivatives, OIS/IRS, DNDF and its derivatives, LCS and benchmark rates reforms (IndONIA and JIBOR). Development of the five key deliverables focuses on four aspects, namely products, pricing, market participants, and infrastructures aligned with FMI readiness. Accelerated implementation of MO, CCP, and BI-ETP must be backed by money market development focusing on repo market, short-term securities market, and interest rate derivatives such as OIS. In foreign exchange market, the development will focus on development of DNDF and its derivatives and development of Local Currency Settlement (LCS).



Source: Bank Indonesia



Source: Bank Indonesia

The first key deliverable is repo market development to strengthen effectiveness of monetary policy transmission. Product strengthening is conducted by development and expansion of repo (securities lending, triparty repo, retail repo, and interlinked fintech), while pricing strengthening is accommodated by utilization of benchmark rate (IndONIA and JIBOR), development of information on secondary price of underlying. Strengthening of market participants includes expansion of participant base, increasing adoption of standard contract (GMRA), and optimization of money broker roles. Meanwhile, infrastructures are strengthened by FMI utilization through CTP-PLTE interconnection with ANTASENA, ETP, collateral management/triparty repo, interlinked fintech, development of repo data and information, digitalization of communication and education, and harmonization of regulations (regulations on banks and NBFI, close-out netting, and taxation on repo transactions).

The second key deliverable is achieved through development of OIS instrument. Products are strengthened by increasing of OIS liquidity, and standardization of OIS traded through FMI. Strengthening of pricing mechanism is developed by OIS utilization

as a benchmark rate, and development of credible OIS rate information. Participants are developed through expansion of investor base, increasing adoption of ISDA/ PIDI, optimization of roles of money market supporting institutions. Infrastructures are strengthened through utilization of FMI (ETP, CCP, TR), development of OIS data and information, digitalization of communication and education, and harmonization of derivative regulations in Indonesia (close-out netting, insolvency, margining rules, derivative tax).

The third key deliverable is achieved through development of DNDF as a hedging instrument. In terms of product related to supply-demand development, DNDF with all tenors and DNDF are traded through ETP and are cleared through CCP. Pricing is developed by determining JISDOR for a credible DNDF fixing rate. Participants are developed by increasing DNDF market liquidity through interbank transactions and increase in DNDF supplier. Infrastructures are strengthened through ETP and CCP development to support DNDF transactions, efforts to encourage close-out netting, use of SID in monitoring transactions, and CSA development for netting.

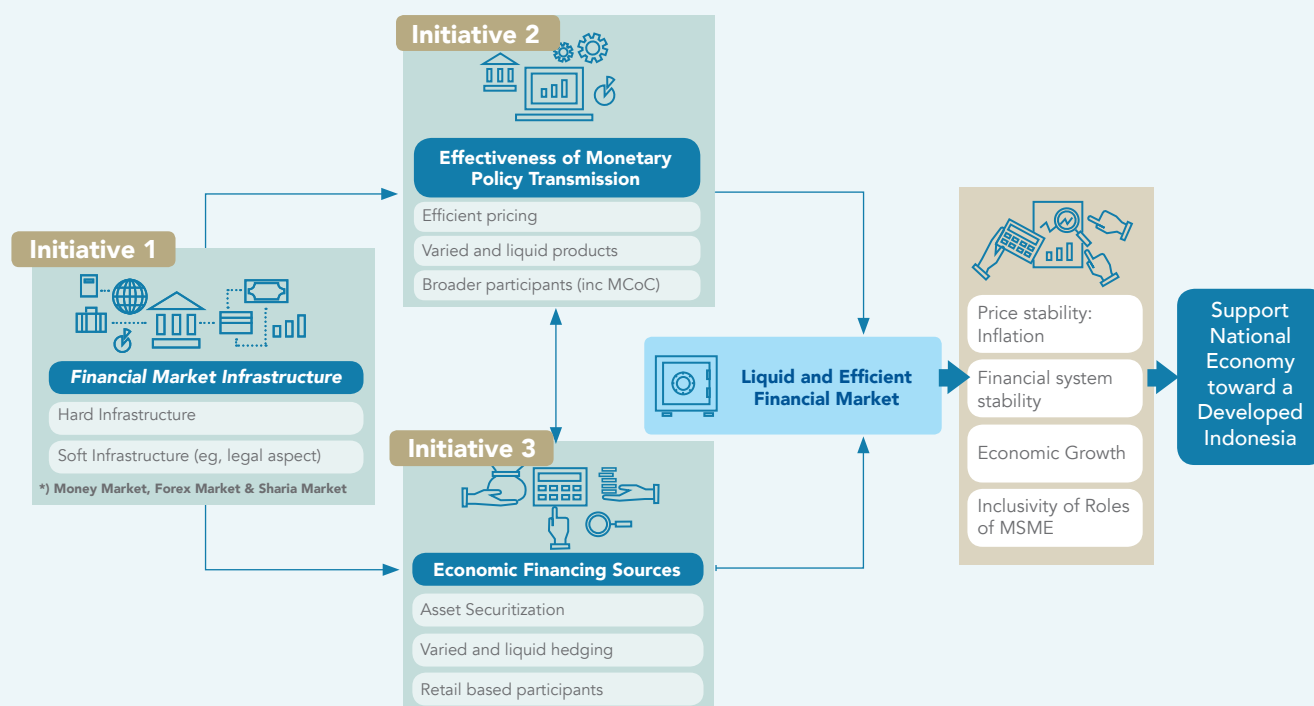
The fourth key deliverable is LCS development. Products are strengthened through expansion and reinforcement of LCS cooperation with new partner countries, strengthening of modality and instruments including DNDF and cross-border QRIS. LCS development also involves price strengthening through direct quotation on online and real-time LCS trading platform and routine development of LCS quotation. Participants are strengthened by expansion of ACCD banks and scope of LCS customers with different sectors. Lastly, infrastructures are strengthened through ETP, RTGS, and multicurrency transactions to support multicurrency settlements and development of omni-channel communication platform.

The fifth key deliverable is to strengthen monetary policy transmission through benchmark rate strengthening of IndONIA and JIBOR. Products are strengthened by increasing volume of the existing money market instruments, such as commercial papers and NCD, study on development of new money market instruments in the form of asset-backed commercial papers, green money market instruments, retail commercial papers, FRA

and IRO, and development of secondary money market instruments. Pricing is strengthened through utilization of benchmark rates (IndONIA and JIBOR), development of credible price information in the money market. Participants are strengthened through expansion of investor base and increase in the number of registered/licensed Money Market Supporting Institutions. Infrastructures are strengthened through prospectus standardization, FMI development and utilization, digitalization of money market license, strengthening of data and information, digitalization of communication and education, and harmonization of regulations (regulations on products, tax assessment of instruments and transactions in the money market).

Initiative III: Develop Economic Financing Sources and Risk Management

Bank Indonesia strives to implement the third initiative through development of economic financing sources and risk management, through the key deliverable of financing instrument development in the form of sustainable and green financing, asset securitization, development of long-term hedging and retail investor base.



Source: Bank Indonesia

The first key deliverable is development of alternative short-term financing source through asset securitization.

Efforts are undertaken through assessment and mapping of working capital and bridging financing requirement. They are undertaken through synergy, harmonization, and standardization of regulations, mechanism, and institutions backing securitization. This economic financing alternative should be aligned with readiness of the required infrastructures and instruments as well as future development plan.

The second key deliverable is undertaken through an initiative on development of sustainable and green financing as an alternative financing source.

Development is targeted to the roles of Bank Indonesia supporting sustainable and green financing through assessment and development of money market taxonomy and instruments. Synergy and coordination between the relevant authorities are then applied to improve and align with the sustainable finance road map.

The third key deliverable is development of economic financing sources and risk management through development of long-term hedging instruments.

Long-term hedging instruments are developed through strengthening of existing instruments such as IRS and CCS. This development aims to increase accesblity to manage exchange rate and interest rate risks for financing providers. In addition, development is also conducted through strengthening of benchmark rates, and the instruments are directed to be traded through Systematic Internaliser and ETP to make pricing more affordable and reflect actual prices in the market.

The fourth key deliverable is targeted on expansion and increase in retail investor base. Efforts are undertaken by Bank Indonesia through financial education and literacy to increase investor base. Financial market education to domestic investors (both retail and institution) is conducted in cooperation with learning institutions, financial market associations, and relevant stakeholders, through conventional and digital media. Furthermore, strengthening the synergy and coordination of financial market

development with other authorities is conducted through FK-PPPK where harmonization of regulations between the relevant authorities turns critical to produce effective and efficient regulations along with oversight and sufficient consumer protection.

Linkages between Key Initiatives

FMI development as described in initiative 1 is inseparable from its function as an infrastructure supporting efforts to achieve effectiveness of monetary policy transmission as well as financing source development and risk management elaborated in initiatives 2 and 3.

In other words, the three initiatives and fourteen key deliverables are correlated and connected to one another. Reliable, efficient, safe, and integrated FMIs reflected on initiative 1 are the main catalyst and prerequisite to accelerate money market development. The establishment of efficient pricing as a positive impact of transparency and access openness for all market participants will reduce imbalanced information and build a credible reference price. Trading venue becomes the major infrastructure in pricing efficiency. The establishment of central counterparty and trade repository is also important and will strengthen risk management and increase market transparency for each participant. BI-RTGS and BI-SSSS as the key infrastructures of fund settlement and securities will also be developed to improve the efficiency and safety for market participants.

The ideal FMI will function as the main foundation of money market development to allow proper and smooth monetary policy transmission carried out by Bank Indonesia toward the real sector.

Properly functioning money market allows efficient and smooth circulation of transactions between market participants as the expected impact of development of money market instruments through initiative 2. Bank Indonesia runs monetary operations to maintain price stability through interest rates and exchange rates to control inflation. This monetary stability and financial system stability will be achieved through development of money market supported with good governance and sound market conduct..

The effectiveness of monetary policies adopted by Bank Indonesia backed by reliable, efficient, safe, and integrated FMI will encourage the improvement of financing for real sector and infrastructure development.

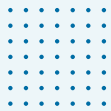
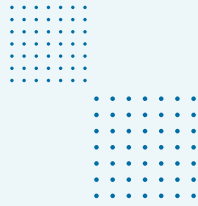
It is consistent with the empirical study by King and Levine (1993) indicating a strong, positive connection between money market development and economic growth. The increased effectiveness of monetary policy transmission as an impact of initiative 2, will lead to lower prices which would be favourable for economic financing. Low interest rates will support development financing increase and be effective to encourage corporations to use equity increase for expansion. Issuance of financial instruments, such as commercial papers, stocks, or bonds, will flare to support the increasing financing for economic and infrastructure development. In an efficient market environment, investors tend to look for investment outlets in financial markets for

example through the purchase of mutual funds, bonds, and stocks. This will help develop financing outlets and investments to become more liquid.

The three initiatives are correlated to create a liquid, deep, and efficient money market. Market condition formed from the three initiatives will result in a favourable market and help improve price stability, financial system stability, and economic growth. In addition, the increasing transaction and financing efficiency from the three initiatives will increase money market inclusivity, thereby increasing ease of access by market actors, including MSME, to the money market. Through money market development program, MSMEs which has structured and met the go-export and go-digital codes will readily gain financing access in the financial market and eventually support the acceleration of national economic growth toward a Developed Indonesia.

DEVELOPED INDONESIA





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Green
power plant



This modern city
is the result of
investments in the
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CHAPTER III

MONEY MARKET DEVELOPMENT ROAD MAP

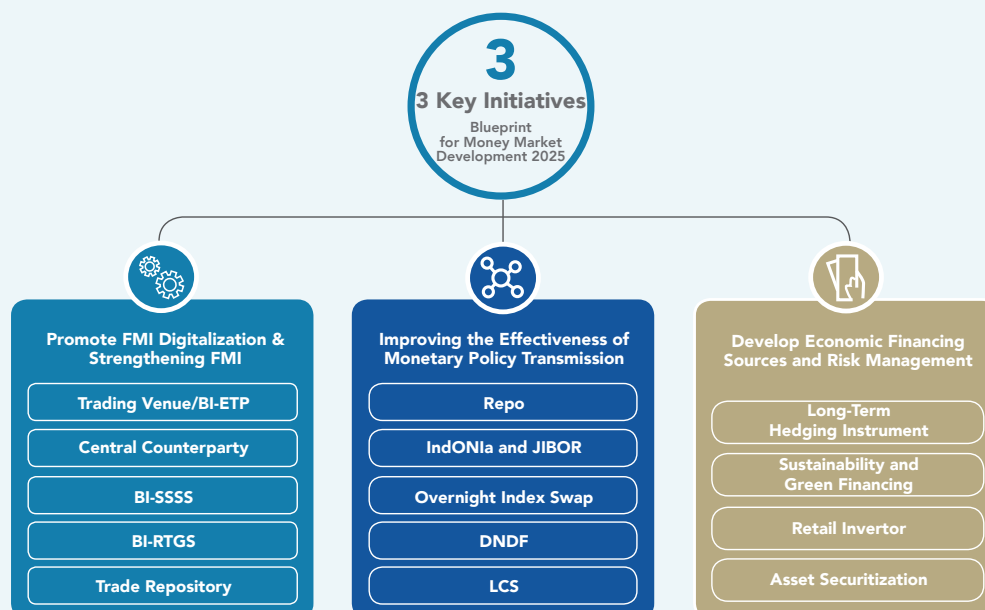
“Well-functioning FMs improve the stability of markets and the wider financial system.” - Bank of England

Development of FMs which contributes to the digitalization of Indonesia’s economy will change transaction mechanism in the money market to become more efficient, deep, and inclusive. In the blueprint for money market development, FMs serve as the key foundation for financial market supporting the effectiveness of monetary policy and promoting the development of economic financing sources toward a Developed Indonesia. The blueprint for money market development is further elaborated in constructive key initiatives and key deliverables.

Five visions of BPPU 2025 are specified in three key initiatives, focusing on promoting digitalization and strengthening of financial market infrastructures, strengthening effectiveness of monetary policy transmission, and developing economic financing sources and risk management. The three key initiatives involve authorities, market participants, and all parties in the financial industry by forming 5 (five) working groups in measured implementation phases from 2020 – 2025.

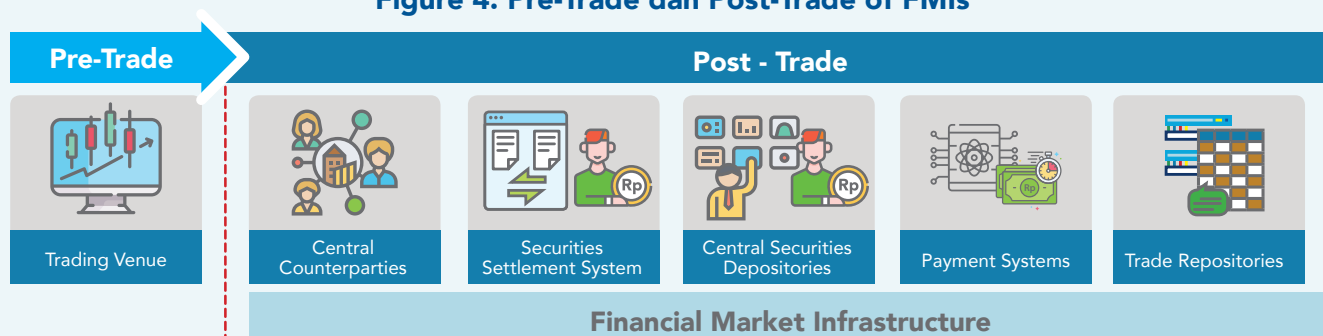
“...Implementation of the five visions of BPPU 2025 aiming to achieve a modern and advanced money market is translated into 3 (three) key initiatives and elaborated through 14 (fourteen) key deliverables. ”

Figure 3. Implementation Framework of the Blueprint for Money Market Development 2025



Source: Bank Indonesia

Figure 4. Pre-Trade dan Post-Trade of FMIs



Source: Bank Indonesia

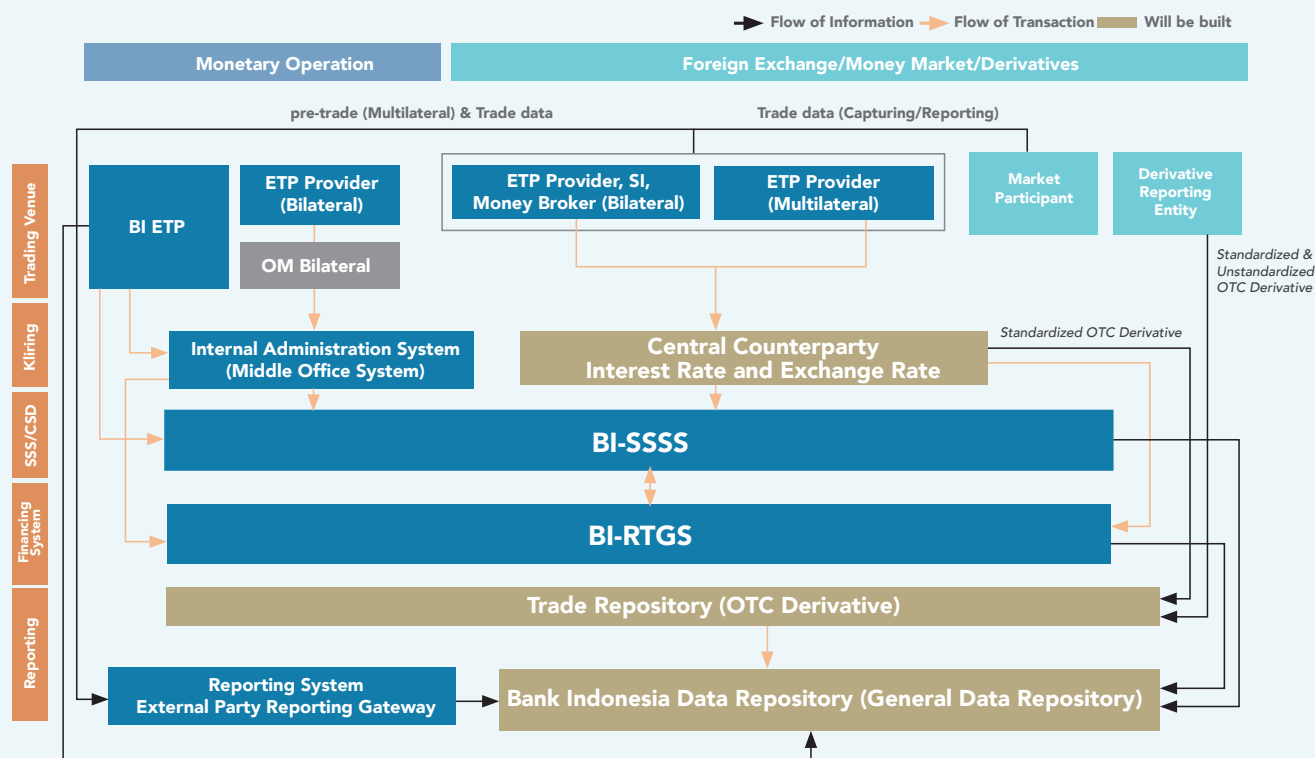
3.1 Key Initiative 1: Promoting FMI Digitalization and Strengthening FMI

Digitalization and strengthening of financial market infrastructures is part of efforts to achieve Visions 3 and Vision 4 of BPPU 2025. This initiative takes priority due to the need in reliable, efficient, safe, and integrated FMIs which becomes the key foundation for a modern and advanced money market in Indonesia. FMI strengthening as an end-to-end system from pre-trade to post-trade becomes vital for its strategic roles in financial market. The need for well-functioning FMIs encourages authorities to determine principles to be adhered to by FMI operators. FMIs which include Payment System (PS), Central Securities Depositories (CSD), Securities Settlement System (SSS), Central Counterparty (CCP), and Trade Repository (TR) must comply with the best practice standard specified in the Principles for Financial Market Infrastructure (PFMI) issued by CPSS-IOSCO in 2012.

Furthermore, FMI development in Indonesia is also part of G20 OTC derivative market reforms which has a 5 main agenda: 1) all standardised OTC derivative transactions should be traded on Electronic Trading Platform (ETP) or exchange; 2) all standardised OTC derivative transactions should be cleared through Central Counterparty (CCP); 3) All OTC derivative contracts should be reported through Trade Repository (TR); 4) non-centrally cleared OTC derivative contracts should be subject to higher capital requirements; 5) non-centrally cleared OTC derivative transactions should be subject to a margin requirements.

The five G20 agendas emphasize the importance of governance and efficiency in OTC derivative transactions, including risk mitigation of volatility in the financial market, in order to allow its proper function as the catalyst to maintain financial system stability. These are valuable lessons from the global crisis in 2008. The end-state FMI is as illustrated in Figure 5.

Figure 5. Money Market Infrastructure Configuration



Source: Bank Indonesia

"...The end state of FMI development is interconnection between FMIs, pre-trade to post-trade"

To achieve reliable, efficient, safe, and integrated FMIs as shown in Figure 5, Bank Indonesia determines 5 key deliverables: (1) Strengthening of trading venue and BI-ETP, (2) Establishment of CCP, (3) Establishment of TR, (4) Strengthening of BI-SSSS, and (5) Strengthening of BI-RTGS.

3.1.1 Key Deliverable – Trading Venue

Strengthening of trading venue starts from regulations on money market operators, including derivative transactions so that market operators meet the requirements specified by Bank Indonesia⁶. Regulatory framework is aimed

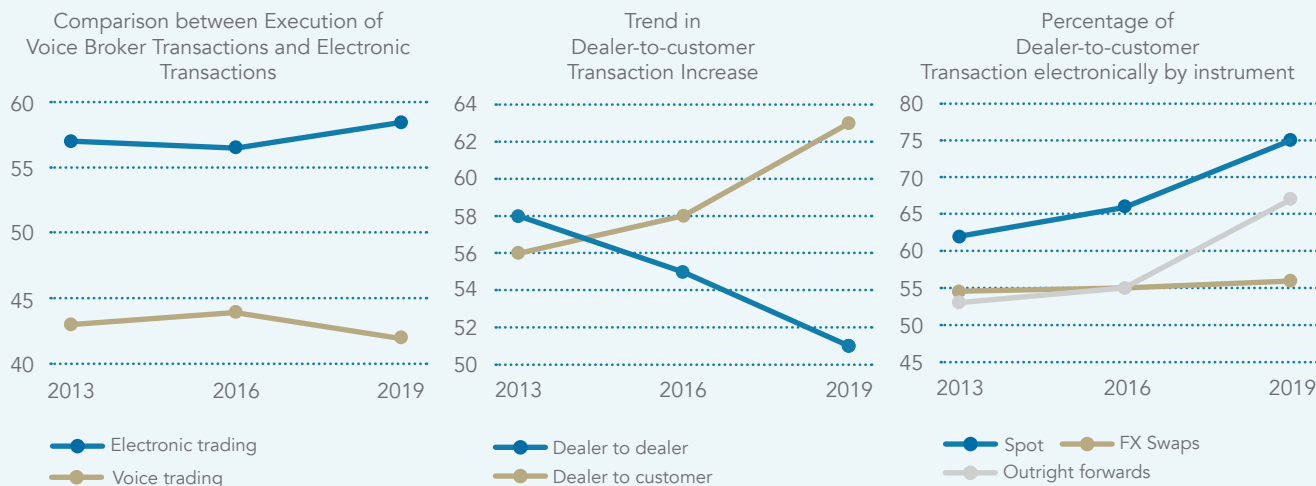
to encourage market operators to facilitate more efficient and transparent market, and able to monitor the granularity of money market dynamics required by Bank Indonesia and financial sector authorities for policy formulation. In line with the increasing digitalization in financial market, according to the BIS survey result (2019) in Chart 5, initiatives are aimed to form multi-matching trading system.

Matching system of trading platform is expected to accelerate money market development by increasing liquidity, efficiency, and price transparency. In the initial phase, matching system, as a more advanced trading platform than the existing bilateral trading system, will be applied for USD/IDR spot transactions as the biggest OTC market segment in Indonesia. Other types of transactions and money market products, in rupiah and foreign currencies will be gradually promoted to be traded on matching system and is planned to operate in 2021.

6. BI Regulation No. 21/5/PBI/2019 on Operators of Transactions in the Money Market and Foreign Exchange Market
Regulation of the Member Board of Governors No. 21/17/PADG/2019 on Brokers in the Money Market and Foreign Exchange Market

Regulation of the Member Board of Governors No. 21/19/PADG/2019 on Electronic Trading Platform Providers
Regulation of the Member Board of Governors No. 21/20/PADG/2019 on Systematic Internalisers

Chart 5. Transaction Shift from Voice Trading to Electronic Trading and Increase in Dealer-to-Customer Transactions

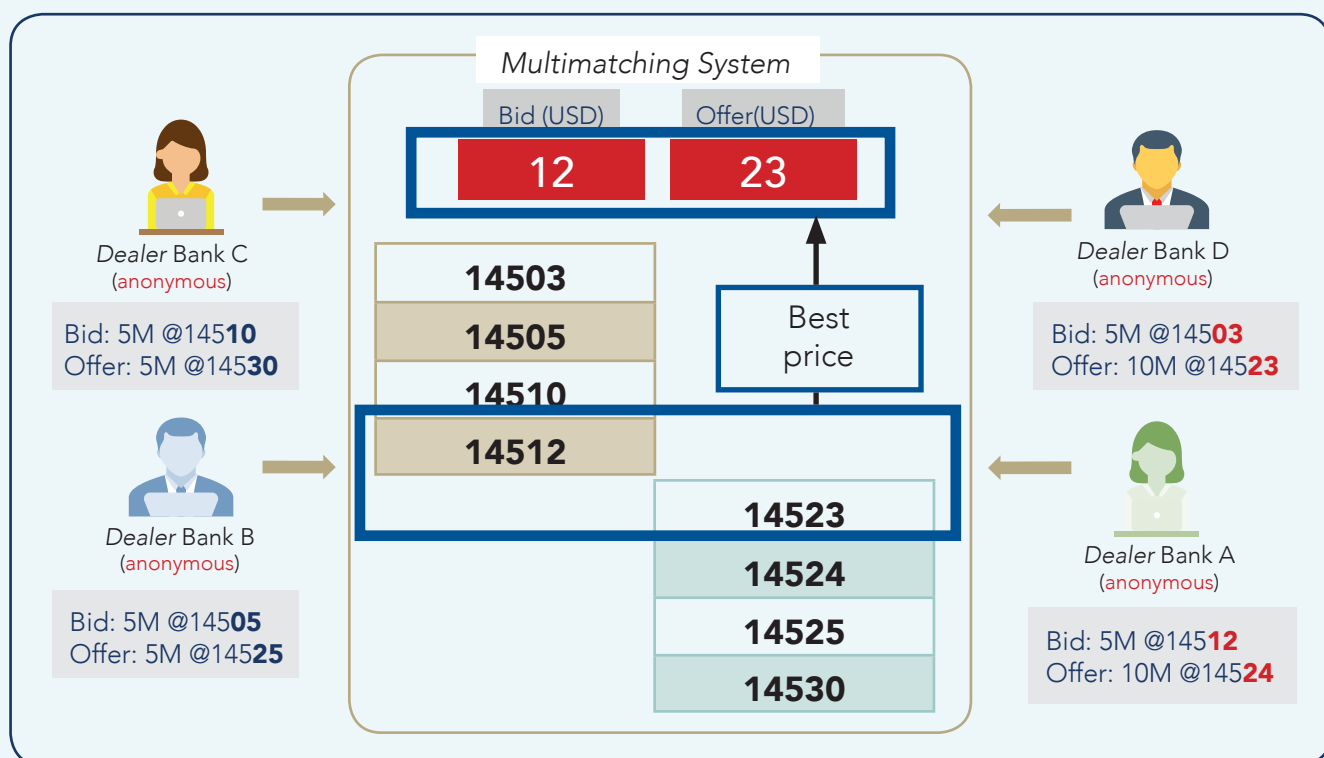


Source: BIS Triennial Central Bank Survey (2019)

Modernization of BI-ETP used by Bank Indonesia in monetary operations and issuance of sovereign bonds by the Government will focus on an auction platform to accommodate all auction mechanisms through various price allocation methods for a successful bidder. BI-ETP will

apply the standard messaging under ISO 20022, the same as BI-RTGS and BI-SSSS to support requirements for more granular data and integration. BI-ETP modernization is planned to be implemented in 2022.

Figure 6. Multimatching System Mechanism



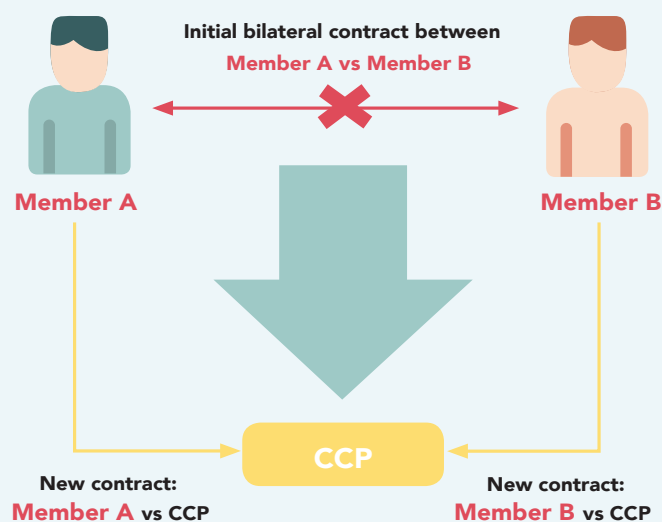
Source: Bank Indonesia

3.1.2 Key Deliverable – Central Counterparty (CCP)

Establishment of CCP is an important pillar in FMI enhancement because of its roles as credit risks management of market participants in OTC market and as a data hub for derivative OTC transactions. CCP acts as a risk manager for market participants (specifically: CCP members) through novation (replacing existing contract either from a seller or from a buyer) and multilateral netting of all trades, making the money market more secure, transparent, and efficient.

“... CCP plays a role in debottlenecking of market segmentation due to high credit risk in the money market, not only to derivative but also to repo transactions, which has been hindering money market deepening efforts”

Figure 7. Novation Process by Central Counterparty



Source: Bank Indonesia

CCP performs a clearing function in three characteristics:

(i) novation, which means replacing counterparty's risks arising from transactions between members; guarantee as a result of novation where the CCP takes over a member's transaction; (ii) multilateral netting, which means calculating the net difference between asset and liabilities of members related to the transacted financial instruments and the corresponding payment as the basis for transaction settlements; and (iii) risk management, means conducting mark-to-market on cleared transactions, applying margin obligation, and being responsible for winding down transaction for defaulting member.

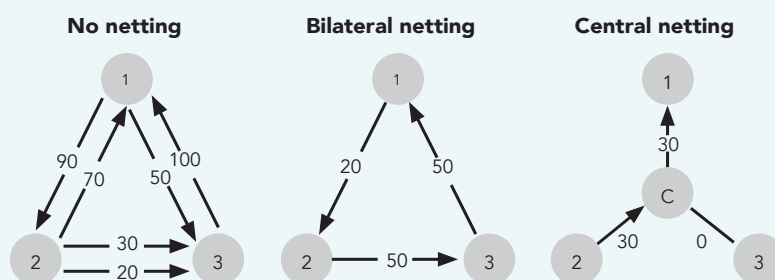
As an evolution from a clearing agency in stock exchange in OTC market, CCP becomes the main idea for OTC derivative market reforms as a G20 agenda. By observing the vital role of CCP in achieving money market development, Bank Indonesia encourages CCP establishment for OTC derivative clearing to start operating in 2021.

As part of CCP establishment measures, Bank Indonesia has issued regulations on CCP operators in 2019 and 2020⁷ specifying requirements to allow CCP to optimally perform its functions, thereby it will balance money market development with the increasing safety and efficiency requirements of money market transactions. These requirements are essentially in line with 22 principles stated in PFMI which must be met by a CCP.

Efforts to strengthen the legal foundation for several business aspects relevant to CCP institutions and transactions in money market are consistently encouraged by BI, mainly related to netting, close-out netting, and settlement finality. Strengthening of the legal foundation is conducted together with the Financial Services Authority (OJK) and Ministry of Finance.

7. Bank Indonesia Regulation Number 21/11/PBI/2019 On Central Counterparties For Over-The-Counter Interest Rate And Exchange Rate Derivative Transactions and Regulation of Member of Board of Governors Number 22/14/PADG/2020 on Procedure For Licensing and Operation of Central Counterparties For Over-The-Counter Interest Rate and Exchange Rate Derivative Transactions.

Figure 8. Multilateral Netting Conducted by Central Counterparty



Source: Central Counterparties, Jon Gregory (2014)

3.1.3 Key Deliverable – Bank Indonesia – Scripless Securities Settlement System (BI-SSSS)

BI-SSSS is an infrastructure used to administer transactions and securities electronically⁸. BI-SSSS is FMI with custodian function (CSD)⁹ and securities settlement (SSS)¹⁰ for securities issued by Bank Indonesia and Government Bonds transacted in the primary market and secondary market.

BI-SSSS modernization is conducted to strengthen FMI to comply with international standards and best practices. Development of BI-SSSS as CSD and SSS is focusing on settlement of delivery versus payment (DVP). It is expected that BI-SSSS in the future may adopt model 2 of DVP settlement (gross settlement of securities – net settlement of fund) and model 3 of DVP (net settlement of securities and fund), since the two models can minimize the systemic risk. In addition, BI-SSSS development is directed to one-tier registry allowing administration of securities ownership until the end-investor level. Another aspect to be developed in BI-SSSS is the use of unique ID and application of ISO 20022 to facilitate easier data integration and communication with other FMIs. In addition, as CSD, BI-SSSS will be equipped with cross-border linked CSD feature where BI-SSSS may be connected with CSD in other jurisdictions through possible arrangements allowing a participant to access securities in another CSD without having to become a direct participant of such other CSD.

3.1.4 Key Deliverable – Bank Indonesia – Real-Time Gross Settlement (BI-RTGS)

BI-RTGS system is an infrastructure used for electronic fund transfer for real-time settlement of each transaction individually¹¹. BI-RTGS system plays a critical role in processing payment transactions, high value and time-critical payments. Functionally, BI-RTGS is designed to ensure that final settlements may be conducted as gross, real-time, final, and irrevocable settlements.

BI-RTGS system modernization is conducted through a safer, more efficient, more flexible, more innovative system, that is more supportive to financial market development. BI-RTGS as the estuary of financial market transactions will be designed as an open infrastructure allowing interconnection with domestic and cross-border financial market infrastructures. Therefore, multi-currency feature in the new generation BI-RTGS will be optimized to accommodate transaction settlements in different foreign currencies. Interconnection will also be strengthened through the use of standard message format under ISO 20022 for data harmonization and integration. Application of ISO 20022 is also beneficial to increase data granularity and support transparency of financial transaction data, which will in turn support financial market development.

8. BI Regulation No 17/18/PBI/2015.

9. A central securities depository provides securities accounts, central safekeeping services, and asset services, which may include the administration of corporate actions and redemptions, and plays an important role in helping to ensure the integrity of securities issuers. Source: CPSS-IOSCO Principles for Financial Market Infrastructures, April 2012.

10. Securities Settlement System (SSS) allows transfer and settlements of securities through book entry process under the specified multilateral rules.

11. BI Regulation No. 17/18/PBI/2015.

In addition to enhancement of core system, the new generation BI-RTGS is supported by strengthening the non-core system. Such enhancement includes expansion of BI-RTGS access policy to meet the needs and development in the digital era through tiered participation management. Non-core system is strengthened through reinforcement of risk management, including cyber risk and fraud, strengthening of information management for data analysis and data analytics availability, and strengthening of the surrounding environment for stronger system resilience.

3.1.5 Key Deliverable – Trade Repository (TR)

Trade repository is an entity that centralizes the reporting, storage, and management of derivative transaction data. The term trade repository starts to emerge since G20 OTC derivative market reforms. Prior to trade repository, derivative transaction data is scattered across counterparties, prime brokers, central counterparty, trading platforms, and custody in different formats and field data. With trade repository, derivative transactions may be recorded in a centralized manner to encourage standardization, quality improvement, and data availability, which will eventually increase transparency in OTC derivative market.

Trade repository performs a pivotal role in increasing the transparency of transactions in financial market, primarily OTC derivative transactions, thus strengthening financial system stability and reducing market abuse.

“... Data and information from trade repository is very useful for authorities and market participants through its role in providing granular, massive, real-time, and comprehensive data”

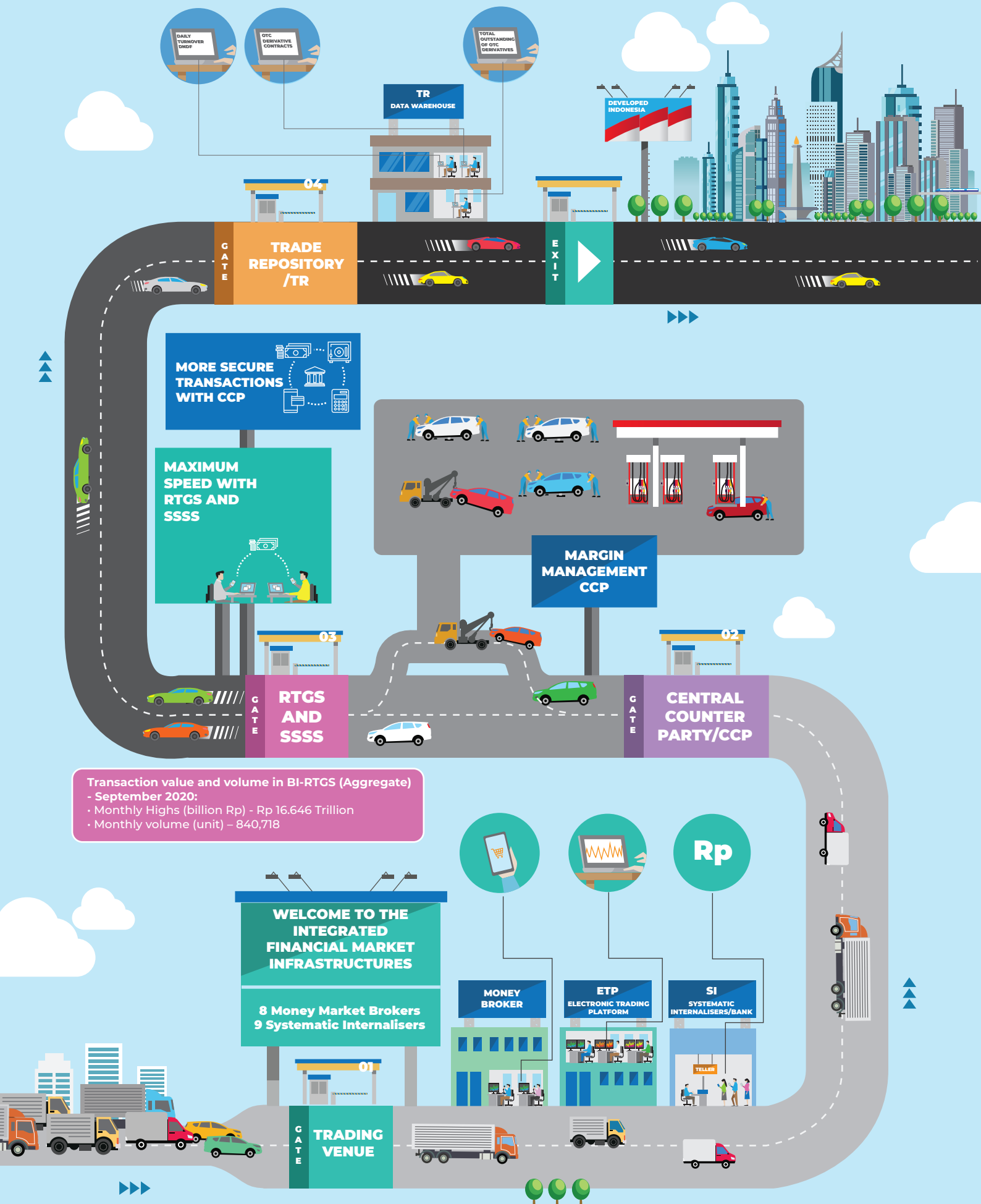
For authorities, information from trade repository supports surveillance and analysis of systemic risks, allowing them to perform their mandate to maintain financial system stability, while for market participants, transparency may help detect and prevent market abuse.

G20 OTC derivative market reforms oblige all derivative transactions to be reported to the trade repository.

The reform mandates cover two main points: (i) mandatory reporting of derivative transactions, and (ii) establishment of an entity which records and manages derivative transaction reporting called trade repository. To fulfil the mandates of G20 OTC derivative market reforms, Bank Indonesia has prepared a TR development road map. In terms of regulations, Bank Indonesia will prepare and re-organize regulations on mandatory reporting, especially on OTC derivative transactions considering that the existing regulation is still integrated with bank reporting regulation. Meanwhile, regarding the TR entity, Bank Indonesia took the initiative to establish a domestic TR in accordance with the international standard (PFMI). Considerations for such initiative are: i) it constitutes an effort to not add reporting burden market participants, (ii) it provides ease of access to derivative transaction data to the TR, and (iii) TR is a critical entity related to data management.

Strengthening of FMIs in compliance with international standards will create a reliable, efficient, secure, and integrated money market environment, thereby attractive to market participants in Indonesia. However, FMI condition will not optimally promote a money market to become modern and advanced if it is not backed by an increase in effectiveness of monetary policy transmission through development of instruments accommodating the needs of market participants. FMI is similar to a toll road built with sophistication and various facilities for convenience of road users. The benefits of FMI or the toll road will not be optimum if vehicles passing it do not carry value-added loads to meet the wider needs of market participants. Therefore, in addition to efforts to strengthen FMI as the first key initiative, to accelerate the accomplishment of a modern and advanced money market, it is necessary to increase the effectiveness of monetary policy transmission through development of instruments accommodating the needs of money market participants. It will be further elaborated in the second key initiative below.

Financial market infrastructures for fast, safe, and efficient transactions



3.2 Key Initiative 2: Increase the Effectiveness of Monetary Policy Transmission

Increase in effectiveness of monetary policy transmission is an effort to achieve Vision 1 and Vision 2 of BPPU 2025.

This initiative emphasizes increasing effectiveness of monetary policy transmission through money market policy optimization. The existence of money market plays a vital role in accelerating monetary policy transmission through interest rates and exchange rates¹². Money market policy optimization focuses on: (1) supporting Bank Indonesia policies to stabilize financial system, among others through development of instruments and standardization, strengthening of benchmark rate, expansion of market participant base, and adjustment to regulations according to market needs; and (2) increasing the confidence of businesses and investors by providing various hedging instruments against exchange rate and interest rate risks.

Money market occupies a central role in monetary policy transmission through interest rates and exchange rates.

Efforts to develop money market, in rupiah and foreign currencies, bear considerable and critical relevance for Bank Indonesia as a monetary authority. The key initiative is elaborated to two initiatives, namely rupiah money market initiative and foreign exchange market initiative, each of which consists of strategic measures and key deliverables to accelerate the achievement of a desired state.

"... To increase effectiveness of monetary policy transmission, it is necessary to develop the rupiah money market and foreign exchange market covering four main aspects, namely products, pricing, market participants, and FMIs"

3.2.1 Initiative – Rupiah Money Market

Money market today shows a market condition which is not yet deep, liquid, and efficient. The limited alternative

instruments and certain tenors available to market participants reflect a shallow market. Transactions in money market remain dominated by interbank transactions with the longest tenor of less than one week. Liquidity of other instruments in money market is also classified low, resulting in an imperfect formation of short-term yield curve in money market due to low liquidity and price information on longer tenor. Consequently, the transmission process of pricing in money market is hindered.

To promote efficient pricing, Bank Indonesia issues benchmark rates in money market, namely IndONIA (Indonesia Overnight Index Average) and JIBOR (Jakarta Interbank Offered Rate). The two benchmark rates are construed an integral unity where IndONIA is a benchmark rate based on overnight interbank money market transactions, while JIBOR is a benchmark rate based on quotation with tenors of 1 week, 1 month, 3 months, 6 months, and 12 months. The benchmark rates are used to determine prices of money market and credit interest rate and to measure performance of financial instruments. Because of its crucial role in the financial market, credibility of benchmark rates must be continuously strengthened. Strengthening of benchmark rates has become the major part of global agenda as specified in the global interest rate benchmark reform, including the development and introduction of alternative risk-free rate (RFR) as well as other transaction-based potential reference rates.

Bank Indonesia also strengthen transaction-based benchmark rates through pricing in Overnight Index Swap (OIS) transaction. The developed OIS market will form transaction-based OIS curve. Liquidity of OIS transaction will stimulate JIBOR which was initially based on quotation to be closer to OIS interest rate, and eventually aims to make JIBOR more convergent to OIS interest rate. Credibility of OIS curve will increase credibility of benchmark rates in the short term and may replace JIBOR as a benchmark rate in the long term.

¹²Mishkin (1995) identifies four main channels of monetary policy in influencing economic activities, namely through exchange rate, interest rate, asset price, and credit.

The important role of interest rates in monetary policy transmission encourages Bank Indonesia to focus on more efficient pricing in money market without undermining other aspects and the development of money market in general. In connection therewith, in the key initiative to increase effectiveness of monetary policy transmission through the initiative in money market, several strategic measures will be taken through three key deliverables: (i) development of repo transactions, (ii) strengthening of IndONIA and JIBOR, and (iii) development of Overnight Index Swap (OIS) transactions.

3.2.1.1 Key Deliverable: Development of Repo Market

Repo transactions provide alternative liquidity management tools for market participants requiring relatively long tenors, making it difficult to be covered through interbank call money. Repo transactions provide alternatives for market participants due to low credit risk compared to interbank call money through transfer of title collaterals, thus it can be liquidated in the event of default. Lower credit risk creates a greater opportunity for development of repo transactions to a longer tenor. Through repo, money market liquidity mainly for tenor of more than one month may increase, thereby strengthening pricing in money market. Repo transactions is part of a solution to minimize market segmentation which remains existent in interbank call money market, therefore it can expand market participant base, including non-bank sector. However, data shows that repo market development is relatively limited, as reflected from far lower outstanding volume of repo transactions compared to interbank call money market. Securities used in repo transactions remain limited to sovereign bonds and monetary instruments, while repo of short-term debt securities, such as NCD and commercial papers, are very few. Shallow secondary market

and absence of market makers in money market leads to the lack of information and price transparency.

Repo market participants are relatively homogenous, almost all of whom come from interbank transactions. It results in unidirectional repo market movements in certain conditions due to similar views and expectations. Bank participants are also limited because not all banks have the same understanding of General Master Repurchase Agreement (GMRA)¹³ and adopt it as a standard agreement on repo transactions. Adopting GMRA for repo transactions in Indonesia is mandatory in order to follow global best practices and provide legal certainty for both parties. However, adoption of GMRA by foreign banks poses certain challenges. Foreign market participants is still concerned about the use of Indonesian Law as the governing law, in particular with the Insolvency Law which creates uncertainty in close-out netting implementation in the event of default.

Development of repo transactions is also carried out through expansion of repo underlying securities, including short-term debt securities such as NCD and commercial papers. In order to do so, efforts to develop information on secondary prices of NCD and commercial papers play a vital role. Information on price of commercial papers is provided by Indonesia Bond Pricing Agency (IBPA). Bank Indonesia coordinates with IBPA to develop information on secondary market prices of NCD, which will be beneficial for secondary market, not only for repo transaction but also for outright transaction.

Development of repo transaction variation in the form of securities lending, which is essentially similar to repo transactions, may accommodate the exchange of securities for other securities, not limited to exchange of securities for fund. It may increase the liquidity of secondary bond market.

To support repo development, market participant base must also be consistently expanded, among others by encouraging the adoption of GMRA standard contract,

13. GMRA is a standard repo transaction agreement issued by the International Capital Market Association

expansion of retail participant base through development of interlinked retail repo to fintech companies, and expansion of market participant to non-bank sectors, primarily Non-Bank Financial Institution (NBFI). Room for development of NBFI in repo transactions remains widely open due to the existence of a regulation permitting NBFI to conduct repo transactions. With the common characteristic of NBFI which has many securities as its assets, NBFI has an enormous opportunity to be active in the repo market.

Repo hard infrastructures are developed through strengthening of BI-SSSS as reliable CSD & SSS, and interconnection with reporting system. The development of the repo settlement type is carried out through BI-SSSS development which aims to accommodate gross, netting, and delivery vs delivery settlements. BI-SSSS will also be developed to have a feature to accommodate tri-party repo transactions, including repo settlement, as well as collateral management. The two features are developed to meet the needs of market participants while still opening the opportunities for other tri-party repo agent development. Reporting enhancement is conducted through coordination with OJK to build interconnection between CTP-PLTE and BI-ANTASENA to increase efficiency and enhance repo transaction reporting.

Development of soft infrastructures is aimed to create an accommodative regulatory climate while still prioritizing the prudential principle. Harmonization of repo regulations related to taxation will be the main focus as it has been considered unaccommodative for non-banks. Further, close-out netting¹⁴ in repo transactions, especially for exemptions of close-out from the Insolvency Law through coordination with the relevant ministries and institutions, will constantly be applied.

3.2.1.2 Key Deliverable: Strengthening of IndONIA and JIBOR

The manipulation of LIBOR (London Interbank Offered Rate) as the global benchmark rate during the financial crisis in

2008 has encouraged G20 to assign Financial Stability Board (FSB) to execute global interest rate benchmark reform. FSB established FSB-OSSG (Financial Benchmarks Official Sector Steering Group) in 2013 to implement the reform agenda by strengthening the existing benchmark rates and developing other potential benchmark rates based on transaction data as well as developing alternative risk-free rate (RFR).

“... Benchmark rates are required by market participants to make pricing process more credible and transparent”

Recognizing the importance of benchmark rates based on transactions, **Bank Indonesia issues IndONIA as RFR to replace overnight JIBOR.** IndONIA is a benchmark rate from volume-weighted average of all data on lending transactions in rupiah without interbank collateral on a transaction day and reported to Bank Indonesia through Commercial Bank Daily Report (LHBU). Credibility of IndONIA is guaranteed as it includes all completed transactions, not only through quotation.

Similar approach is not yet applicable to JIBOR other than overnight tenor, considering the low liquidity of transactions with a longer tenor. Bank Indonesia consistently make efforts to increase the credibility of JIBOR as a benchmark rate based on quotation. Some of the efforts to strengthen JIBOR among others include:

a. Use of Input Data Hierarchy

To ensure that a benchmark rate is transactable, Bank Indonesia requests market participants to use input data hierarchy in their quotation submission. Contributor banks are requested to submit interest rate quotations according to the market transactions, in money market and other similar markets. Expert judgment may only be used as the last alternative in the event of no transactions with the relevant tenor. Application of this input data hierarchy refers to 20 principles of best practices of IOSCO Principles for Financial Benchmarks.

¹⁴Close-out netting is a transaction settlement method bound by a master agreement where parties to a transaction will offset their liabilities in the event of termination and settlement through net payment.

b. Strengthening of Governance

To prove the implementation of the input data hierarchy, a contributor bank must administer data, information, and matters related to determination of indicative interest rate quotations. This process must be specified in an internal guideline submitted to Bank Indonesia.

c. Application of Transactable Method

In addition to strengthening of quotation submission, Bank Indonesia applies transactable method to ensure that the quoted interest rate may be realized by a contributor bank. This method obliges a contributor bank to meet Rupiah lending transaction request from another contributor bank at an interest rate quoted to Bank Indonesia. In the last updated regulation, Bank Indonesia adds tenors of transactable method to one week, one month, three months, and six months.

3.2.1.3 Key Deliverable: Development of Overnight Index Swap (OIS) Instrument

OIS transaction is classified as a derivative transaction in rupiah interest rate which may be used to mitigate risks arising from interest rate volatility. As a hedging instrument, OIS transaction is considered crucial, especially during this global market uncertainties affecting the domestic market. Potential volatility of interest rates in the middle of global uncertainty will increase company lending cost, reduce company profitability, and reduce investor yields. Other than hedging, derivative instruments may also be transacted for speculation or arbitration which may compromise financial system stability as notoriously happening in the 2008's global financial crisis. The crisis gives a valuable lesson on the importance of derivative transaction regulation to reduce systemic impacts and create financial system stability. As a policy response, Bank Indonesia has issued Bank Indonesia Regulation No. 20/13/PBI/2018 on Rupiah Interest Rate Derivative Transactions and Regulation of the Member Board of Governors No.

21/13/PADG/2019 on Rupiah Interest Rate Derivative Transactions of Interest Rate Swap Transactions.

OIS transactions also have a crucial role in strengthening benchmark rates in rupiah money market based on transactions. OIS transaction is basically a swap transaction at fixed and floating interest rates. OIS transactions at rupiah interest rate use IndONIA to calculate cash flow on floating leg. OIS rate reflects a fixed-leg interest rate of an OIS transaction, considered representative to market interest rate as it uses the transaction-based IndONIA as a benchmark floating rate. More liquid OIS transactions will form a credible OIS curve serving as an anchor to form a quotation-based JIBOR curve. It makes JIBOR more convergent to the OIS rate, thereby increasing JIBOR credibility.

The strategic role is not supported by liquidity of the currently shallow OIS market, as reflected from the limited volume and participants, owing to the fact that OIS transactions are just introduced at the end of 2019. The shallow OIS market affects inefficient pricing process due to lack of price reference.

For pricing aspect, development will be directed to promote methodology standardization and market convention for OIS pricing. The role of banks and money market brokers in quoting OIS price is optimized not only through information service providers, such as Refinitiv or Bloomberg, but also through systematic internaliser and ETP to minimize asymmetric information of price. With accessibility to price information in the market, the price formation becomes more efficient.

Strengthening of participants aspect will focus on the expansion of participant base and increase in capability and credibility. Increase in participation of banks and NBFI, such as insurance, pension fund, and financing companies, will be constantly encouraged. Non-financial corporations and retail investors are also expected to participate in hedging transactions through OIS. Meanwhile, increase

in capability and credibility of market participants will be conducted through specific treasury certificates in relation to OIS transactions in coordination with IFEMC and ACI-FMI as associations of market participants. In line therewith, increase in the adoption of standard contract in the form of ISDA or PIDI will consistently be encouraged by conducting dissemination, education, and technical assistance activities.

Development of hard infrastructures is directed toward increasing efficiency of transactions and reporting as well as reducing credit risk arising from derivative transactions.

The achievement is translated in development of systematic internaliser, ETP, CCP, and BI-ANTASENA to facilitate OIS transactions. In line with G20 OTC derivative market reforms, OIS transactions will optimize the use of systematic internaliser and ETP as a trading venue to facilitate trading by participants, and the use of CCP for clearing and novation, and reporting to the trade repository.

Soft infrastructures will prioritize harmonization of regulations to support development of market products, pricing, and actors.

Harmonization of regulations aims to promote the application of more accommodating derivative taxes, relaxation of derivative actor limitation, and implementation of close-out netting in Indonesia. In addition, Bank Indonesia coordinates with IFEMC as a market association in improving market convention and providing technical guideline for interest rate derivative transactions.

3.2.2 Initiative – Foreign Exchange Market

Development of domestic FX market shows a positive trend despite relatively lower than that of peer countries.

Positive development of Indonesian FX market is reflected from the increasing FX transaction volume. However, the volume remains relatively low compared to that of peer countries such as Malaysia, Thailand, Korea,

Brazil, and India. Ratio of daily FX turnover against trade flows also tends to be stagnant within the range of 1.5 – 1.7%, different from that of peer countries reaching above 3%. Development of foreign exchange market in Indonesia is significantly affected by domestic and global economic condition. Covid-19 pandemic limits export, import, and cross-border investment activities, making market participants limit their FX transactions.

The fundamental condition of the country's economy substantially affects supply and demand structure in domestic foreign exchange market

primarily when the national economy suffers from current account deficit since 2011. Consequently, net demand of foreign currency is inevitable, which mainly comes from corporate needs for payment of imports and external debts. Fortunately, Indonesian financial market is somewhat attractive to invite foreign investors to invest their funds in Indonesia, to increase FX supply to meet domestic FX demand.

Indonesian FX market is dominated by spot transactions accounting for 60%, while derivative transactions only account for 40% of total FX transactions, different from peer countries where derivative transactions account for more than 50%. Therefore, continuous global shocks create various challenges for Bank Indonesia in exchange rate management. BI continues to support efforts to boost derivative transactions in domestic FX market, which result in an increasing trend from time to time.

Shallow foreign exchange market and very few domestic investor base may create high volatility in exchange rate.

Dominated by spot transactions and net demand condition results in fluctuation of rupiah exchange rate, prone to global shocks, and creating an increase in bid-ask spread. For the last decade, rupiah exchange rate is highly influenced by global financial market and domestic foreign exchange needs, causing higher volatility of rupiah exchange rate than that of other countries in the region

Chart 6. Movement of Rupiah Exchange Rate against USD



Source: Reuters

As a response, development of derivative market in the form of DNDF and diversification of currency exposure through LCS framework is considered necessary to reduce volatility of exchange rate. Based on such consideration, in the short and medium term, Bank Indonesia will focus on development of Domestic Non-Deliverable Forward (DNDF) and its derivatives and Local Currency Settlement (LCS), without overlooking development of foreign exchange market in general. DNDF instrument is expected to increase the confidence of businesses and investors in conducting economic activities in Indonesia by providing exchange rate risk management tools. In addition, it is expected that LCS development may reduce dependency of domestic market participants on hard currencies such as USD.

3.2.2.1 Key Deliverable - Domestic Non Deliverable Forward (DNDF)

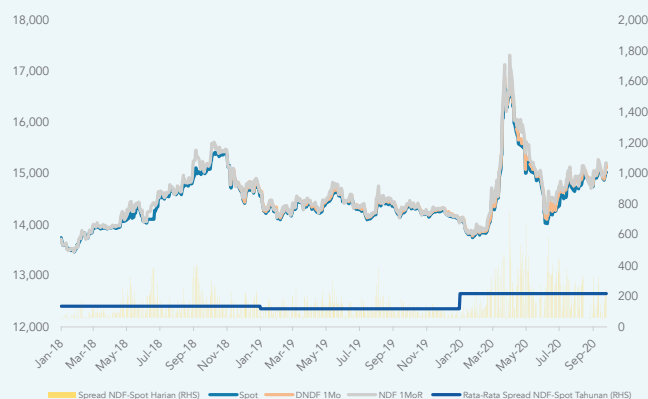
DNDF transaction is a derivative transaction in foreign currency against rupiah in the form of forward transaction with fixing mechanism and settled in rupiah. Since its first introduction at the end of 2018 under BI Regulation No. 20/10/PBI/2018, DNDF transaction has served as a flagship instrument not only for hedging against exchange rate risk, but also as part of Bank

Indonesia's exchange rate management. Implementation of monetary policy through DNDF transaction has successfully maintained rupiah exchange rate in the last few years. DNDF auction by BI has shown a success in minimizing spread between NDF price offshore and spot price in onshore market, resulting in more stable movement of exchange rate.

"... DNDF is a derivative instrument for exchange rate risk hedging in the form of a contract to buy or sell foreign currencies within a certain period with fixing mechanism"

Bank Indonesia has implemented development of DNDF instruments including: i) change of DNDF auction method to fixed-rate; ii) relaxation of DNDF regulation to boost an increase in DNDF supply; iii) increase in DNDF auction frequency; iv) change of DNDF regulation allowing foreign party's rupiah account (vostro account) to become an underlying of DNDF transaction; and v) change of regulation including DNDF to calculation of bank's net open position.

Chart 7. DNDF Development & DNDF Price Development



Source: Reuters

Challenges for DNDF transactions among others are unbalanced supply-demand and limited investor base.

DNDF supply in domestic FX market remains dominated by Bank Indonesia, while non-banks tend to create net-demand for DNDF. Interbank DNDF transactions are currently limited. In addition to unawareness of DNDF instruments, limited investor base also results in different use of standard contract for DNDF transactions, such as ISDA/PIDI or contract that governs the guarantee..

Product development will be directed to achieve more balanced DNDF supply-demand as supply development is very crucial for DNDF market. Some policies adopted to encourage liquidity and development of DNDF supply must be conducted through relaxation of regulations in the form of underlying DNDF transactions and product development on DNDF. Strategic efforts to enrich DNDF tenor to other tenors other than 1-month maturity, as well as non-USD/IDR DNDF are consistently encouraged.

DNDF liquidity is increased by improving pricing through JISDOR enhancement and transparency of quotation information.

As a benchmark rate and fixing rate, JISDOR will be strengthened to reflect the average of benchmark rate and fixing rate, JISDOR will be strengthened to reflect the average of exchange rate movement all day. JISDOR enhancement also constitutes part of Bank Indonesia's efforts to provide a benchmark rate in accordance with international standards for domestic and offshore market participants. Banks must be more active to submit DNDF quotation through information service provider, such as Refinitiv or Bloomberg, and through systematic internaliser and ETP. The more accessible sources of information on DNDF quotation, DNDF pricing will potentially be more efficient and credible.

Flexibility of DNDF transactions is developed through enhancement of DNDF flexibility for market participants to access DNDF transactions. In addition, Bank Indonesia will also encourage the use of standard contract (such as ISDA/PIDI followed by contract that governs the guarantee) by market participants to expand counterparties of interbank

transactions. With more market participants adopting the standard contract for derivative transactions, it is expected that market segmentation will decrease and participant base will increase. Increasing of awareness of non-bank corporations and foreign investors will be consistently conducted through FGD and continuous dissemination.

In terms of hard infrastructure aspect, DNDF transactions will be directed to meet G20 OTC derivative market reforms and global standard. DNDF transactions interlinked to FMI become crucial, where DNDF should be transacted through ETP and cleared through CCP and reported to the trade repository. Efforts to map market segments are conducted to analyse impacts on the planned application of mandatory margining rule on non-centrally cleared DNDF transactions. To allow clearing through CCP, development program is also directed toward standardization of DNDF instruments. In relation to reporting, interlink to BI-ANTASENA and data repository of Bank Indonesia will be directed to support more efficient transaction reporting, as well as the assessment and development of SID (Single Investor Identification) interlink to monitor underlying DNDF transactions.

Similar to interest rate derivative transactions, development of soft infrastructures will be conducted by increasing adoption of standard contract for transactions such as ISDA/PIDI and CSA, harmonization of regulations with the relevant authorities especially on taxation, and encouraging implementation of close-out netting mechanism to increase transaction flexibility in derivative market.

3.2.2.2 Key Deliverable – Local Currency Settlement (LCS)

Bank Indonesia consistently strives to develop foreign exchange market by introducing different innovations.

Innovative efforts in foreign exchange market development deliver Local Currency Settlement (LCS) which has been running since 2018. LCS scheme aims to diversify settlements of bilateral transactions between Indonesia

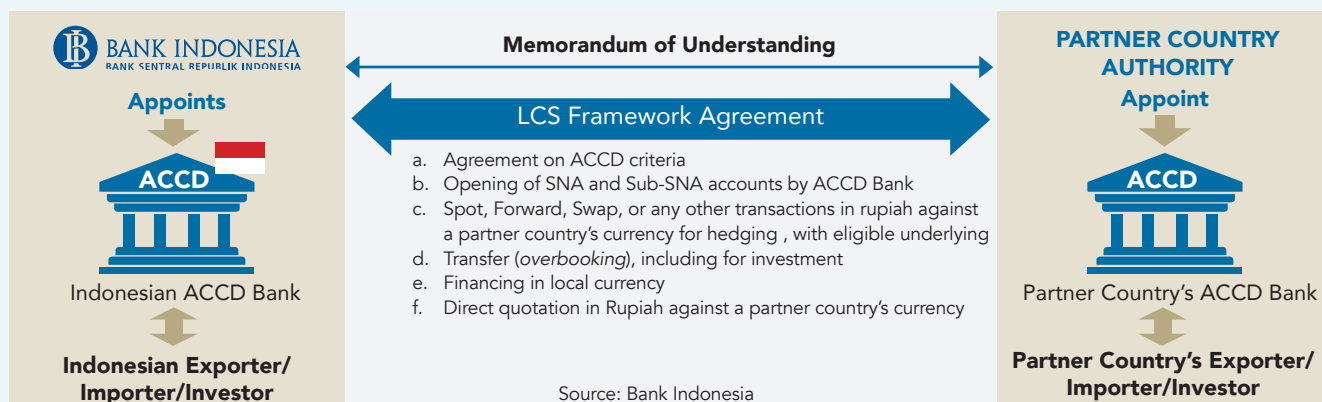
and partner countries by using local currencies. Under LCS scheme, the use of local currencies is widely encouraged in line with the increasing trade and investment volume between Asian countries including Indonesia. The dominant use of the hard currencies for transactions in Indonesia may be minimized in order to reduce global shock impacts, to support Bank Indonesia mandate to maintain rupiah exchange rate stability, and to support the government program in national economic recovery. Indonesia has been implementing LCS with three partner countries, namely Malaysia and Thailand since the end of 2018, and Japan since September 2020. LCS transactions are facilitated by banks appointed to facilitate the use of local currencies also known as ACCDs (Appointed Cross Currency Dealers). BI Regulation No.22/12/PBI/2020 as the last adjusted regulation has provided flexibility in LCS development in the future, including to facilitate expansion of the number of partner countries and modality strengthening.

In general, LCS transactions show a positive trend. It is reflected from the continuously increasing volume and number of participants (Chart 8 and Chart 9). Quality of price quotation produced by LCS mechanism is relatively more efficient and more competitive than the cross rate price quotation, which may potentially be developed. Unfortunately, LCS transaction volume is lower than 1% of the total trade with partner countries. Limited instruments transacted under LCS scheme and scope of underlying become the subject of continuous evaluation.

LCS development will be directed to the development of product variations, expansion of eligible underlying, and expansion of partner countries. LCS development is conducted by expansion of eligible instruments under LCS and expansion of eligible underlying, including current account transactions, direct investment, and QR cross-border transactions. Instrument variations will be consistently encouraged to wider expansion with DNDF as one of the main candidates. Expansion of cooperation with partner countries will be constantly conducted, including China and Philippines. The number of countries partnering with Indonesia under LCS scheme will likely to increase because many countries have close economic relationship with Indonesia.

To increase LCS transactions, the participant aspect will be consistently strengthened for ACCD banks as well as for corporation and retail customers. Currently, there are around 1,300 customers in Indonesia-Malaysia LCS and 450 customers in Indonesia-Thailand LCS. An effort to develop ACCD banks includes adjustment to ACCD bank scheme from one-to-one relationship to one-to-many relationship. The number of ACCD banks in the existing LCS partner countries will be increased to add more market participant base that can access this framework. Meanwhile, expansion of participants in general will be conducted through education and dissemination of LCS transaction scheme to corporate customers, especially corporates with relatively big business scale, as well as retail customers.

Figure 9. Local Currency Settlement (LCS) Framework



Efficient price establishment is LCS key attractiveness that stimulates market participants to shift from the hard currencies to local currencies as trade settlements.

Development of more competitive direct quotation price between MYR/IDR, THB/IDR or JPY/IDR with low spread than cross-rate will help attract customers to use this scheme, resulting in a more liquid LCS transaction. Interbank LCS transaction liquidity will be constantly increased as part of an effort to lowering bid-ask spread for local currency prices. Use of hard infrastructures in submitting price quotation will also be part of an effort to encourage liquidity by direct quotation through ETP, allowing access by broader investor base.

Bank Indonesia also develop hard infrastructures to support LCS transactions, among others through the use of ETP to increase transaction liquidity, transparency, and efficiency. For settlements, implementation of multicurrency RTGS will help accelerate and increase efficiency of local currency transactions. Another support is given by utilizing digital technology through integration of LCS transactions with Quick Response Indonesia Standard (QRIS) and Open API. Digital technology may also be utilized for LCS transactions online monitoring to gather more granular data in order to increase efficiency and effectiveness of surveillance and supporting appropriate policy formulation.

Soft infrastructures are also developed through coordination with the relevant authority as an effort to support national economic recovery. Transaction facilitation through tax and customs incentives in LCS transactions as mentioned in Government Regulation No.23 / 2020 will help to increase LCS attractiveness to be used

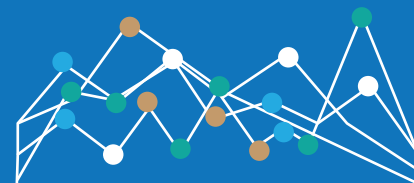
by market participants. LCS scheme will also be improved through periodic review together with partner countries including several aspects, such as transaction threshold and limit, types of financial instruments, number of banks facilitating LCS transactions, eligible underlying of LCS, and other mechanisms.

FMI strengthening initiative as a financial market toll road may provide facilitation and flexibility for money market participants to conduct transactions efficiently, safely, and integrated. Development of various money market instruments is consistently supported to make faster and more efficient vehicles of monetary policy transmission to achieve the key objective to maintain price stability. Availability of FMI as the foundation for money market transactions will increase smooth monetary policy transmission for monetary stability and financial system stability, which will bring positive impacts on investors and business's confidence in conducting money market transactions. To facilitate money market participants, it is important to develop initiatives in economic development financing and hedging schemes to stimulate active involvement of market participants to support achievement of a modern and advanced money market.

3.3 Key Initiative 3: Economic Financing & Risk Management

The third key initiative is to develop economic financing and risk management as an effort to accomplish vision 1 and vision 2 of BPPU 2025. A modern and advanced money market is realized to create an attractive and accessible money market in order to facilitate various financing sources for national development.

MONEY MARKET



Money market has shown a positive development after the crises in 1998 and 2008. It is reflected from the increasing transaction volume and participation of money market participants. Money market development is considered important not only for authorities but also for market participants.

MONEY MARKET FUNCTIONS

LIQUIDITY
MANAGEMENT

SHORT-TERM
FINANCING SOURCES

INTEREST RATE AND
EXCHANGE RATE HEDGING

RUPIAH MONEY MARKET

REPO

Rp1.2
Trillion/day

INTERBANK CALL
MONEY MARKET

Rp15.1
Trillion/day

IRS&OIS

Rp0.8
Trillion/day

POSITION OF SHORT-TERM DEBT SECURITIES

Rp19.4
Trillion

NCD

Rp0.8
Trillion

Commercial
Paper

FOREIGN EXCHANGE MARKET

DOMESTIC FOREIGN
EXCHANGE INTERBANK
CALL MONEY MARKET

USD 320
million/day

OFFSHORE FOREIGN
EXCHANGE INTERBANK
CALL MONEY MARKET

USD 2
billion/day

FOREIGN EXCHANGE MARKET



DAILY FOREIGN EXCHANGE TRANSACTION

SPOT

USD 3.8
billion/day

SWAP

USD 1.6
billion/day

FORWARD

USD 327
million/day

OPTION

USD 67
million/day

CCS

USD 87
million/day

CSO

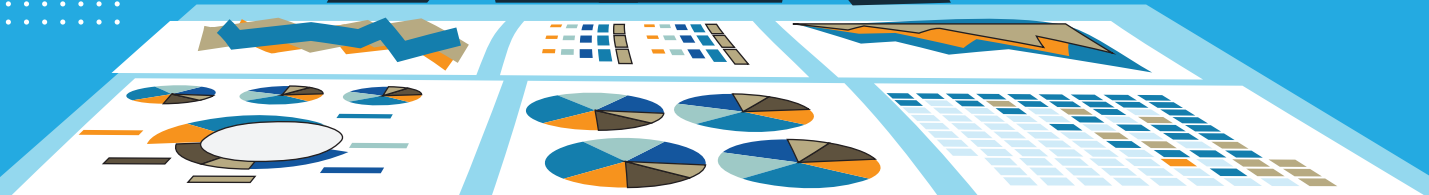
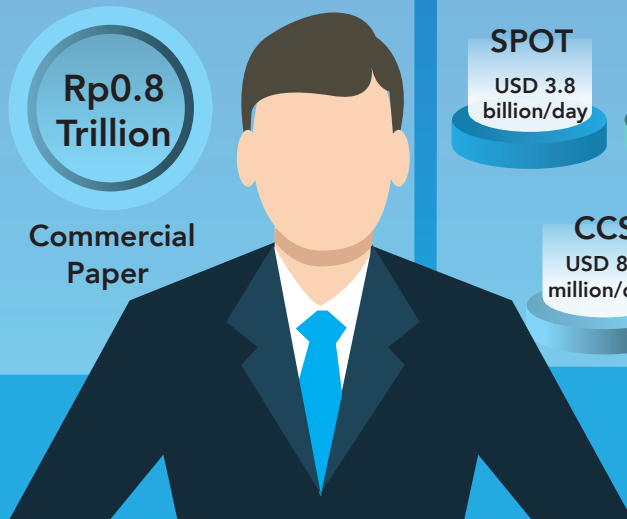
USD 57
million/day

DNDF

USD 221
million/day

Note: Highest Data from January-October 2020

Source: Bank Indonesia



“Development of economic financing and risk management instruments is necessary to create conducive money market environment to achieve a desired state of modern and advanced money market”

Therefore, it is indeed important to develop various risk management instrument alternatives to provide hedging for money market activities. This effort is conducted through four key deliverables:

3.3.1 Key Deliverable – Long-Term Hedging Instruments

In general, economic development financing has long maturity which is exposed to market risks, namely exchange rate risk and interest rate risk. Appropriate long-term hedging instruments may mitigate these risks so that potential losses can easily be anticipated. Several long-term hedging instruments are currently available in domestic money market, among others are Interest Rate Swap, Cross Currency Swap, and Call Spread Option.

However, availability of long-term hedging instruments is still low, limited and costly. Interest Rate Swap (IRS), as one of commonly transacted contracts for long-term interest rate derivative transactions, has average daily turnover of Rp34 billion or only 8% of total IRS transactions in the domestic market, where USD IRS is still dominant. The volume is far different from the global condition where IRS has a big market niche of more than 50% of total OTC single currency interest rate¹⁵.

Other long-term hedging instruments in foreign currencies are cross currency swap (CCS) and call spread option (CSO) with similar depiction. CCS is a fully hedged instrument

because the two parties thereto exchange interest payments in different currencies with or without exchange of principal within a defined period, which makes it more complete hedging instruments. CCS composition is dominated by tenors more than 1 year accounting for 72% of total CCS transactions, despite low turnover with daily average of \$50 million in 2020. For CSO development, despite the very competitive cost of CSO, its daily turnover has not met the hedging requirement of market participants as it only reaches around \$11 million per day with the commonest tenor of more than two years.

Pricing factors and financial market infrastructures is an important contributor to the development of long-term hedging instruments. Non-credible benchmark rates and lack of a credible long-term yield curve provide negative implications for inefficient pricing, lack of participants, and undeveloped financial market infrastructures, which are the major factors influencing liquidity of long-term hedging instruments. Such problems have contributed to the inefficiency and low attractiveness of the instrument. Therefore, strategies for development of long-term hedging instruments will focus on addressing the problems.

Strengthening of benchmark rates for IRS instruments will focus on development of JIBOR credibility through periodic evaluation of contributor banks and pricing guideline so that submitted quotations reflect interest rate movement in the market. Benchmark rates on CCS and other derivative instruments will be mainly strengthened by reforming LIBOR as the pricing factor for CCS and other derivative instruments, in line with the global benchmark reform. Availability of liquid and transparent long-term yield curve as a pricing reference for hedging instruments is a determining pricing factor. With the above strategy, it is expected that pricing of long-term hedging instruments may create more efficient price in the market.

15. BIS Triennial Survey foreign exchange and OTC derivatives trading.

The number of CCS and CSO long-term hedging customers is expected to increase through harmonization of regulations for NBFI and SOE with exposure to foreign currencies by allowing them to hedge. NBFI and SOE may not optimally execute derivative transactions for hedging due to relatively limited FX exposure. Expansion of participant base through education on CCS and other derivative instruments and technical assistance for customers, including banks and non-bank financial institutions, must be further encouraged, which will also increase hedging literacy.

Infrastructures are developed by encouraging IRS, CCS, and CSO transactions through Systematic Internaliser and ETP. ETP featuring straight through processing will stimulate efficient financial transactions, increase more accurate granular data quality, and better risk management for market participants. Development of SI and ETP in money market instruments will also increase liquidity of transaction and information speed as well as continuous update of price information.

It is expected that with transparent pricing and development of reliable system for long-term hedging instruments, participation in long-term financing will increase in line with increasing accessibility to risk management tools.

3.3.2 Key Deliverable - Sustainable dan Green Financing (SGF)

Global trend of eco-friendly industries requires Indonesian financial market to transform to green and sustainable financing. The National Development Planning Agency (Bappenas) has initiated policy formulation together with the Ministry of Finance to align climate change policy with the work plans and budget of Ministries and Institutions (M/I). Formulation of green financing policies are marked with issuance of policies, regulations, road maps, and

strategies in favour of green financing and green industry.

Bank Indonesia, as a monetary authority, actively supports SGF through development of green money market within the framework of cooperation and synergy among authorities. SGF will be developed through development of market products, pricing, and participants as well as coordination and communication through cooperation between authorities under a financial market development road map aligned with the Sustainable Finance Road Map Phase II issued by OJK.

SGF is developed through classification, coordination, and capacity building through FK-PPPK and development of green commercial papers. Financing will be classified by considering conformity to an international "green" taxonomy to avoid market fragmentation due to different terminologies. Coordination, harmonization, and involvement of several authorities take on a great importance of Sustainable dan Green Financing development. One of relevant suggestions to the SGF coordination plan is to establish a Task Force to promote sustainable financing development to achieve Sustainable Development Goals (SDGs).

In coordination aspect, task force establishment may facilitate strategy synchronization and alignment among authorities for Sustainable Development Goals. This step is needed to ensure alignment of policies and strategies to allow acceleration of joint objective achievement. In addition, from participant perspective, continuous capacity building must be strengthened to support the latest knowledge and shared understanding among money market participants.

Bank Indonesia continuously supports sustainable and green financing through relaxation of Loan to Value (LTV) ratio policy. It is expected that this policy may promote the use of green property and vehicles, and increase bank's green financing while considering the

prudential principle¹⁶. In addition, Bank Indonesia has also been an investor for the framework by allocating investments in sustainable and green securities in line with Sustainable and Responsible Investment (SRI) guidelines.

Implementation of SGF in Indonesia has a strategic role in promoting green and sustainable investments. Going forward, key deliverables of SGF are expected to serve as an alternative financing source which may become a long-term solution to availability of sustainable financing sources. Such availability shows development transformation potentials from several relevant sectors. An instrumental perspective of a modern and sustainable concept through the investment may change economic paradigm and produce a massive change for the greater common good.

3.3.3 Key Deliverable – Retail Investor

Retail investors may be enhanced through expansion of investor base and instrument development. Domestic investor base is dominated by institutional investors, and therefore, a key deliverable is needed to encourage retail investors to invest in the financial market. The key challenge to add retail investor base is the lack of understanding of investments in the financial market. Many people tend to deposit their funds in banks. Development of varied instruments is required to provide investment options by adjusting investor risk profile.

The current condition shows that retail instruments in the capital market and debt securities market tend to be more varied than those in the money market. Stock and mutual funds are available as retail investment products allowing retail investors to invest by adjusting their risk profile efficiently. In the bond market, retail sovereign bonds are also available at an affordable investment cost and relatively easy investment process.

Bank Indonesia and relevant authorities consistently collaborate to develop literacy and education on financial market for investors to achieve a sufficiently financial literate community. Expansion and increase in retail instrument base will be conducted by providing an integrated financial literacy through FK-PPPK. All dissemination and education activities will utilize digital financial literacy technology. Therefore, expansion and increase in investor base is conducted not only within the country but also reaching out to potential domestic investors residing overseas (diaspora). Financial literacy activities will also utilize the roles of learning institutions and alumni associations to accelerate financial literacy among academia.

Expansion in retail investor base for money market instruments contribute to financial market deepening.

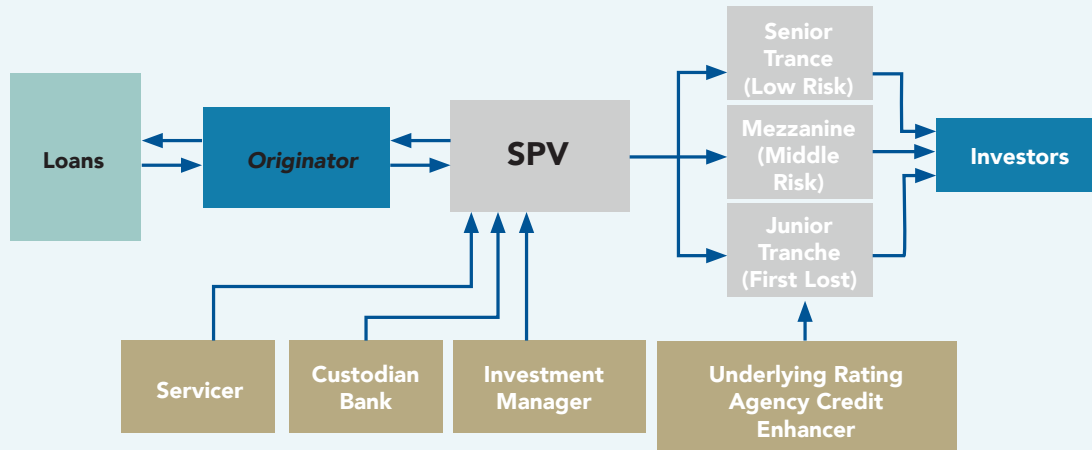
The increasing number of investors may balance foreign capital inflow to the financial market in Indonesia. Accordingly, the financial market in general will not be vulnerable to external turbulences. The wider and expanded retail investors, especially in the money market, play a strategic role in financial market development in general. The increasing liquid capital flow and many transactions in the money market will be able to contribute to the availability of alternative economic financing sources.

3.3.4 Key Deliverable – Securitization

In addition to banks, securitization is one of financing alternatives through financial asset conversion from cash flow to tradeable securities. Hu (2011) explained that asset securitization is an innovative way for corporations to access financing through the financial market by selling cash flow of their assets. Under Presidential Regulation No. 19 of 2005, asset securitization is defined as transformation of non-liquid assets to liquid assets by purchasing financial assets from the original creditor.

¹⁶ Bank Indonesia Regulation Number 21/13/PBI/2019 on Amendment to Bank Indonesia Regulation Number 20/8/PBI/2018 on Loan to Value Ratio for Property Credit, Financing to Value Ratio for Property Financing, and Advance Payment for Motorized Vehicle Credit or Financing.

Figure 10. Asset Securitization Mechanism



Source: Santoso, Soekro, Darmansyah, Sihalo (2014)

In securitization process, 3 main supporting institutions are involved, namely originator, issuer/SPV, and investor.

Originator is an owner of financial asset transferring such asset to a Special Purpose Vehicle (SPV), which then functions to issue securities with collateral in the form of claim to the financial asset transferred by the originator. These securities are then sold in the capital market and offered to investors. Transfer of assets to an investor must meet the criteria of true sale which, under the law, is evidenced by an opinion of a legal consultant registered with OJK.

Bank Indonesia and the relevant authorities will continuously coordinate, collaborate, and communicate in asset securitization development. Authority in the financial market plays a vital role in maintaining governance of collateralized securities issuance and ensuring fulfilment of market conduct and consumer protection. Regulation by the authority aims not only to develop securitization market but also to maintain integrity of market participants and confidence of investors in securitization. It is expected that development of asset securitization happens not only in the primary market but also in the secondary market. With standard transaction structure, fixed interest rates,

and transparency of information on underlying asset quality, it is expected that securitization market credibility may increase. With such ideal condition, the roles of associations and participants in asset securitization development may constantly increase.

Asset securitization may be conducted on short-term money market instruments. It may be used to optimize financing sources for corporations and potential MSME. Financing may be in the form of short-term financing for working capital or bridging financing. Issuance of securities with less than 1-year tenors will not add to corporate liability ratio in the event of true sale and part of risk management due to transfer of credit risk.

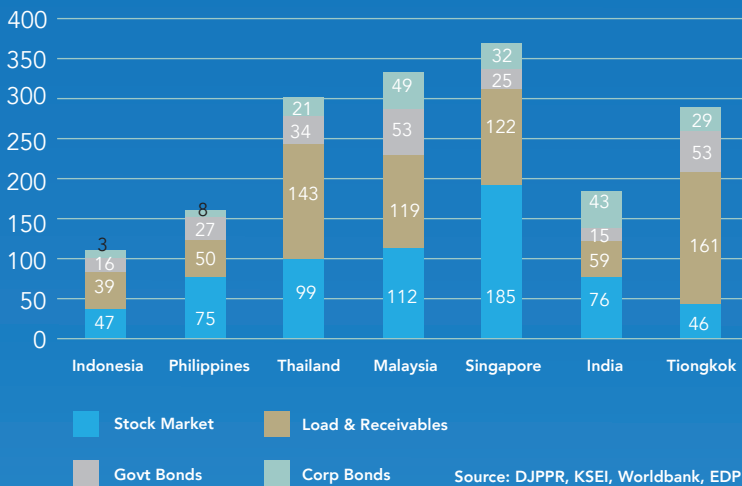
Short term asset securitization is an alternative economic financing source. Asset securitization may be conducted to access financing without adding debts through leverage ratio. It may serve as a solution for an issuer with covenant ratio difficulty. Meanwhile, for banks as issuers, securitization is a solution to reduce credit exposure to avoid Legal Lending Limit (LLL), in order to give space for commercial banks to procure financing for the next project. For investors, investment in asset securitization

Financial Market

Financing Source



Financial Market Role



Investment requirement
from 2020-2024



Total investment requirement
for infrastructure
from 2020-2024

Source: RPJMN 2020 - 2024

Initiatives on development of economic financing sources & risk management are required

Long-Term
Hedging
Instrument

Sustainable &
Green Financing

Retail Investor

Securitization



with underlying money market instruments gives income certainty in the short term and payment certainty because it is based on underlying cash flow of financial asset.

Development of short-term asset securitization supports financial market development as a national development financing source. Bank Indonesia as a money market authority is committed to promote a liquid and efficient securitization market with different underlying assets. Development aims to create efficient supporting institutions and infrastructures. If securitization market ecosystem is properly built, short-term asset securitization may add variations of money market instruments which may be used by issuers for financing and by investors as means of investment.

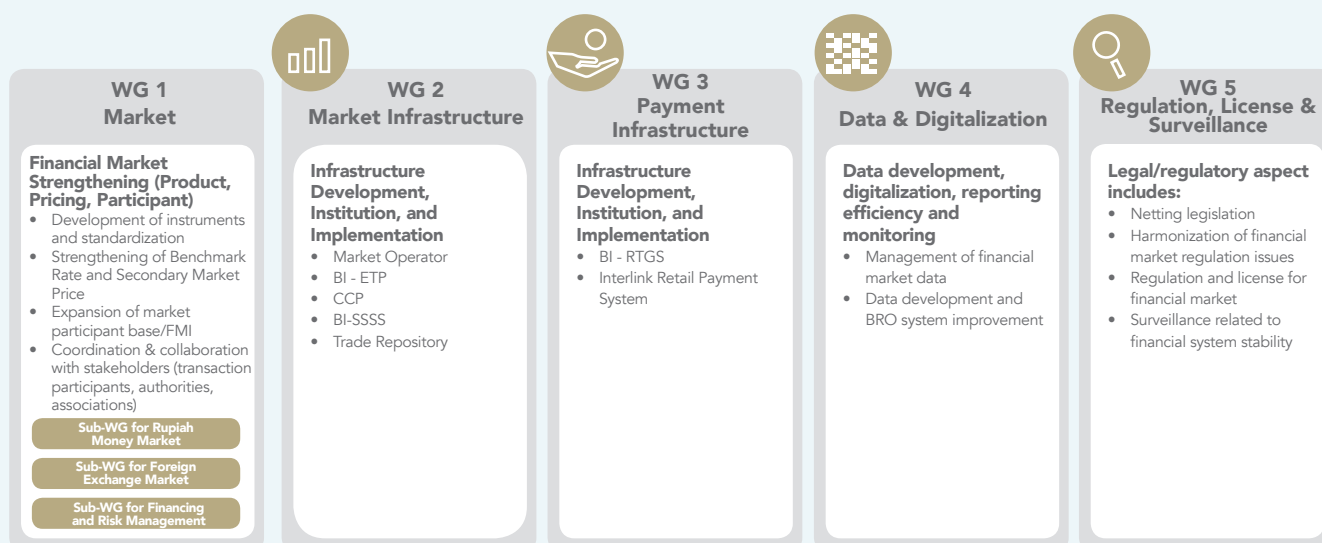
To implement the key initiatives as explained in sections 3.1, 3.2, and 3.3, it is necessary to follow up by preparing a clear work plan and timetable target to achieve the desired state of a modern and advanced money market.

3.4 Work Plan

Five Working Groups (WG) have been established to implement the 3 initiatives and 14 key deliverables in the Blueprint for Money Market Development 2025. The three initiatives correlate as an integral unity to navigate the direction of developing a modern and advanced money market based on FMI enhancement. The five WG will collaborate by prioritizing coordination among the relevant authorities, institutions and industries/market participants. The roles of each WG are outlined below:

Working Group 1: Market is directed to develop money market by strengthening products, pricing, participants and coordination and collaboration with other stakeholders. By 2022, the Market WG is targeted to realize expansion of underlying repo to short-term securities, strengthening of IndONIA and JIBOR, improvement of OIS market convention (including pricing, transactions, settlements), increase in liquidity of DNDF transactions, expansion of LCS framework in terms of scope and partner countries, increase in liquidity of long-term hedging i.e. IRS, CCS and CSO, and development of securitization and retail investor

Figure 10. Working Group (WG) Blueprint for Money Market Development 2025



Source: Bank Indonesia






base through coordination within FK-PPPK. Workplan in 2023-2025 of the Market WG is directed to implementation of tri-party repo, development of repo variations: securities lending & borrowing, utilization of transaction-based benchmark, implementation of OIS transactions, IRS and DNDF in ETP and CCP, LCS implementation through ETP and settlement through BI-RTGS (Generation. III), development of green financing, and increase in securitization issuers and retail investor base (i.a. Diaspora).

Working Group 2: Market Infrastructure targets to implement multimatching system, modernization of BI-SSSS (Generation. III) and BI-ETP (Gen. III), development of infrastructures, institution and implementation of CCP and Trade Repository. Some work programs of Market Infrastructure WG, such as implementation of multimatching system, BI-ETP modernization, preparation of BI-SSSS conceptual design, establishment of CCP, and issuance of trade repository regulation, are targeted to be completed no later than 2022. In the next phase, establishment of a trade repository institution and implementation of BI-SSSS (Generation. III) should be completed by 2025.

Working Group 3: Payment Infrastructure targets BI-RTGS modernization and payment system infrastructure interlink to the financial market. By 2022, Payment Infrastructure WG will finalize the conceptual design and business requirement design of BI-RTGS (Gen. III) allowing BI-RTGS modernization to complete by 2025. Similarly, the payment system infrastructure interlink to the financial market is targeted to complete by 2025.

Working Group 4: Data and Digitalization will focus on development of granular, real-time, and secure data and digitalization. It will be gradually implemented through several key deliverables. By 2022, Data and Digitalization WG will develop reporting electronification and management of treasury certification data, and conceptual design of granular data provision for market supervision (suptech). From 2023-2025, the expected output is granular data integration in BI-ETP, CCP, TR, and data repository of Bank Indonesia, and SID implementation to monitor transactions in the money market. The use of SID in reporting of the financial market transactions will enhance supervision aspect and policy formulation, for example, monitoring application of threshold for FX transaction. Data

Figure 12. Road Map & Timetable of BPPU

Key Deliverables		2021	2022	2023-2025
WG 1	 Market	Strengthening of IndONIA and JIBOR	Expansion of Underlying Repo, Commercial Paper, NCD	Implementation of Tri-party Repo
		Strengthening of DNDF Liquidity	Improvement of OIS Market Convention: Pricing, Transaction, Settlement	Transaction-Based Benchmark Rate (OIS)
		Expansion of LCS Scope and Partner Countries	Product Standardization for Mandatory Transaction and Clearing	LCS via ETP and BI-RTGS (Gen III)
		Development of Securitization and Investor Base via FK-PPPK Coordination	Improvement of Long-Term Hedging Liquidity: CCS, CSO, IRS	Money Market-Based Green Financing Instrument
WG 2	 Market Infrastructure	Implementation of Multimatching ETP	Implementation of CCP SBNT	Implementation of Trade Repository
		Conceptual Design of BI-SSSS (Gen III)	Implementation of BI-ETP (Gen III)	Implementation of BI-SSSS (Gen III)
		Conceptual Design of Trade Repository		
WG 3	 Payment Infrastructure	Design of BI-RTGS	Functional and Design Specification of BI-RTGS	Implementation of BI-RTGS (Gen III) Payment System Infrastructures Interlink to Financial Market
WG 4	 Data and Digitalization	Electronification of Reporting and Data Management	Conceptual Design of Granular Data for Supervision (Suptech)	Granular Data Integration: ETP, TR CCP, BI Repository SID Implementation for transaction monitoring
WG 5	 Regulation, License, and Surveillance	Harmonization of Financial Market Regulations	Implementation of Consumer Protection Framework	Mandatory Transaction via ETP and Clearing via CCP
		Implementation of FMI and Market Operator Supervisory Framework		Certainty of Close Out Netting Framework

Source: Bank Indonesia

development, digitalization, efficiency of data capturing and monitoring will support BI's policy formulation as a monetary and financial market authority.

Working Group 5: Regulation, License, and Surveillance

is established to achieve an agile, industry-friendly and innovative regulatory framework compliant with international codes. Various efforts and initiatives by Regulation, License, and Surveillance WG until 2022 including harmonization of financial market regulations, establishment of supervisory framework for industrial financial market and market operators, and implementation of consumer protection framework in the financial market. Moving forward, in 2025, regulations will be issued on mandatory transactions through ETP and clearing through CCP and ensure availability of close out netting framework.

Based on the described implementation target in 2021-2025, BPPU 2025 implementation will present a money market development milestone in Indonesia in a short term (2021-2022) and medium term (2022-2025). The milestone aims to guide money market development to make it on-target according to the five visions. BPPU 2025 will navigate the transformation process toward a modern and advanced money market.

3.5 Conclusion

Money market has a strategic role in supporting the vision of a Developed Indonesia. Money market plays a central role in monetary policy transmission to support monetary stability and financial system stability. Money

market also plays an important role as a financing source catalyst to meet national financing requirements. However, insufficient domestic money market depth results in less efficient money market financing flow. Therefore, acceleration of money market development is required to enhance the potentials of financing source to support high and sustainable economic growth.

Money market development must also focus on responding to various global challenges. The challenges include digitalization trend and global financial system reform emphasizing on strengthening financial market infrastructures. It is necessary to create a financial market ecosystem compliant with international standards for competitiveness purpose.

To achieve the ideal state, Bank Indonesia issues the Blueprint for Money Market Development (BPPU) 2025 as a money market development guideline in the future. BPPU 2025 aims to realize a modern and advanced money market which is reflected on a deep, inclusive, and contributive money market. With such condition, it is expected that domestic money market will support national economic financing, effectiveness of monetary policy transmission, and financial system stability.

“BPPU 2025 manifests a real contribution of Bank Indonesia to transform domestic money market to become a modern and advanced money market.”



GLOSSARY

Terminology	Definition
Algorithmic Trading	Automatic trade by computer programmed to take certain actions as a response to market data.
Arbitrase	Simultaneous buying and selling of the same item in two markets or more expecting to gain profit from the price difference.
Artificial Intelligence	Analysis and technique based on logic to interpret events, support and automate decision making and actions.
Asset Securitization	Issuance of securities by an issuer with asset collateral or issuer with sharia asset collateral from an originator followed by payment from selling collateralized securities to an investor or payment from an issuer's fund.
Banker's Acceptance	Bank draft marked 'accepted' and tradeable in the money market as one of short-term funding sources.
Benchmark Rate	Interest rate reference used to determine other interest rates.
BI-ETP	Infrastructure used as a means of transactions electronically.
BI-RTGS	Electronic fund transfer system whose settlement may be conducted real-time.
BI-SSSS	Means of transaction with Bank Indonesia (Open Market Operation, BI funding facility to Banks and commercial bond transaction for and on behalf of the Government) including their administration and securities administration electronically and directly connected with BI-SSSS participants (online) integrated to Bank Indonesia – Real-Time Gross Settlement (Sistem BI-RTGS).
BIS Triennial Survey	Survey by Bank of International Settlement to some respondent countries related to information on the structure of global foreign exchange and OTC derivatives markets.
Bond	Debt statement from a bond issuer to a bond holder and a covenant to repay the principal and interest coupon on the payment due date.
Bridging Financing	Interim financing by a bank or investor before a company obtains more certain financing in a credit extension or project funding phase.
Call Money	Placement or borrowing-lending of interbank short-term fund.
Call Spread Option (CSO)	Combination of buying call option and selling call option simultaneously under a transaction contract at a different strike price and in the same nominal amount.
Central Counterparty (CCP)	Entity which places itself between partners for a contract traded in one or more financial markets, which becomes a buyer for each seller and a seller for each buyer, thereby ensuring the performance of an open contract.
Central Securities Depositories (CSD)	Financial organization specializing in holding securities in a certain form, usually government debt securities.
Central Counterparty (CCP)	Institution which places itself between parties to execute derivative transactions, acting as a buyer for a seller and a seller for a buyer.
Clearing	Exchange of paper or Electronic Financial Data between clearing participants in the name of the participant or in the name of the customer's participant whose calculation is completed in a certain period.
Close-Out Netting	Agreement mechanism allowing unilateral termination of a financial transaction in the event of default.
Corporate Bond	Bond issued by a certain entity/business entity.

Terminology	Definition
Commercial Paper	Securities issued by a non-bank corporation in the form of promissory note with a term of 1 (one) year registered with Bank Indonesia.
Cross Border Transaction	Cross-border transaction during an exchange process involving goods, person, information, or money.
Cross Currency Swap (CCS)	Type of derivative transaction where periodic cash flow exchange is made between 2 (two) parties for a certain period in the future in two different currencies involving principal and interest rate.
Derivatif Instrument	Contract or agreement whose value or profit opportunity relates to the performance of another asset.
Domestic Non Deliverable Forward (DNDF)	Derivative transaction in foreign currency against rupiah in the form of forward transaction with fixing mechanism conducted in domestic market in rupiah.
Electronic Trading Platform (ETP)	Infrastructure used as a means of transaction executed electronically.
Financial Development Index	Index issued by the World Economic Forum which measures and analyses factors in financial system development among different economies.
Financial Technology (Fintech)	Innovation in financial service industry utilizing technology.
Foreign Direct Investment	Direct foreign investment where an investor within the scope of one country is interested in the business within the scope of another country.
<i>Forum Pembiayaan Pembangunan Melalui Pasar Keuangan (FK-PPPK)</i>	Coordination forum among the Ministry of Finance, Bank Indonesia, and Financial Services Authority for development and deepening of financial market in Indonesia.
Forward	Selling or buying foreign currencies against rupiah in which fund is transferred within more than 2 (two) working days after a transaction date.
Global Master Repo Agreement (GMRA)	Standard repo transaction agreement issued by the International Capital Market Association.
Gross Domestic Product (GDP)	Added value produced by all business units in a certain country or the total final value of goods and services produced by all economic units.
Hedging	Strategy created to reduce unexpected business risk occurrence besides possible profit gain from the investment.
Indonesia Overnight Index Average (IndONIA)	Benchmark rate calculated from volume-weighted average of all lending-borrowing in rupiah without interbank collateral which is reported to Bank Indonesia.
Interest Rate Swap (IRS)	Contract/agreement between two parties at a fixed rate and floating rate in the same currency within a certain period.
Jakarta Interbank Offered Rate (JIBOR)	Average indicative interest rate on credit without collateral which is offered and aimed for transaction by one contributor bank to another to lend rupiah for a certain period in Indonesia.
Jakarta Interbank Spot Dollar Rate (JISDOR)	Representation of spot price of US dollar against rupiah from an interbank transaction in the domestic market, including domestic bank transaction with an offshore bank.



Terminology	Definition
Leverage Ratio	Financial ratio which measures the ability of a company to pay its long-term liabilities.
Loan to Value Ratio	Ratio between credit/financing value which may be extended by a conventional or sharia commercial bank to collateral value in the form of property during credit/financing extension based on the latest assessment result.
Local Currency Settlements (LCS)	Settlement of transaction between two countries executed within one of the countries by using the country's currency.
Market Conduct	Conduct of financial service provider in designing, preparing, and submitting information, offering, drafting an agreement, on a product and/or service and dispute resolution and complaint handling.
Mutual Funds	Medium used to gather funds from an investor to be invested in securities portfolio by an investment manager.
Negotiable Certificate of Deposit (NCD)	Saving in the form of deposit with negotiable certificate of deposit.
Originator	Party transferring a financial asset or sharia asset to an issuer.
Transaksi Derivatif OTC	Bilateral derivative contract (involving two parties) performed outside of exchange or without any broker (direct transaction between two parties).
Over-The-Counter (OTC)	Financial instrument transaction outside of exchange.
Overnight Index Swap (OIS)	Contract/agreement to trade interest rate flow in the same currency with daily compounding.
Payment System	System related to transfer of a certain value of money from one party to another.
Post Trade	Process conducted after execution of a financial transaction.
Pre-Trade	Process conducted before execution of a financial transaction.
Rasio Financing To Value	Ratio between credit/financing value which may be extended by a conventional or sharia commercial bank to collateral value in the form of property during credit/financing extension based on the latest assessment result.
Rasio Loan To Value (LTV)	Ratio between credit/financing value which may be extended by a conventional or sharia commercial bank to collateral value in the form of property during credit/financing extension based on the latest assessment result.
Rencana Pembangunan Jangka Menengah Nasional (RPJMN)	National development strategy, general policy, strategic priority project, program of Ministries/ Institutions and cross-Ministries/Institutions, regional and cross-regional development direction, development priority, and macroeconomic framework covering an overall economic outlook including fiscal policy direction in a work plan in the form of regulatory framework and indicative funding framework.
Repo (Repurchase Agreement)	Contract for selling or buying securities with a repurchase or resale covenant in a time and at a price determined at the beginning of a transaction.
Securities Settlement System (SSS)	Entity allowing securities to be transferred and settled through a journal entry under a previously agreed rule. The system also allows transfer of securities with or without payment process.
Sertification of Treasury	Systematic and objective grant of treasury certificate through a competency test referring to the national work competency standard in Indonesia, international standard, and/or special standard.

Terminology	Definition
Settlement	Final process of transaction where delivery is conducted by a seller and payment is conducted by a buyer.
Single Investor Identification (SID)	Single and special code issued by KSEI used by customer, investor, and/or another party under the applicable regulation for activities related to securities transaction and/or using other services provided by KSEI or any other party with the approval of KSEI or under the applicable regulation.
Supervisory Technology	Use of innovative technology by authority to support supervision.
Sustainable and Green Financing	Financial investment flowing to sustainable development projects and initiatives, environmental product, and policy promoting sustainable economic development.
Sustainable and Responsible Investment	Investment considering sustainable development priority.
Sustainable and Responsible Investment (SRI) Guidelines	Guideline for central banks wishing to adopt sustainable and responsible investment practices.
Sustainable Development Goals	Global action plan agreed by world leaders, including Indonesia, to end poverty, reduce gap, and protect the environment.
Swap	Agreement on currency exchange between two parties, consisting of exchange of payment of principal and interest on loan in one currency for payment of principal and interest on loan in the same value in another currency.
Trade Repository (TR)	Entity that centrally collects and maintains the records of derivatives.
Trading Venue	Medium where a third party sells and buys.
Underlying Asset	Asset put up as collateral or underlying financial instrument.
Yield Curve	Various level of yield of certain bonds with different maturity.



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