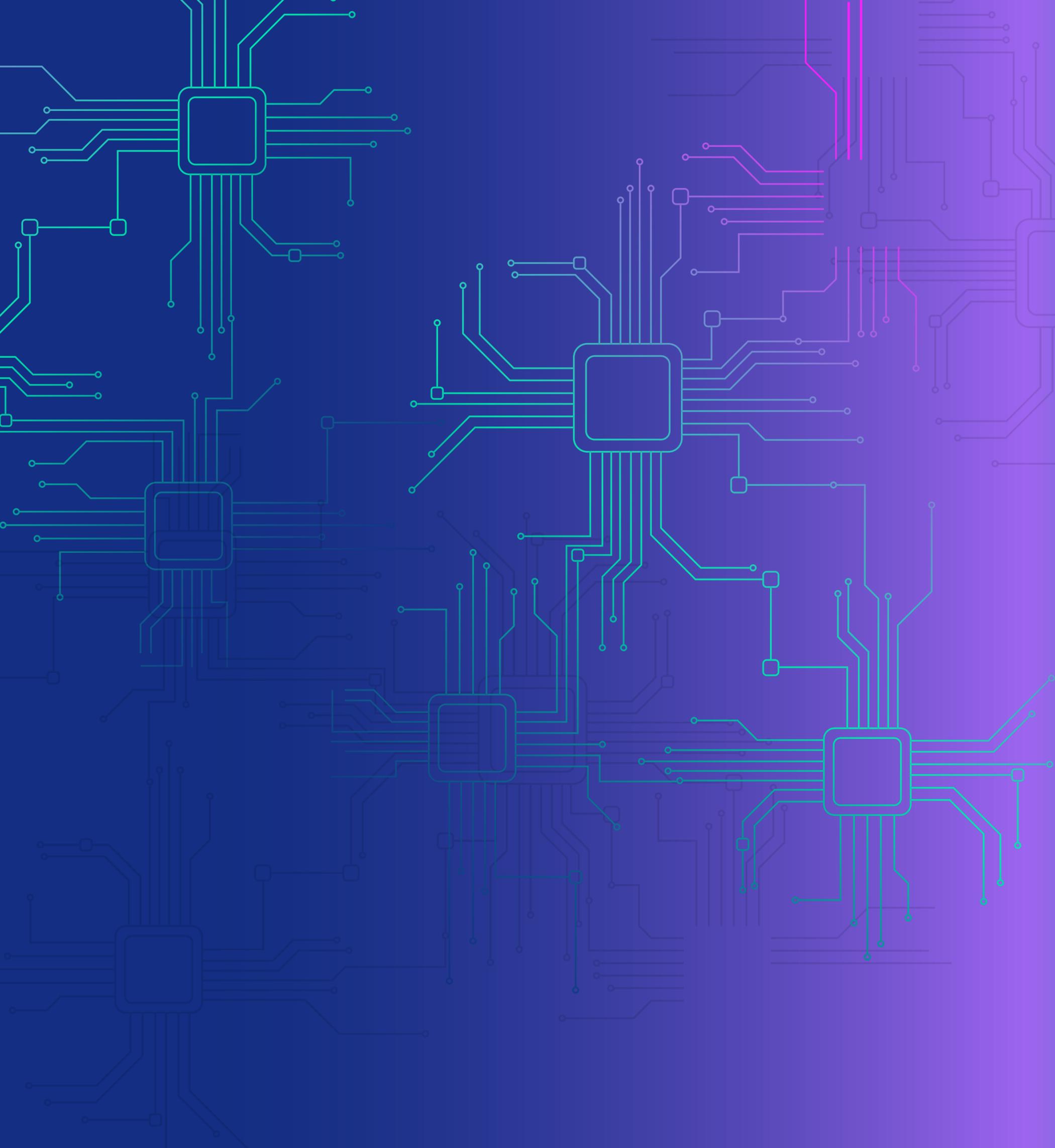


MONEY MARKET AND FOREIGN EXCHANGE MARKET DEVELOPMENT

BLUEPRINT 2030

Accelerating Money Market and Foreign Exchange
Market Deepening **for an Advanced Indonesia**





MONEY MARKET AND FOREIGN EXCHANGE MARKET DEVELOPMENT BLUEPRINT 2030
Accelerating Money Market and Foreign Exchange Market Deepening for an Advanced Indonesia

BANK INDONESIA
Jalan M.H. Thamrin No. 2
Jakarta – 10350
Indonesia

Jakarta, 29 November 2024

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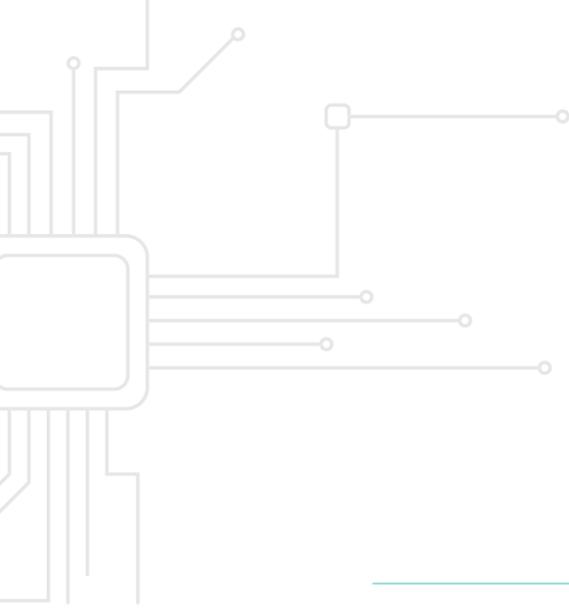
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List of Abbreviations and Acronyms

Abbreviation	Expanded Form
3i	Interconnection, Interoperability, Integration
3P+I	Product, Pricing, Participant, and Infrastructure
A	
AI	Artificial Intelligence
APUVINDO	Indonesia Money Market and Foreign Exchange Market Association
ARR	Alternative Reference Rate
B	
Bappebti	Commodity Futures Trading Regulatory Agency
BI	Bank Indonesia
BI-ETP	Bank Indonesia Electronic Trading Platform
BI-RTGS	Bank Indonesia Real Time Gross Settlement
BI-SSSS	Bank Indonesia Scripless Securities Settlement System
BKBI	Bank Indonesia Policy Mix
BPPU 2025	Money Market Development Blueprint 2025
BPPU 2030	Money Market and Foreign Exchange Market Development Blueprint 2030
C	
CCP	Central Counterparty
CCR	Cross Currency Repo
CCS	Cross Currency Swap
CPSS	The Committee on Payment and Settlement Systems
CSD	Central Securities Depositories
D	
DFA	Digital Financial Asset
DLT	Distributed Ledger Technology
DNDF	Domestic Non-Deliverable Forward



DSN-MUI	National Sharia Board of the Indonesian Council of Ulama
DSRS	Dynamic Systemic Risk Surveillance
DvP	Delivery vs Payment
DWP	Digital Workplace
E	
ESG	Environmental, Social, and Governance
ETP	Electronic Trading Platform
ETP MMS	Electronic Trading Platform Multi Matching System
ETP MO	Electronic Trading Platform - Market Operator
F	
FMI	Financial Market Infrastructures
Fintech	Financial Technology
FX	Foreign Exchange
<i>FX Forward Curve</i>	Foreign Exchange Forward Curve
<i>FX Swap</i>	Foreign Exchange Swap
G	
GFXC	Global Foreign Exchange Committee
GMRA	Global Master Repurchase Agreement
I	
ICoC	Islamic Financial Market Code of Conduct
IDCB	Integrated Digital Central Banking
ICCAT	Independence, Consistency, Coordination, Accountability, Transparency
IKNB	Institusi Keuangan Non Bank
INDONIA	Indonesia Overnight Index Average
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association
ISO	International Organization for Standardization

J	
JIBOR	Jakarta Interbank Offered Rate
JISDOR	Jakarta Interbank Spot Dollar Rate
K	
KPEI	PT Kliring Penjaminan Efek Indonesia or Indonesia Stock Market Clearing House
L	
LCT	Local Currency Transaction
LPS	Indonesia Deposit Insurance Corporation
M	
MCoC	Market Code of Conduct
N	
NBFIs	Nonbank Financial Institutions
O	
OIS	Overnight Index Swap
OJK	Indonesia Financial Services Authority
P	
PDB	Gross Domestic Product (GDP)
PFMI	Principles for Financial Market Infrastructures
PUAB	Interbank Money Market
PUVA	Money Market and Foreign Exchange Market
Q	
QCCP	Qualifying Central Counterparty
R	
RDG	Board of Governors Meeting
Repo	Repurchase Agreement
RRH	Daily Average

S	
SBN	Government Securities
SBNT	Interest Rate and Exchange Rate
SDGs	Sustainable Development Goals
Seclend	Securities Lending
SICS	Size, Interconnectedness, Complexity, and Substitutability
SID	Single Investor Identification
SiPA	Sharia-Compliant Interbank Fund Management Certificates
SISMONTAVAR	Monitoring System for Interbank Foreign Exchange Transactions Against the Rupiah
SNAP	National Open API Payment Standard
SRBI	Bank Indonesia Rupiah Securities
SRO	Self-Regulatory Organisation
SSS	Securities Settlement System
STP	Straight Through Processing
SukBI	Bank Indonesia Sukuk
Suptech	Supervisory Technology
SUVBI	Bank Indonesia Forex Sukuk
SVBI	Bank Indonesia Forex Securities
T	
TIKMI	Transaction, Interconnection, Competency, Risk Management, and Information Technology
TR	Trade Repository
TSSB	Interest Rate Term Structure
U	
UU PPSK	Financial Sector Development and Strengthening Act (PPSK Act)

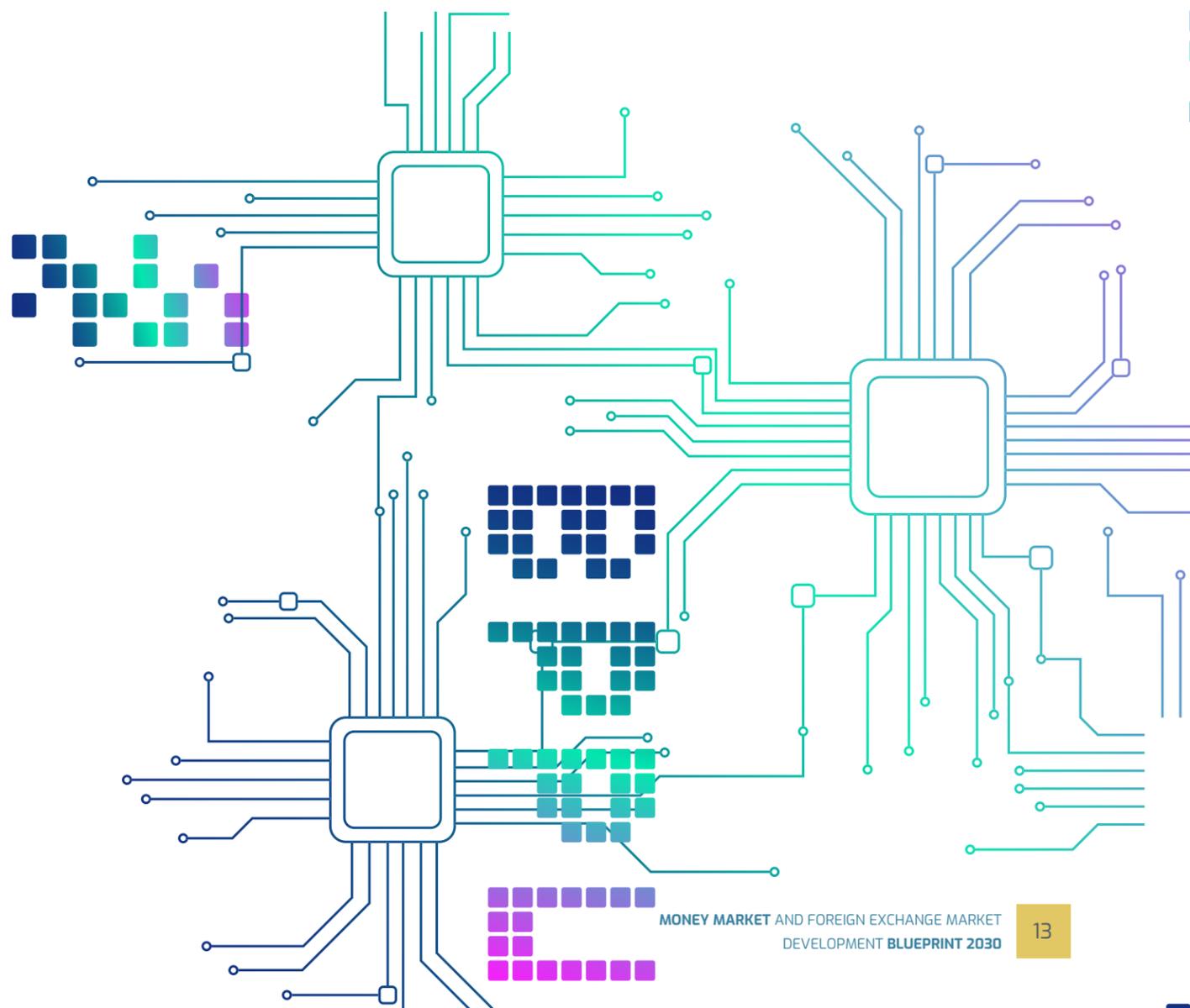
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Governor's Foreword



Perry Warjiyo

Governor of Bank Indonesia

**Assalamu'alaikum warahmatullahi wabarakatuh,
May peace be upon us all,
Om Swastiastu, Namu Buddhaya, Salam Kebajikan.**

Praise and gratitude to God Almighty for the publication of the Money Market and Foreign Exchange Market Development Blueprint (BPPU) 2030. BPPU 2030 serves as a roadmap to navigate the direction of deepening modern and advanced money market and foreign exchange market during the period from 2025-2030 to support monetary policy transmission, financial system stability and national economic financing, while simultaneously implementing Bank Indonesia's mandate and authority in accordance with the Financial Sector Development and Strengthening Act (PPSK Act).

BPPU 2030 follows the Money Market Development Blueprint (BPPU) 2025, which succeeded as a strategic reference in building the solid foundations of a modern and advanced money market and foreign exchange market. From 2021-2024, BPPU implementation achieved several important milestones in the development of diverse and liquid products, efficient and transparent pricing, competent and ethical participants, as well as reliable and integrated financial market infrastructures (FMIs). Furthermore, BPPU 2025 established an agile, industry-friendly and innovative regulatory framework in compliance with international standards.

Entering a new era through to 2030, Indonesia's money market and foreign exchange market are faced with compelling new opportunities and emerging challenges. Globally, deepening geopolitical tensions and world trade fragmentation, coupled with a rebalancing of global economic growth to the US and India, have triggered high global uncertainty. At home, Indonesia is faced with mitigating the deleterious impact of global spillovers on

higher inflation, macroeconomic and financial system stability as well as the national economic recovery process. A deep and efficient money market and foreign exchange market could facilitate sound liquidity management and hedging against interest rate and exchange rate risks in the business community, while providing a source of economic financing.

The Money Market and Foreign Exchange Market Development Blueprint (BPPU) 2030 was conceived as a comprehensive roadmap to accelerate money market and foreign exchange market deepening by achieving three destination statements, namely increasing transaction volume and liquidity, pricing efficiency and market conduct, as well as infrastructure and market stability. Achieving the destination statements will provide a solid foundation to create and maintain modern and advanced money market and foreign exchange market, integrated with pro-market monetary operations that underpin the effective transmission of monetary policy, the stability of the financial system and national economic financing.

In closing, we are confident BPPU 2030 will serve as a strategic guide in strengthening the role of financial markets as a key pillar of supporting national economic stability. We respectfully urge all stakeholders to contribute to realising a modern and advanced money market and foreign exchange market, integrated with pro-market monetary operations. Through strong cooperation and shared commitment, we remain optimistic that Indonesia will overcome the global and domestic challenges and achieve the overarching goal of sustainable economic development.

Senior Deputy Governor's Foreword



Destry Damayanti

Senior Deputy Governor of Bank Indonesia

**Assalamu'alaikum warahmatullahi wabarakatuh,
May peace be upon us all,
Om Swastiastu, Namu Buddhaya, Salam Kebajikan.**

Praise to God Almighty for his blessings and grace that the Money Market and Foreign Exchange Market Development Blueprint (BPPU) 2030 has been published. BPPU 2030 will help navigate efforts to create the desired state of a modern and advanced money market and foreign exchange market, integrated with pro-market monetary operations. Modern and advanced money market and foreign exchange market are characterised by the availability of innovative products, increasing participation as well as credible pricing that reflects efficient market mechanisms, accompanied by modern financial market infrastructure in line with international best practices. Creating modern and advanced money market and foreign exchange market supports the development of a solid, competitive and sustainable financial market ecosystem.

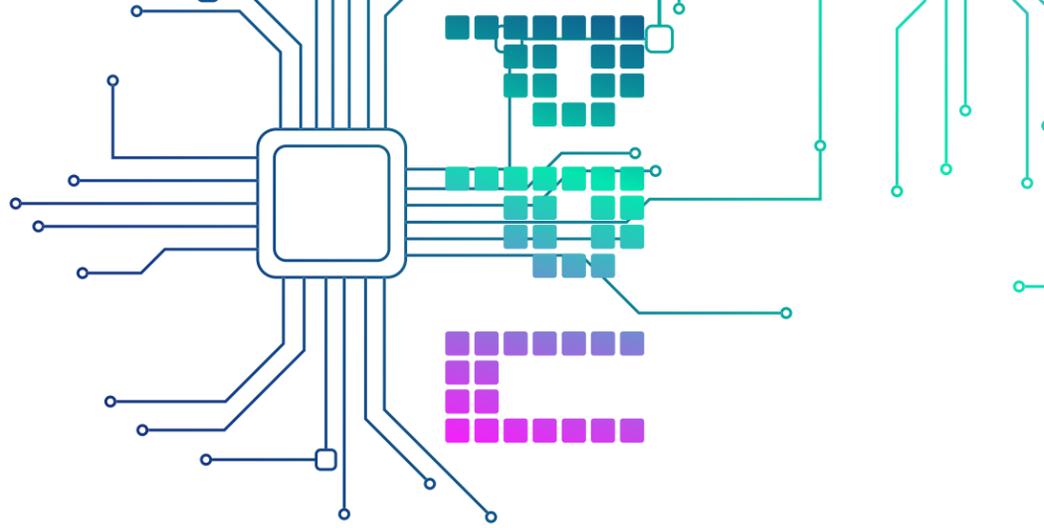
To that end, 5 (five) visions for money market and foreign exchange market deepening were formulated. First, building modern and advanced money market and foreign exchange markets, integrated with pro-market monetary operations, to support effective monetary policy transmission. Second, developing and nurturing diverse and liquid money market and foreign exchange market products, with efficient and credible pricing, supported by active and competent market participants. The first two visions will be achieved through major initiatives to develop money market and foreign exchange market instruments, alongside economic financing and risk management.

Third, developing and strengthening money market and foreign exchange market infrastructure based on

the 3i principles of interconnection, interoperability and integration to ensure reliability, efficiency and security. Fourth, developing granular, real-time and secure money market and foreign exchange market data digitalisation to support money market and foreign exchange market deepening, monetary policy and financial system stability. This will be achieved through initiatives to develop and strengthen financial market infrastructures (FMIs), supported by interagency synergy and coordination in the financial sector. And fifth, strengthening money market and foreign exchange market regulation and oversight based on international standards and best practices, while supporting international cooperation that prioritises the national interest.

Preparing and publishing BPPU 2030 are critical steps in communicating Bank Indonesia's strategy and policy direction to accelerate money market and foreign exchange market deepening in Indonesia. The blueprint offers guidance and outlines specific measures designed to create modern and advanced money market and foreign exchange market, integrated with pro-market monetary operations. This will support ongoing efforts to maintain monetary and financial system stability and play an important role in providing sources of financing for national development.

In closing, I would like to express my deepest appreciation and gratitude to all parties who contributed to the preparation of BPPU 2030. The active support of all stakeholders, including relevant government ministries/agencies and the financial market industry, is required to realise modern and advanced money market and foreign exchange market.



Executive Summary

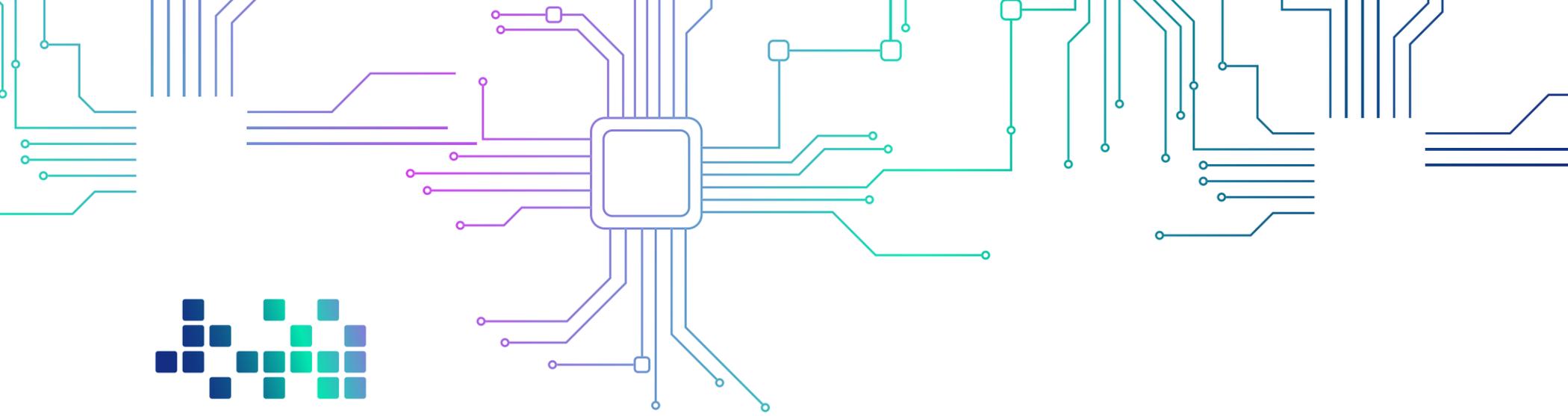
As an integral element of the financial markets in Indonesia, the money market and foreign exchange markets (PUVA) play a strategic role in supporting national economic growth and achieving the sustainable development goals. Money market and foreign exchange market deepening are implemented by considering future dynamics in the strategic environment. *First*, a build-up of uncertainty risk in response to increasing geo-economic and geopolitical fragmentation, creating greater urgency in terms of PUVA deepening as a source of risk management. *Second*, rapid economic digitalisation that must be anticipated by accelerating innovation and digitalisation in the money market and foreign exchange market. *Third*, increases observed in the economic and financial cycles, which must be anticipated through money market and foreign exchange market deepening for liquidity management and sources of financing.

The Money Market and Foreign Exchange Market Development Blueprint (BPPU) 2030 was prepared to help navigate the direction of PUVA deepening efforts in pursuit of modern and advanced PUVA markets. Considering the various dynamics and challenges in the PUVA environment, end-to-end PUVA deepening is required with the support of close synergy and coordination with relevant authorities and market participants. BPPU 2030 encompasses comprehensive PUVA development, including the conventional and sharia-compliant money markets and foreign exchange markets. Modern and advanced PUVA markets are crucial to strengthening monetary policy transmission, financial system stability and national economic financing, while supporting the implementation of Bank Indonesia's mandate and authority in accordance with the Financial Sector Development and Strengthening Act (PPSK Act).

BPPU 2030 contains 5 (five) visions to create and maintain money market and foreign exchange market (PUVA) that support sustainable economic growth. The five visions are as follows: (1) building modern and advanced PUVA markets, integrated with pro-market monetary operations, to support effective monetary policy transmission, financial system stability and national economic financing, (2) developing and nurturing diverse and liquid PUVA product innovation, with efficient and credible pricing, supported by active and competent market participants, (3) developing and strengthening PUVA infrastructure based on the 3i principles of interconnection, interoperability and integration to ensure reliability, efficiency and security, (4) developing granular, real-time and secure PUVA data digitalisation to support money market and foreign exchange market deepening, monetary policy and financial system stability, and (5) strengthening PUVA regulation and oversight based on international standards and best practices, while supporting international cooperation that prioritises the national interest.

The significant milestones achieved through the Money Market Development Blueprint (BPPU) 2025 were used as the basis for determining the development priorities in BPPU 2030 in order to build on the achievements and positive momentum of BPPU 2025, while maintaining the continuity of PUVA deepening efforts. Strategic targets were set in terms of the products, pricing, participants and infrastructure (3P+I) as follows:

1. The strategic targets of PUVA product development were separated into 2 (two) areas, namely the development of repurchase agreements (repo) and Domestic Non-Deliverable Forwards (DNDF).
2. The strategic targets of PUVA pricing development were separated into 2 (two) areas, namely (1)



establishing reference prices in the form of interest rates in the money market or benchmark yields in the sharia money market, and (2) establishing reference prices in the form of exchange rates in the foreign exchange market and sharia foreign exchange market.

3. **The strategic targets of PUVA participant development** were separated into 2 (two) areas, namely (1) competent participants based on the Market Code of Conduct (MCoC) in line with best global practices, and (2) active participants.
4. **The strategic targets of PUVA FMI development** were separated into 3 (three) areas, namely (1) front-end financial market infrastructure (FMI), (2) middle-end FMI, and (3) back-end FMI.

Bank Indonesia formulated 3 (three) strategies to achieve the strategic targets of PUVA deepening efforts.

The PUVA deepening strategies are as follows: (1) the development of diverse and liquid PUVA products based on efficient and credible pricing, (2) the development of active and competent market participants, along with financial market infrastructures (FMIs) based on the 3i principles, (3) synergy and coordination to support effective monetary policy, digitalisation and granular data, as well as economic financing. Each of these strategies is cascaded down into initiatives for phased implementation through to 2030.

Strategy 1: Product Development and Pricing

The first initiative, namely product development, is focused on the development of money market and foreign exchange market products, secondary monetary operations and digital financial assets (DFA). In the money market, product development will focus on increasing

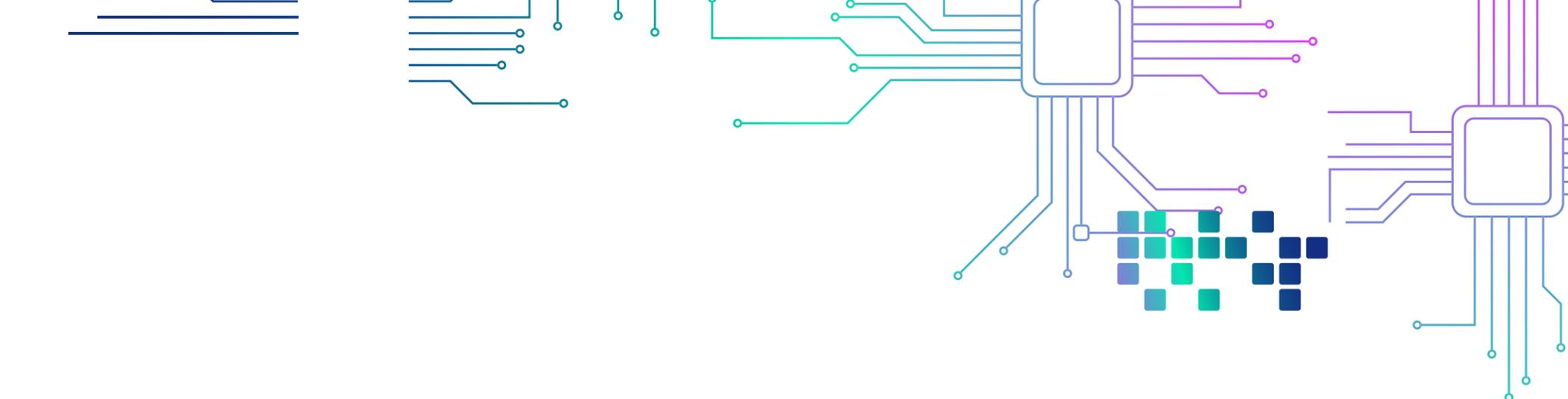
transaction volume for repo liquidity and Overnight Index Swaps (OIS). In the foreign exchange market, product development will focus on increasing transaction volume for DNDF liquidity and FX Swaps.

The second initiative, namely pricing, will focus on establishing credible and transparent reference prices. This involves: (1) establishing reference prices for non-overnight tenors (term rate) in the money market, referencing IndONIA and the OIS Curve for tenors from 2 (two) weeks to 12 (twelve) months and reformulating IndONIA based on overnight repo, (2) reformulating the Jakarta Inter-bank Spot Dollar Rate (JISDOR) and expanding the scope of non-USD/IDR reference rates in the foreign exchange market, and (3) formulating a money market curve and Foreign Exchange Forward Curve (FX Forward Curve).

Product development and pricing in the money market and foreign exchange market will also be aligned with the pro-market monetary operations strategy. Effective monetary policy transmission will be achieved if changes in the policy rate are transmitted fully to the term structure of PUVA pricing, including interest rates and exchange rates. The term structure of the money market is represented in the money market curve, while the term structure of the foreign exchange market is represented in the FX forward curve. Prices in the money market and foreign exchange market will serve as a reference for pricing other financial market products, including securities, credit and derivatives.

Strategy 2: Participant and Infrastructure Deepening

The first initiative, namely the development of active



and competent PUVA participants through competency development and the application of a Market Code of Conduct (MCoC), will increase participant activity and collaboration with industry associations. Bank Indonesia is collaborating in synergy with the industry association, in this case the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO), in terms of PUVA development, which includes enhancing the quality of human resources. Competency development is achieved through the mandatory issuance of treasury competency certification by operators registered at Bank Indonesia. The enforcement of market conduct was initiated with the issuance of a Market Code of Conduct (MCoC) and Islamic Financial Market Code of Conduct (ICoC) as ethical guidelines for PUVA participants.

The second initiative, namely the development of front-end, middle-end and back-end financial market infrastructures, is supported by the latest technology to strengthen FMI stability and reliability based on the 3i principles and international standards. Infrastructure development aims to expand PUVA products and participants, including the sharia PUVA, and optimise the utilisation of data to support data-driven policy. *First*, development on the front end involves strengthening the trading venues, including the Bank Indonesia-Electronic Trading Platform (BI-ETP) and the Electronic Trading Platform Market Operator (ETP MO). Development on the middle end involves strengthening and developing the clearing system, using a Central Counterparty for Interest Rate and Exchange Rate Derivatives (CCP-SBNT), hereinafter referred to as CCP-PUVA. Development on the back end involves strategies to develop the Bank Indonesia – Scripless Securities Settlement System (BI-S555) and Bank Indonesia – Real Time Gross Settlement (BI-RTGS) System, as contained in the Indonesia Payment System Blueprint (BSPI) 2030, alongside the Digital Rupiah in line with Project Garuda, as well as the creation and development of a Trade Repository (TR). PUVA infrastructure development will apply the ISO 20022 international standard for financial messaging to enhance efficiency, transparency, data granularity and security in transactions in anticipation of further PUVA

digitalisation moving forward.

Strategy 3: Synergy and Coordination

The first initiative, namely synergy with the pro-market monetary operations strategy and macroprudential surveillance, is oriented towards increasing transaction liquidity in the money market and foreign exchange market, strengthening infrastructure and market stability, as well as efficient pricing in accordance with market conduct. The strategy is integrated with the development of products and pricing, participants and infrastructure as well as regulatory harmonisation between monetary operations, PUVA deepening and monetary market surveillance with macroprudential policies to support financial system stability.

The second initiative, namely PUVA deepening digitalisation synergy with BSPI 2030 initiatives, aims to strengthen infrastructure and data digitalisation. This begins with the alignment of PUVA Unique Identifiers with Payment ID, alongside the development of data capturing and data analytics infrastructure for various use cases. Infrastructure harmonisation through the ISO 20022 international standard for financial messaging will target the: (1) Third Generation Bank Indonesia – Real Time Gross Settlement (BI-RTGS) System, (2) Third Generation Bank Indonesia – Scripless Securities Settlement System (BI-S555), (3) Trade Repository, and (4) Central Counterparty.

The third initiative, namely synergy in maintaining financial system stability and economic financing, will be achieved through regulation and oversight based on international standards through bilateral coordination between Bank Indonesia and OJK. In addition, coordination between 4 (four) competent authorities, namely Bank Indonesia, the Ministry of Finance, the Indonesia Financial Services Authority (OJK) and the Indonesia Deposit Insurance Corporation (LPS), in the financial sector, as mandated by the Financial Sector Development and Strengthening Act (PPSK Act), will be pursued towards financial sector development.

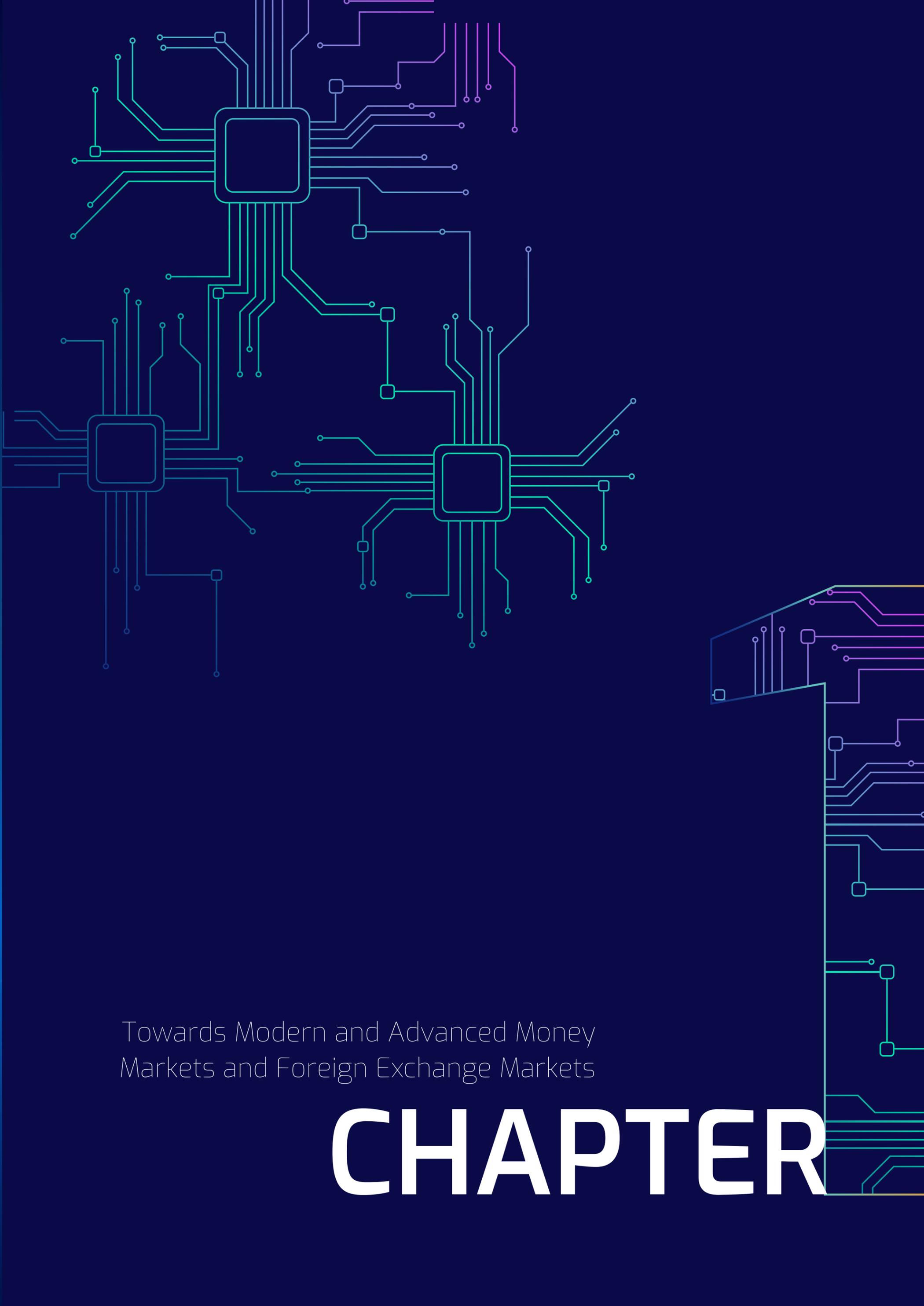


VISION

1



Building a modern and **advanced money market and foreign exchange market**, integrated with pro-market monetary operations, to support effective monetary policy transmission, financial system stability and national economic financing.



Towards Modern and Advanced Money
Markets and Foreign Exchange Markets

CHAPTER



1.1 Strategic Environment

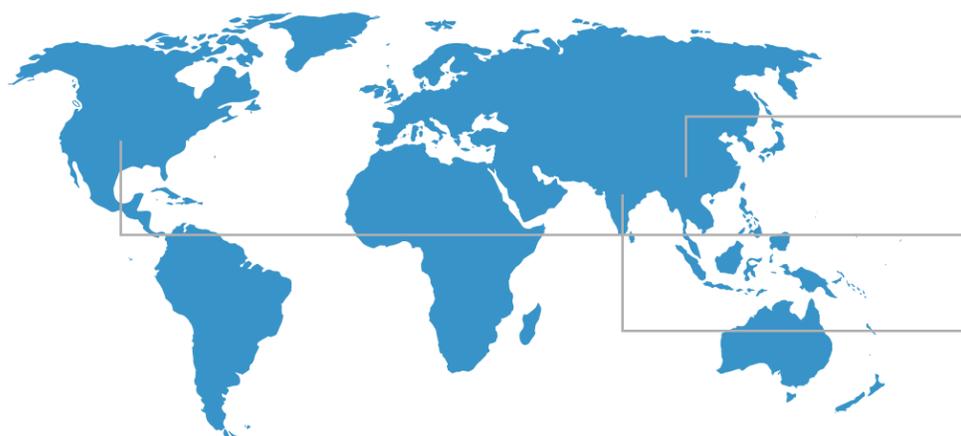


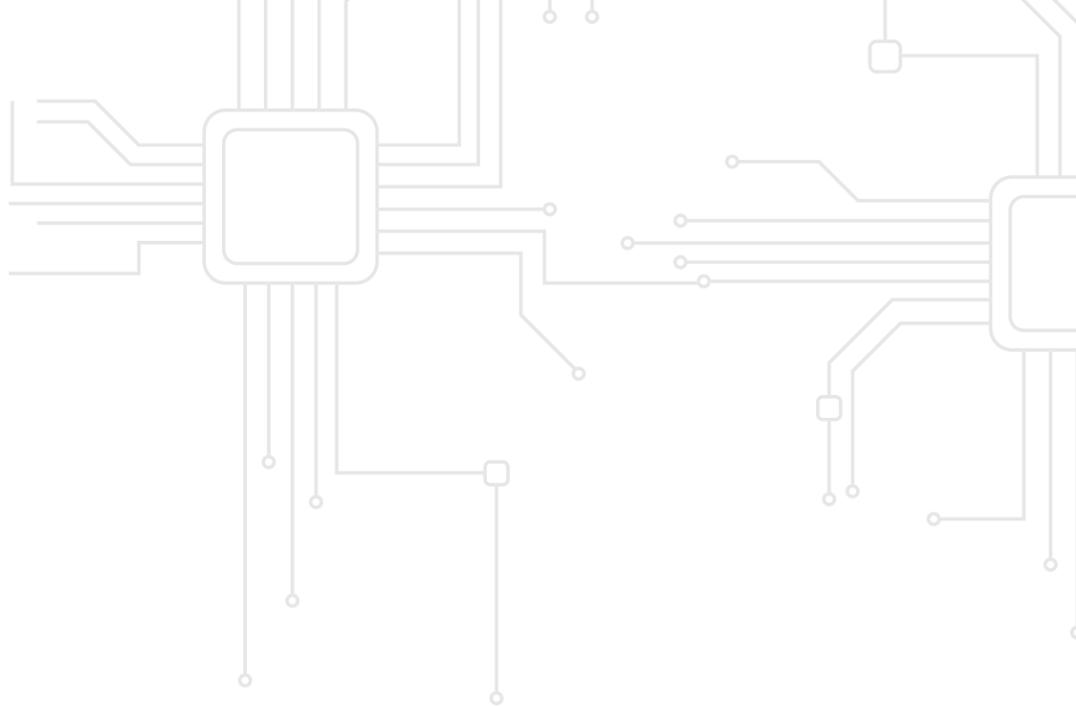
Figure 1 Projected GDP in 2030 by Country
Source: Bank Indonesia

Moving forward, money market and foreign exchange market (PUVA) deepening will be determined by dynamics in the global and domestic strategic environment. Globally, there are 2 (two) strategic environments that affect PUVA deepening efforts, namely: (1) increasing geo-economic and geopolitical fragmentation as well as demographic change, and (2) the inexorable financial technology revolution. Domestically, there are also 2 (two) strategic environments that influence PUVA deepening efforts, namely: (1) domestic economic growth, and (2) regulatory reform in the financial sector through the promulgation of Act Number 4 of 2023 concerning Financial Sector Development and Strengthening, otherwise known as the PPSK Act.

First, increasing geo-economic and geopolitical fragmentation as well as demographic change in the form of an ageing population, which could potentially spur lower global productivity and increase uncertainty risk. The world economy is currently on a trajectory towards economic polarisation due to geo-economic and geopolitical fragmentation. Polarisation has centred economic fragmentation around three major global powers, namely the United States, China and India, thus

forming economic blocs that compete in terms of finance, technology and innovation. Moving forward, countries will increasingly focus on their domestic and regional economies, leading to deglobalisation. Deglobalisation and demographic change in the form of an ageing population could potentially erode global productivity and, therefore, increase uncertainty risk. PUVA deepening, which could provide various hedging instruments, will play an important role in anticipating and mitigating such uncertainty risk.

Second, the inexorable financial technology revolution is reshaping the way we interact, transact and manage the economy and finance in various jurisdictions. The financial technology revolution is predominantly taking place through digital payment platforms, app-based investments and online lending platforms, driven by Distributed Ledger Technology (DLT) and Artificial Intelligence (AI). DLT, including blockchain, is enabling safer, faster and more transparent transactions, while AI and machine learning present data and information in real time. The digitalisation of financial technology (fintech) also supports the development of investment in the Environmental, Social and Governance (ESG) sector,

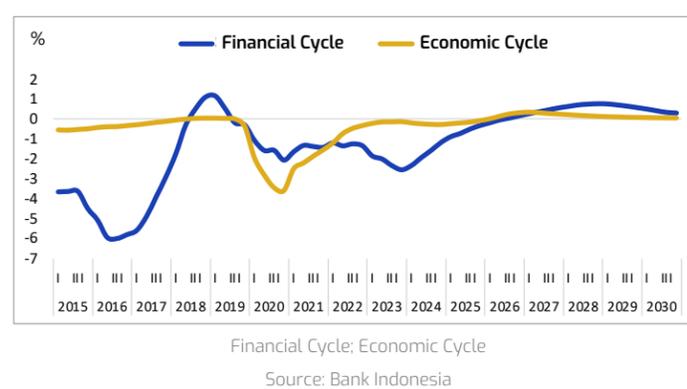


as an innovative solution to mitigating climate change. The adoption of financial technology could potentially expand financial inclusion yet also increase cyber risk. The combination of rapid fintech development and widespread adoption of technology by the younger generation in emerging markets and developing economies (EMDEs), including Indonesia, has increased the urgency of accelerating fintech adoption in financial markets, including the money markets and foreign exchange markets, which must be accompanied by adequate risk management.

Third, significant domestic economic growth potential is projected in Indonesia despite the ongoing challenges posed by global financial market uncertainty. Massive economic growth potential in Indonesia is underpinned by the current demographic bonus and momentum of the new government, which could accelerate economic growth. Looking ahead, government policy will focus on sustainable economic growth, food and energy security, as well as financial market development. The availability of new sources of economic financing must be expanded to support sustainable economic growth as well as maintain food and energy security in the face of global challenges. On the other hand, dynamic economic and financial cycles and global challenges demand adaptive funding sources and risk management instruments. PUVA deepening efforts support the availability of such funding sources and risk management instruments.

Fourth, the PPSK Act strengthens Bank Indonesia's jurisdiction in the monetary and PUVA sector. The PPSK Act strengthens Bank Indonesia's authority to set and implement monetary policy as well as regulate, develop and supervise the money market and foreign exchange market. The regulation, development and supervision of a market under the authority of one regulator have potential linkages with the regulation, development and supervision of another market under the authority of a different regulator in the financial sector. Consequently, the PPSK Act strengthens the coordination mechanisms between the Ministry of Finance, Bank Indonesia, Indonesia Financial Services Authority (OJK) and Indonesia Deposit Insurance Corporation (LPS). Interagency synergy and coordination in the financial sector are required to maintain the stability of the financial system and help create good governance in the money market and foreign exchange market as a source of national economic financing.

Graph 1 Financial Cycle and Economic Cycle 2015-2020





1.2 Money Market and Foreign Exchange Market Deepening Milestones, Gaps and Challenges

1.2.1 BPPU 2025 Milestones

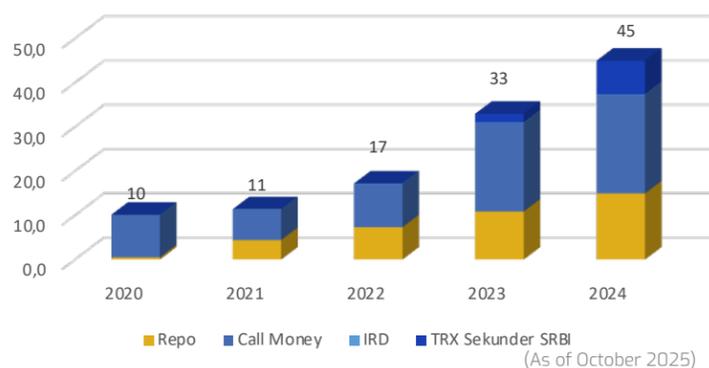
1.2.1.1 Product and Pricing Milestones

BPPU 2025 successfully navigated the direction of PUA deepening policy and achieved several significant milestones from a product perspective, namely: (1) money market products, (2) sharia money market products, (3) foreign exchange market products, and (4) sharia foreign exchange market products. *First*, in terms of money market products, average daily transaction volume in the repo and money markets increased respectively from IDR10.0 trillion and IDR0.5 trillion in 2020 to IDR45.0 trillion and IDR14.9 trillion in 2024 (Graph 2). *Second*, the average daily transaction volume of secured sharia money market products in the form of Sharia-Compliant Interbank Fund Management Certificates (SiPA) and sharia repo increased from zero in 2020 to IDR0.7 trillion in 2024 (January-October 2024), accounting for 33% of total transactions in the sharia money market. *Third*, average daily transactions of foreign exchange market products and DNDF products increased respectively from USD4.8 billion and USD21.0 million in 2020 to USD9.1 billion and USD124.0 million in 2024 (Graph 3). *Fourth*, in the sharia foreign exchange market, spot transactions continued to dominate 99% of all transactions, with sharia hedging transactions accounting for just 1%, with average daily transactions totalling USD728,000 in 2024 (January-October 2024).

BPPU 2025 also successfully navigated pricing in the: (1) money market, (2) sharia money market, and (3) foreign exchange market. *First*, Bank Indonesia has published the Compounded Indonesia Overnight Index Average (Compounded IndONIA) and IndONIA Index since 1st February 2023 to assist market participants utilise IndONIA as an alternative reference rate (ARR) for non-overnight tenors. *Second*, reference prices for the sharia

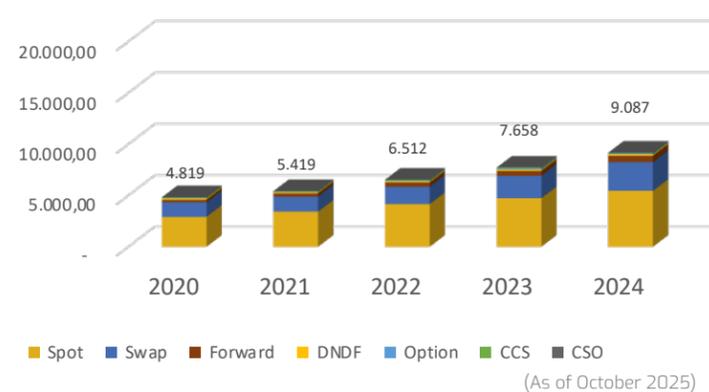
money market are currently still under development. *Third*, Bank Indonesia already publishes non-USD/IDR reference rates, which complement JISDOR as a reference rate for market participants, particularly in the settlement of non-USD derivative transactions.

Graph 2 Average Daily Money Market Transactions (IDR, trillions)



Source: Bank Indonesia

Graph 3 Average Daily Foreign Exchange Market Transactions (USD, millions)



Source: Bank Indonesia

1.2.1.2 Participants and Infrastructure Milestones

BPPU 2025 successfully served as a roadmap for the development of market participants, as represented by the establishment of an industry association and the

implementation of Primary Dealers (PD). Bank Indonesia issued regulations concerning market associations as the legal basis for the establishment of the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO) by PUVA market participants. APUVINDO is a self-regulatory organisation (SRO) in the money market and foreign exchange market and simultaneously a strategic partner of Bank Indonesia for PUVA development. Furthermore, Bank Indonesia introduced Primary Dealers (PD) to the money market and foreign exchange market on 17th May 2024, by consolidating PUVA participants, to support implementation of the monetary operations strategy as well as develop an advanced and modern money market and foreign exchange market.

BPPU 2025 also provided a framework for the successful development of Financial Market Infrastructures (FMIs) by implementing transaction facilities and clearing systems. Bank Indonesia has licensed transaction services providers with domestic institutional subsidiaries, namely PT LSEG Transaction Services Indonesia on 23rd September 2022 and PT Antara Elektronik Transaksi Pratama on 17th October 2022. Bank Indonesia also granted a business licence to PT Kliring Penjaminan Efek Indonesia (KPEI), the Indonesia Stock Market Clearing House, as a central counterparty (CCP), on 28th June 2024. Strengthening the institutional arrangements, Bank Indonesia agreed to capital participation in the CCP-PUVA with 8 (eight) banks, namely Bank Mandiri, Bank Rakyat Indonesia (BRI), Bank Negara Indonesia (BNI), Bank Central Asia (BCA), Bank CIMB Niaga, Bank Danamon, Bank Maybank Indonesia, and Bank Permata. The capital participation was implemented prior to the CCP-PUVA launch on 30th September 2024, accompanied by the announcement of Qualifying CCP (QCCP) status by Bank Indonesia.

1.2.2 PUVA Deepening Gaps and Challenges

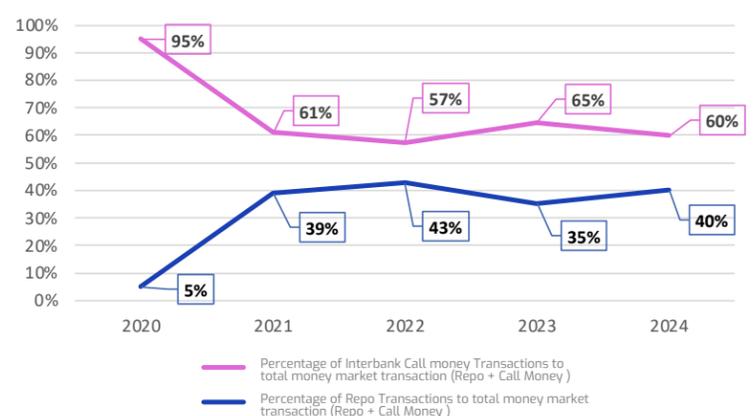
1.2.2.1 Product and Pricing Gaps and Challenges

Although BPPU 2025 successfully navigated the development of PUVA products and pricing, several

gaps/challenges remain. Transactions in the money market and sharia money market remain dominated by unsecured call money transactions, which distort PUVA term structures and yields. Meanwhile, transactions in the foreign exchange market and sharia foreign exchange market remain dominated by spot transactions in US dollars, which are exposed to currency risk.

First, in the money market, call money market transactions or interbank money market transactions, which are unsecured, remain dominant (Graph 4). Although money market transactions and average daily repo transactions have increased significantly, the domination of unsecured call money transactions means money market transactions are liquid in terms of short tenors from overnight to 1 (one) week. Consequently, formation of the money market curve for longer tenors, from 2 (two) weeks to 12 (twelve) months, is distorted. On the other hand, the money markets curve serves as a reference for pricing other financial products, such as credit, securities, derivatives and others.

Graph 4 Percentage of Repo and Interbank Call Money Transactions to Total Money Market Transactions (Repo + Call Money)



Source: Bank Indonesia

Second, in the sharia money market, unsecured transactions also remain dominant despite a significant uptick in the volume of secured transactions. Secured instruments in the sharia money market continue to face challenges due to imbalances between Islamic and conventional banks. Meanwhile, reference prices for the sharia money market are currently under development and not yet available. Nevertheless, sharia money market participants can refer to the reference prices available in the market that are compliant or aligned with sharia principles.

Third, in the foreign exchange market, spot transactions, specifically those denominated in US dollars, are more



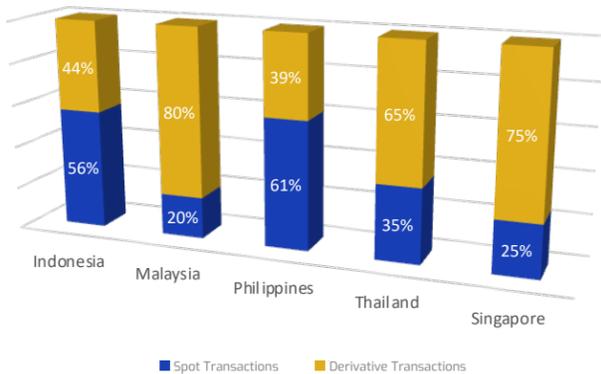
dominant than derivative transactions. Although DNDF transactions increased significantly from 2020 to 2024, average daily DNDF transactions and other exchange rate derivatives maintained a smaller market share than spot transactions. This bucks the trends observed in other countries (Graph 5), which indicate a larger share of derivative transactions than spot transactions. Furthermore, a lower volume of DNDF transactions than offshore Non-Deliverable Forward (NDF) transactions (Graph 6) points to limited liquidity and domestic participation relative to international markets that are more active in terms of hedging activity. Consequently, illiquid derivative transactions distort the FX Curve, which is used as a reference for hedging valuation.

Fourth, spot transactions dominate 99% of all transactions in the sharia foreign exchange market. This situation creates massive dependence on the spot market, thereby increasing exposure to currency risk. On the other hand, efforts to reduce the dependence on spot transactions by expanding the use of sharia hedging transactions continue to face challenges.

participants and infrastructure. First, PUVA and sharia PUVA participants remain segmented with limited linkages and broad competency gaps. Consequently, market segmentation and limited interconnections mean PUVA participants transact more with the central bank. Simply increasing linkages to boost transactions faces the issue of competency gaps, particularly between large banks and small banks. As a self-regulatory organisation (SRO) in the money market and foreign exchange market, the role of the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO), therefore, must be optimised to increase interbank linkages and enhance the quality and competencies of PUVA participants.

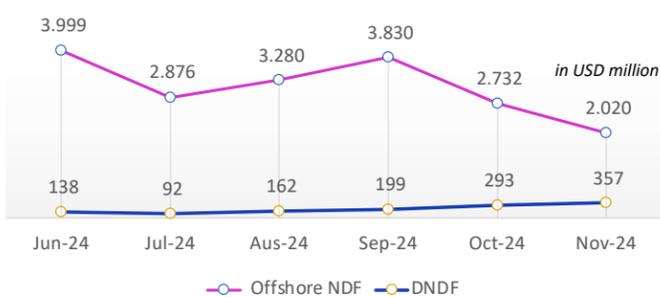
Second, PUVA infrastructure still suffers from several limitations in terms of functionality, thereby failing to fully meet the 3i principles. Systems that facilitate transactions between market participants, such as the Electronic Trading Platform Multi-Matching System (ETP), remain limited to spot transactions. The CCP-PUVA system is also limited to providing clearing services for DNDF transactions. The feature sets of settlement systems, including the Bank Indonesia – Scripless Securities Settlement System (BI-S555) and Bank Indonesia – Real Time Gross Settlement (BI-RTGS) system, are limited in terms of facilitating cross-border transaction settlement, for example. Meanwhile, the trade repository (TR) is still under development. FMI development is tied closely to the information systems and technology, which must consider cybersecurity risks.

Graph 5 Composition of Spot and Derivative Transactions in Total Foreign Exchange Market Transactions by Country



Source: BIS Triennial Survey 2022, processed

Graph 6 Average Daily DNDF Transactions and Offshore NDF Transactions



Source: Bank Indonesia and Bloomberg, processed

1.2.2.2 Participant and Infrastructure Gaps and Challenges

Accelerating the development of products and pricing continues to face gaps and challenges in terms of the

1.2.2.3 Synergy and Coordination Gaps and Challenges

The development of 3P+I aspects continues to face continuity challenges in terms of PUVA deepening in synergy with the development of other financial markets. Coordination between the relevant authorities is facilitated through the Financial Market Development and Deepening Coordination Forum (FK-PPPK). Furthermore, the PPSK Act mandates coordination between the competent authorities, namely the Ministry of Finance, Bank Indonesia, the Indonesia Financial Services Authority (OJK) and Indonesia Deposit Insurance Corporation (LPS), with respect to financial sector development. Implementation of the mandate and appropriate coordination forums are still under discussion, however.





1.3 Context of BPPU 2030 in Financial Market Deepening in Indonesia

BPPU 2030, as a roadmap for PUVA deepening, was prepared in accordance with the mandate of the PPSK Act, considering the strategic objective of strengthening collaboration between financial sector authorities towards financial market deepening. PUVA and sharia PUVA deepening policy, as contained within BPPU 2030, is oriented towards harmony with the Islamic Economy and Finance Development Blueprint issued by Bank Indonesia, which aims to increase the financing contribution and deepen sharia financial markets. The implementation of PUVA deepening policy is performed in synergy and in coordination with other financial sector regulators.

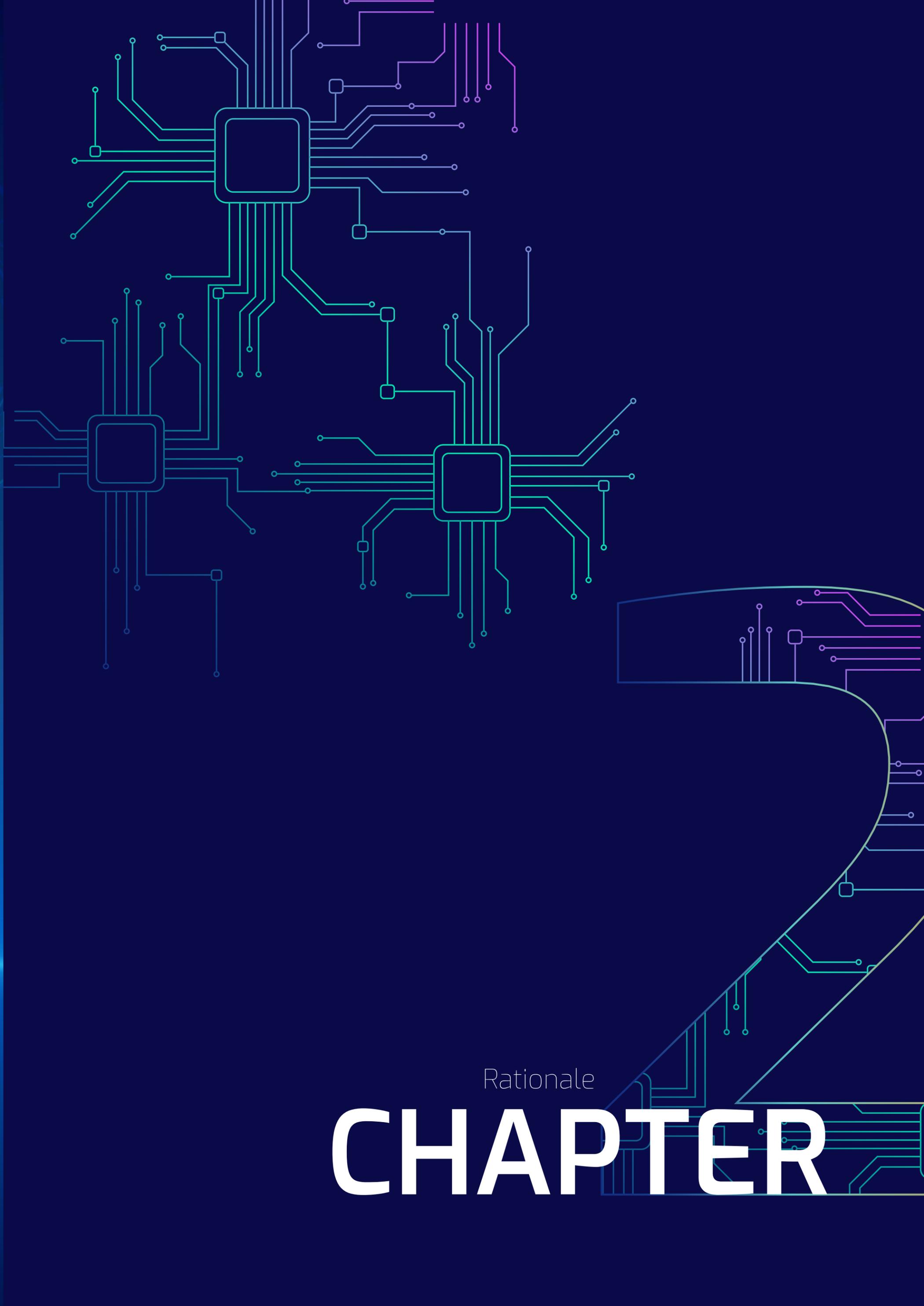
PUVA deepening policy is oriented towards realizing the mandate for strengthening interagency coordination in accordance with the PPSK Act, which aims to: (1) deepen

the financial markets, (2) increase efficiency, and (3) expand access to finance. *First*, financial market deepening through PUVA and sharia PUVA deepening is achieved by enriching product variety and strengthening market capacity to meet growing financing needs. The focus of PUVA product development on repurchase agreements (repo) and derivatives aims to deepen the money market and foreign exchange market as well as the government securities (SBN) market, which are used as the underlying collateral in most repo transactions. *Second*, Bank Indonesia is pursuing efficiency improvements through regulatory reform and strengthening intermarket infrastructure to accelerate the digitalisation of PUVA transactions as a catalyst for PUVA deepening. *Third*, Bank Indonesia is increasing accessibility through a multiagency financial market literacy program to expand the reach of financial services to all social strata (financial inclusion).

VISION



Developing And Nurturing Diverse And Liquid Money Market
And Foreign Exchange Market Product Innovation, **With**
Efficient And Credible Pricing, Supported By Active And
Competent Market Participants.



Rationale

CHAPTER



2.1 Direction of Transformation and Vision of PUVA Deepening 2030

BPPU 2030 is a form of Bank Indonesia (BI) commitment to fulfilling the mandate of the PPSK Act. In accordance with the PPSK Act, Bank Indonesia is authorised to regulate, develop and supervise the money market and foreign exchange market (PUVA). Bank Indonesia prepared BPPU 2030 to navigate the direction of deepening modern and advanced PUVA markets to strengthen monetary policy transmission, financial system stability and national economic financing.

The direction of PUVA deepening transformation in BPPU 2030 is elaborated in the corresponding BPPU 2030 visions to strengthen the direction of transformation in BPPU 2030. Strengthening the direction of PUVA

transformation in BPPU 2030 takes into consideration the dynamics of PUVA development and the latest policies. *First*, strengthening the integration of PUVA deepening efforts with the implementation of pro-market monetary operations. In this case, integration covers the innovation of pro-market monetary operations instruments and products to support efficient pricing in the money market and foreign exchange market. *Second*, strengthening the strategic targets for various aspects, including the products, pricing and participants. *Third*, emphasising the urgency of financial market infrastructure (FMI) development in line with 3i principles as well as PUVA data digitalisation. *Finally*, strengthening PUVA regulation and oversight in line with international standards and best practices as a concrete foundation of the BPPU 2030 vision.

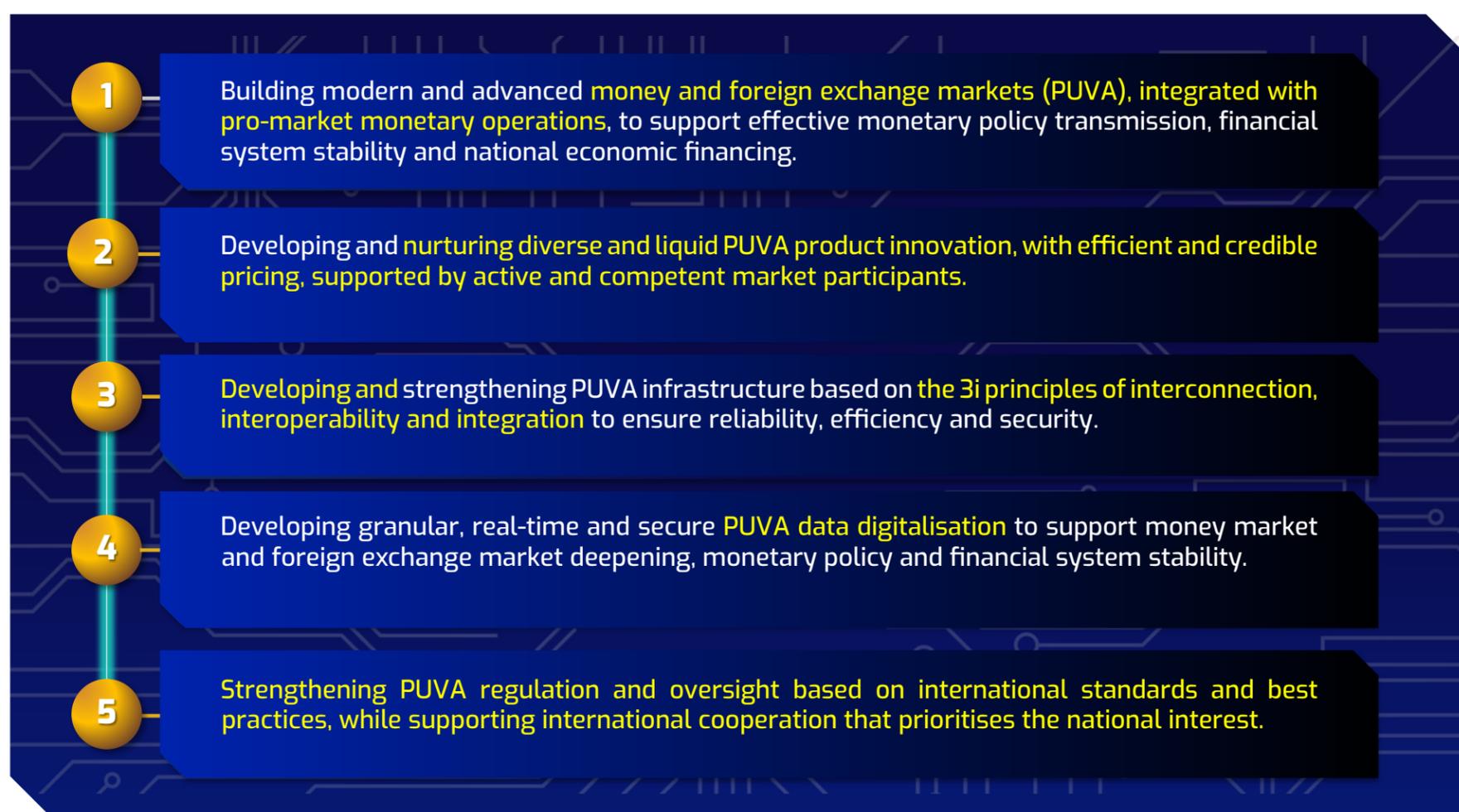


Figure 2 Vision of BPPU 2030



Vision 1: Building modern and advanced money market and foreign exchange market (PUVA), integrated with pro-market monetary operations, to support effective monetary policy transmission, financial system stability and national economic financing.

The first vision of BPPU 2030 is the overarching vision of PUVA deepening transformation to create and maintain modern and advanced money market and foreign exchange market (PUVA). Transformation is achieved by integrating the pro-market monetary operations strategy with PUVA deepening. Integration involves the active participation of market players, namely PUVA Primary Dealers (PD), as catalysts of PUVA deepening. Primary Dealers function to redistribute liquidity, market-making and supporting inflows. Such integration aims to ensure monetary policy transmission is more effective and PUVA deepening is more accelerative in terms of maintaining financial system stability and expanding sources of national economic financing.

Vision 2: Developing and nurturing diverse and liquid PUVA product innovation, with efficient and credible pricing, supported by active and competent market participants.

The second vision of BPPU 2030 supports the first vision by developing and strengthening the aspects of products, pricing and participants, or 3P PUVA. Innovation through the broader diversification of liquid products can satisfy the various needs of market participants in terms of liquidity, risk and investment management. Efficient and credible pricing aims to ensure PUVA prices are based on transactions and can be used as a reference in the valuation of various financial products. Meanwhile, the active participation of competent market participants will bolster the sustainable development and stability of the money market and foreign exchange markets (PUVA).

Vision 3: Developing and strengthening PUVA infrastructure based on the 3i principles of interconnection, interoperability and integration to ensure reliability, efficiency and security.

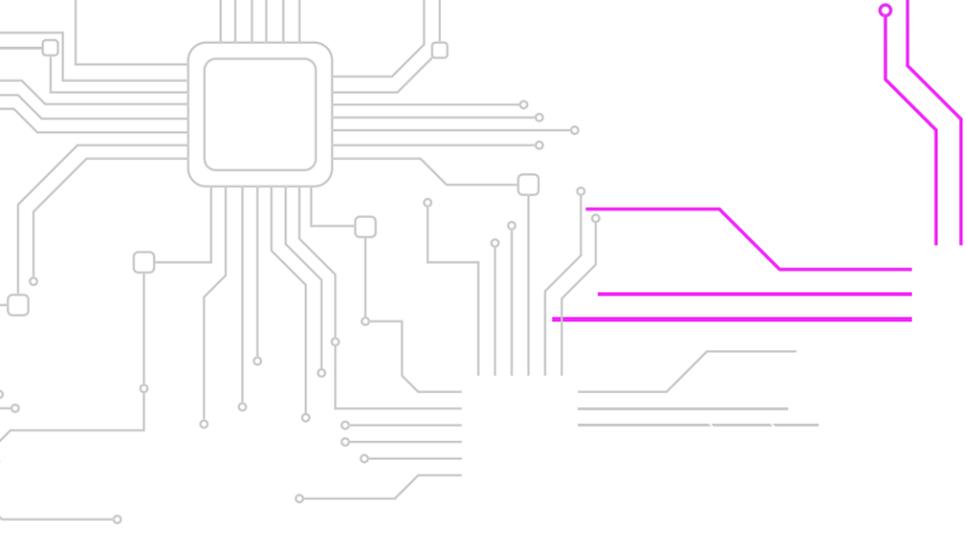
The third vision of BPPU 2030 supports the first vision by developing Financial Market Infrastructures (FMIs) based on the 3i principles. FMI development aims to ensure the availability of infrastructure appropriate to the digital age. In addition, strengthening financial market infrastructure also aims to boost the efficiency of transactional processes, thereby aligning settlement with international standards and principles. Fulfilling the 3i principles will support the interconnectivity of FMIs and other systems, thus creating reliable, efficient and secure infrastructure to accelerate PUVA deepening.

Vision 4: Developing granular, real-time and secure PUVA data digitalisation to support money market and foreign exchange market deepening, monetary policy and financial system stability.

The fourth vision of BPPU 2030, namely data digitalisation, will be achieved through the development of comprehensive PUVA data infrastructure. Digitalisation in data management is required in line with the latest technological developments and massive growth of data volume. The provision of granular, real-time and secure PUVA data is required to optimise the use cases in policymaking analytics. Data-driven policymaking analytics will strengthen effective policymaking in line with dynamics in the strategic environment.

Vision 5: Strengthening PUVA regulation and oversight based on international standards and best practices, while supporting international cooperation that prioritises the national interest.

The fifth vision of BPPU 2030, namely strengthening PUVA regulation and oversight, is the foundation underlying all visions. Strengthening regulation and oversight based on international standards aims to create an integrated financial market ecosystem that is consistent with global best practices. BPPU 2030 is oriented towards nurturing various PUVA deepening initiatives at the international level through international cooperation to strengthen the national interest.



2.2 Strategic Targets of PUVA Deepening



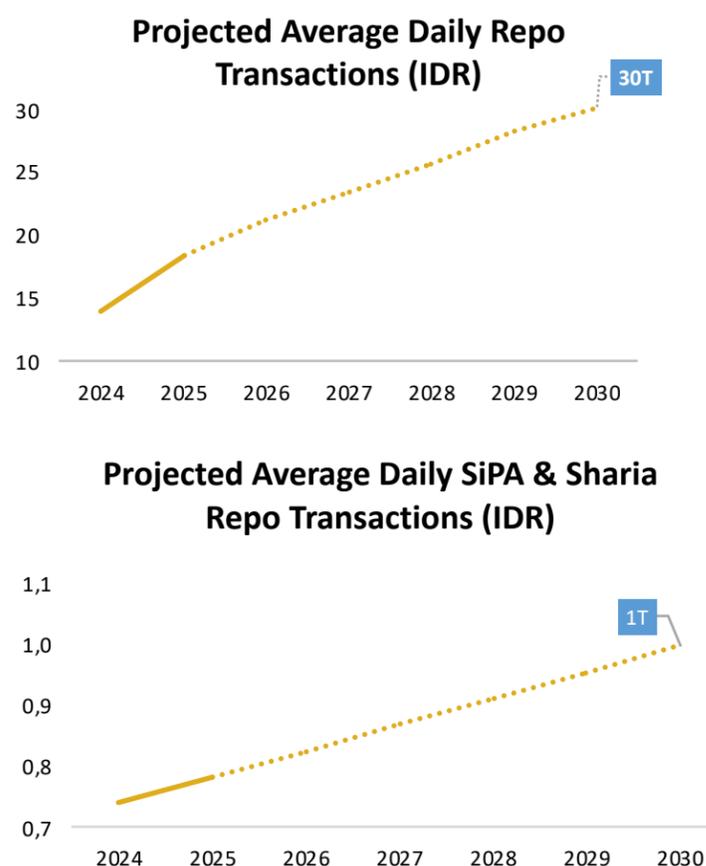
The significant PUVA deepening milestones achieved by Bank Indonesia through BPPU 2025 serve as a solid foundation when determining the strategic targets for the subsequent phases of PUVA deepening efforts. The priorities of PUVA deepening initiatives were formulated to build on the positive achievements and momentum of BPPU 2025 implementation, as well as to maintain the continuity of PUVA deepening efforts moving forward. Bank Indonesia set the strategic targets of BPPU 2030 implementation based on the 3P+I aspects as follows: (1) diverse and liquid products, (2) efficient and credible pricing, (3) active and competent market participants, and (4) 3i infrastructure.

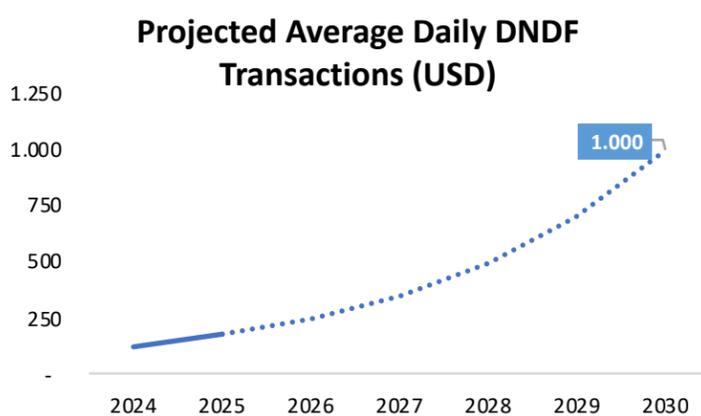
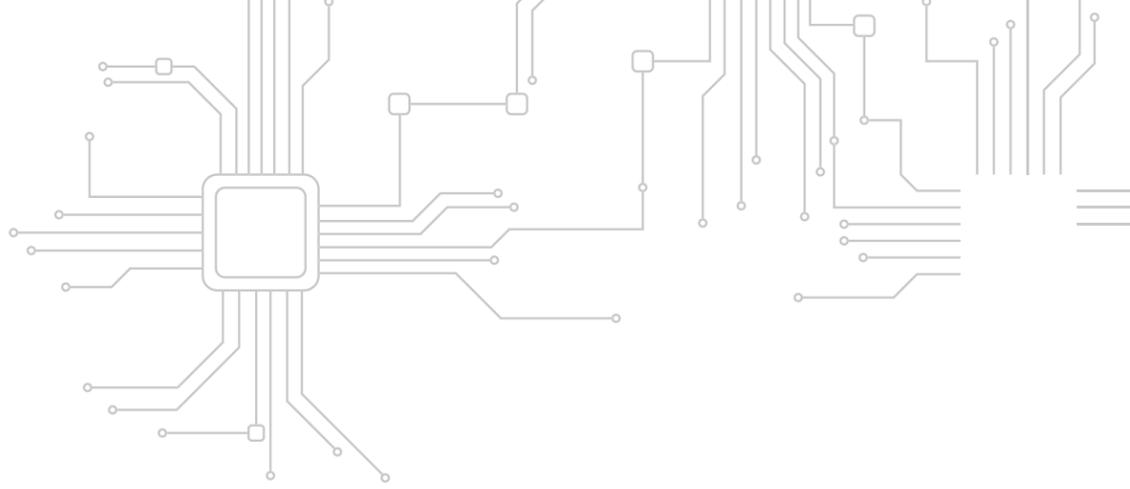
2.2.1 Strategic Targets of Product Development

The strategic targets of PUVA product development were separated into 2 (two) areas, namely: (1) the development of repurchase agreements (repo) and Domestic Non-Deliverable Forwards (DNDF). *First*, the development of repo transactions will increase liquidity in the money market and securities market as collateral. *Second*, DNDF transactions were selected as the focus of development given the attractive and efficient feature of accounting for differences in liabilities on transactions, which has the potential to increase liquidity. In addition, repo and DNDF transactions are monetary operations instruments, thus targeting repo and DNDF development in PUVA deepening efforts is consistent with pro-market monetary operations initiatives. Meanwhile, the focus of sharia PUVA product development is secured transactions, namely Sharia-Compliant Interbank Fund Management Certificates (SiPA) and sharia repo transactions, in the sharia money market and sharia hedging transactions in the sharia foreign exchange market.

The strategic target of increasing repo and DNDF volume and liquidity by 2030 is measurable, while still considering future projections in the strategic environment. The average daily volume of repo transactions and secured sharia transactions (SiPA and Sharia Repo) are targeted at IDR30.0 trillion and IDR1.0 trillion, respectively. The average daily volume of DNDF transactions is targeted at USD1 billion, while the average daily volume of conventional and sharia foreign exchange market transactions are targeted at USD18 billion and USD100 million, respectively. The strategic targets were set based on several assumptions, as follows: (1) economic growth, (2) CCP-PUVA implementation for products and the incremental expansion of PUVA participants, (3) the phased implementation of primary dealer (PD) rights and obligations in monetary operations and PUVA markets, and (4) alignment with the regulatory reforms undertaken by Bank Indonesia.

Graph 7 Projected Average Daily Repo Transactions, Secured Sharia Transactions (SiPA, Sharia Repo), and DNDF Transactions





Achieving the strategic targets of product development will provide various benefits to market participants in the context of increasing liquidity, including the availability of risk management instruments that will boost pricing efficiency. In the money market, increasing secured repo transaction liquidity will enhance pricing efficiency, thereby strengthening monetary policy transmission and increasing the efficiency of SBN yields, which are used as underlying collateral in most domestic repo transactions. In the foreign exchange market, increasing DNDF transaction liquidity will strengthen risk management and hedging for economic players and, ultimately, bolster financial system stability and development financing.

2.2.2 Strategic Targets of Pricing Development

The strategic targets of PUVA pricing development were separated into 2 (two) areas, namely: (1) establishing reference prices in the form of interest rates in the money market or benchmark yields in the sharia money market, and (2) establishing reference prices in the form of exchange rates in the conventional and sharia foreign exchange markets. Pricing development is oriented towards the efficient formulation of credible reference prices across all major tenors of the PUVA markets. The availability of efficient pricing is reflected in a narrow bid/ask spread due to liquid markets and access to accurate information for the market participants. Credible PUVA prices are transaction based and refer to international

standards on governance in the formulation of reference prices and aspects of transparency. The international standards used for reference include the Principles for Financial Benchmarks issued by the International Organisation of Securities Commissions (IOSCO), as well as the standards set by the International Swaps and Derivatives Association (ISDA).

The strategic target for PUVA pricing in 2030 involves establishing efficient and credible transaction-based PUVA pricing across all tenors. The target for money market pricing is the formation of a term structure of interest rates (TSIR) and benchmark yields for major non-overnight tenors, namely from 2 weeks to 12 months, by 2030. A forward-looking TSIR will later complement the overnight reference rate, namely IndONIA. Meanwhile, the target for foreign exchange market pricing is the formation of an FX Forward Curve to complement the reference rates, namely the JISDOR and non-USD/IDR reference rates. The FX Forward Curve is required as a price reference for conventional and sharia exchange rate derivative products. PUVA prices are targeted to be formulated continuously and transparently, and widely accessible.

Efficient and credible PUVA pricing will foster market transactions and increase convergence between market prices and the policy stance. The continuous and broad availability of transaction-based TSIR and benchmark yields will encourage price discovery for various financial products, such as credit, securities and derivatives. Efficient and credible pricing will also help participants evaluate fair value and manage expectations of future market movements. Meanwhile, the FX Forward Curve will nurture hedging activity among market participants. A comprehensive FX Forward Curve across various tenors will also attract liquidity from foreign exchange hedging transactions against the rupiah in offshore markets to onshore (domestic) markets.

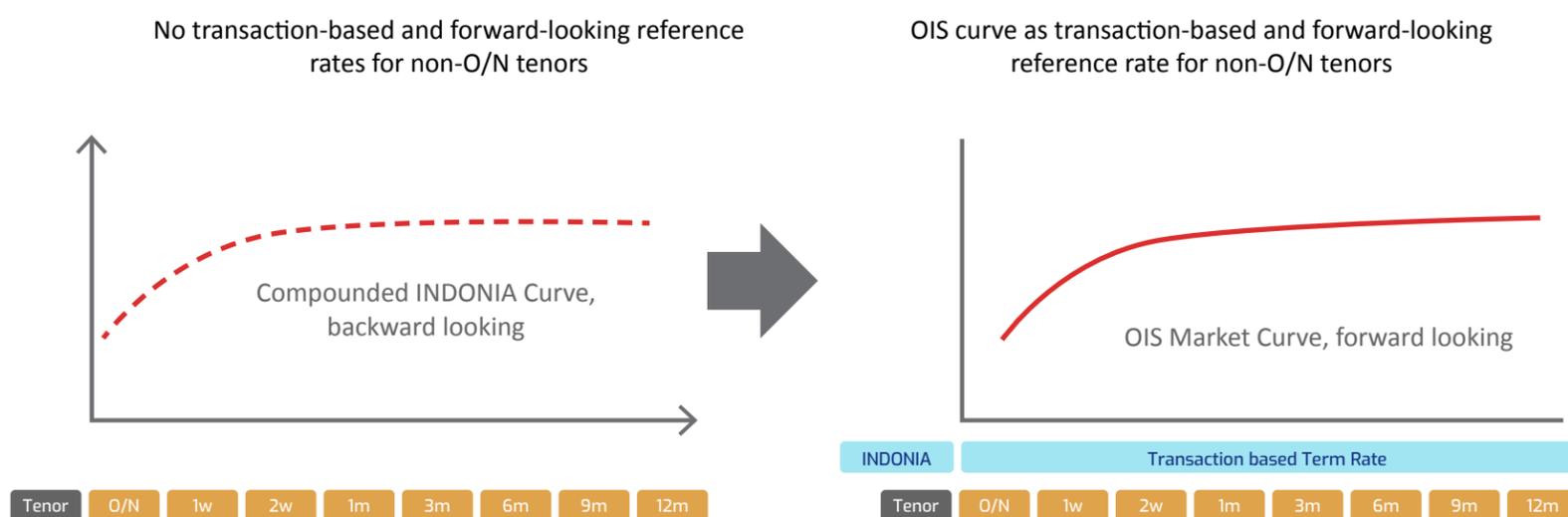


Figure 3 Illustration of Yield Curve in the Money Market

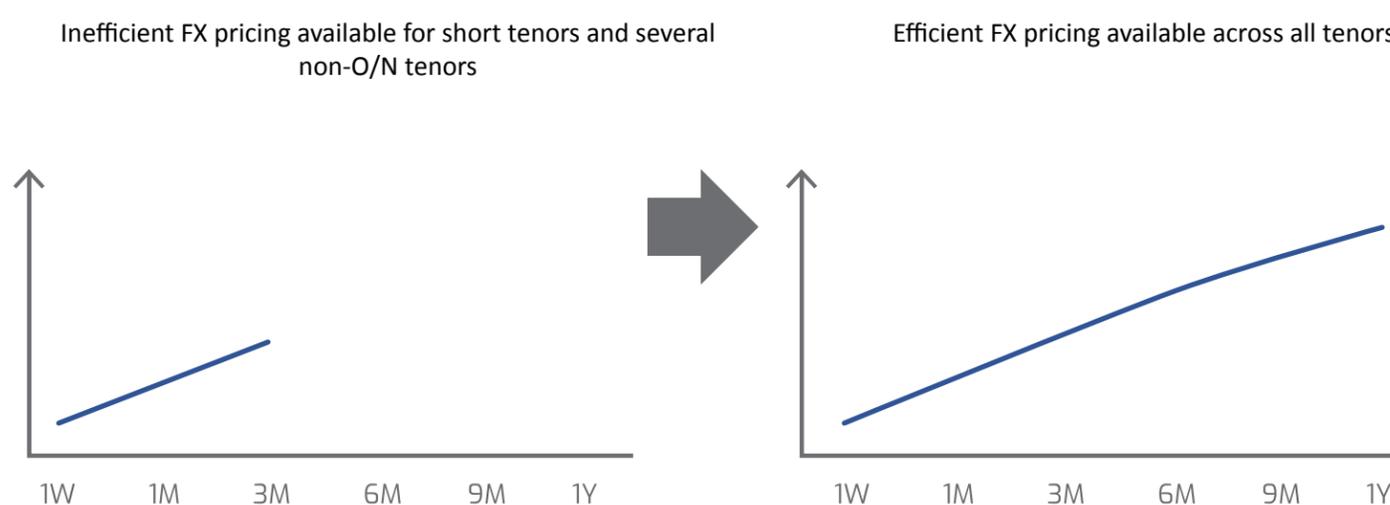


Figure 4 Illustration of Yield Curve in the Foreign Exchange

2.2.3 Strategic Targets of Participant Development

The strategic targets of PUVA participant development were separated into 2 (two) areas, namely: (1) competent participants based on the Market Code of Conduct (MCoC) in line with best global practices, and (2) active participants. *First*, defining strategic competency targets for participants, recognising that PUVA participants must possess adequate knowledge, expertise and ethical standards aligned with the needs of an evolving market. *Second*, defining strategic expertise targets for participants, focusing on indicators of total repo and DNDF participants. Achieving these targets will indicate a reduction in market segmentation. Furthermore, targets that expand participation are consistent with the strategic targets for product development, which focuses on repo and DNDF transactions.

The strategic targets of PUVA market deepening in the form of more active and competent participants

also consider the strategic targets for future product development and pricing. In terms of active participants, the market share of repo and DNDF participants is targeted to reach 90% and 60% of all banking industry players. Regarding the sharia PUVA markets, Bank Indonesia targets the number of sharia repo and SiPA participants to reach 70% of total sharia banks or sharia business units (Islamic windows), and the number of sharia hedging participants to reach 50% of total sharia banks or sharia business units licensed for foreign exchange business activity. In terms of competent participants, the number of certified participants, registered treasury dealers, and MCoC statements of compliance submitted are targeted at 98% of all PUVA participants holding positions for more than 6 (six) months, 98% of total treasury dealers reported by the banks and brokers, and 95% of total banks and brokers. The targets are applicable to both conventional and sharia PUVA participants.

Striking an optimal balance between increasing participant activity and competency will redistribute liquidity between participants, while strengthening

resilience to external risk. Increasing participant activity in PUVA transactions will boost liquidity creation and efficiency, while creating healthy competition between participants in the PUVA markets. On the other hand, improving competencies implies that participants will execute their roles referring to the best national competency standards, accompanied by ethical and professional conduct in line with best global practices.

2.2.4 Strategic Targets of Infrastructure Development

The strategic targets of Financial Market Infrastructure (FMI) development were separated into 3 (three) areas, namely: (1) front-end financial market infrastructure (FMI), (2) middle-end FMI, and (3) back-end FMI. The FMI development targets are applicable to all systems that facilitate transactions in the PUVA markets, including transaction settlement and reporting. On the front end, FMI development targets the Bank Indonesia-Electronic Trading Platform (BI-ETP) as a platform for bank transactions with Bank Indonesia and the Electronic Trading Platform Market Operator (ETP MO) as a platform for transactions between participants. On the middle end, FMI development targets the CCP-PUVA. On the back end, FMI development targets the Bank Indonesia – Scripless Securities Settlement System (BI-S555) and Bank Indonesia – Real Time Gross Settlement (BI-RTGS) System, alongside the Digital Rupiah, which will facilitate DFA settlement, as well as a Trade Repository (TR). FMI development is required to meet the needs for richer features and products as well as the availability of new systems. Feature sets and products will be expanded

in the context of pro-market monetary operations and the needs of PUVA participants, including sharia PUVA through the application of sharia principles.

The strategic targets of FMI development in terms of fulfilling the 3i principles were determined by aligning with the strategic development targets for the products, pricing and participants. System development by Bank Indonesia and third parties external to Bank Indonesia include: (1) upgrading legacy systems in terms of the features and modernisation, or (2) developing new systems. FMI development by Bank Indonesia includes upgrading various systems, including BI-ETP development and modernisation of the third generation BI-S555 and BI-RTGS systems, while the development of new systems includes the Trade Repository (TR) and Digital Rupiah. FMI development by third parties involves bilateral and multilateral electronic trading platforms (ETP) as well as the CCP-PUVA, which will be developed to accommodate additional products and expand participation. FMI development is oriented towards fulfilling the 3i principles and complying with international standards, such as the Principles for Financial Market Infrastructures (PFMI) issued by CPSS-IOSCO in 2012 and the ISO 20022 international standard for financial messaging issued by the International Organisation for Standardisation. Achieving the strategic targets for FMI development is based on several factors, among others: (1) the identification of system development needs to support the business side, (2) the timeline for infrastructure development implemented by external parties, and (3) industry readiness.

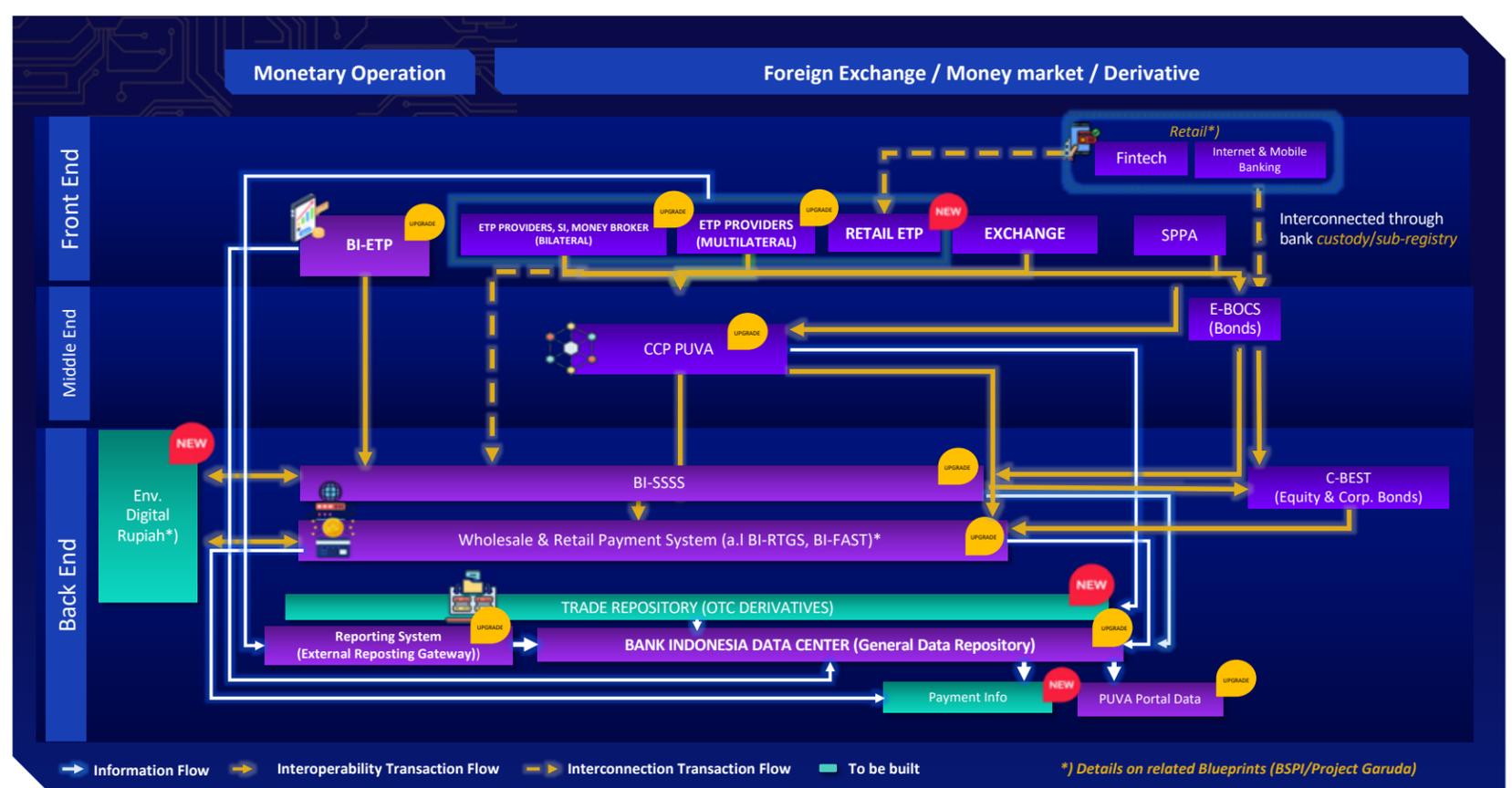
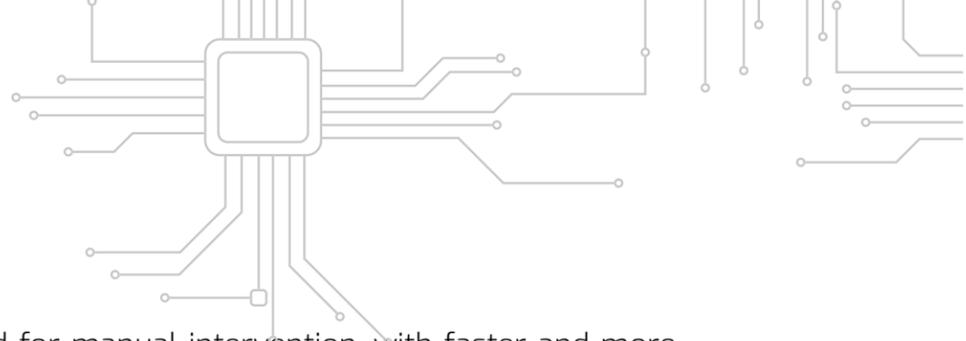


Figure 5 Configuration of PUVA Infrastructure



FMI development from the front end, middle end and back end, in line with 3i principles and international standards, will support the end-to-end digitalisation of transaction processes towards Straight Through Processing (STP). STP becomes critical as transaction volume increases to maintain seamless operations and support the availability of granular data. STP facilitates automatic transaction processing, thereby obviating

the need for manual intervention, with faster and more efficient transaction settlement. Ultimately, faster and more efficient processing will increase productivity, while maintaining system reliability and accuracy. Meanwhile, the granular data collected from Financial Market Infrastructures (FMIs) can be utilised further by Bank Indonesia and the industry for PUVA development.

2.3 PUVA Deepening Policy Framework

PUVA deepening in Indonesia is oriented towards creating and maintaining modern and advanced PUVA markets to support effective monetary policy transmission, financial system stability and economic financing synergy. The integration of PUVA deepening with pro-market monetary operations will precipitate more effective monetary policy transmission. The creation of a modern and advanced PUVA ecosystem will increase the efficient allocation of funding sources, pricing and liquidity redistribution, while attracting capital inflows. Deep and liquid PUVA markets will strengthen financial system stability and bolster sustainable economic growth.

Creating modern and advanced PUVA markets entails end-to-end efforts covering 3P+I aspects alongside synergy and coordination. Such aspects were translated into three main strategies or pillars to achieve the targets and goals of PUVA deepening. The first pillar, namely product development and pricing, is oriented towards increasing the liquidity of diverse PUVA products and strengthening efficient and credible pricing. The second pillar is focused on the development of PUVA participants, which is oriented towards creating active and competent participants, alongside PUVA infrastructure development in line with the 3i principles. The third pillar is focused on internal (BI) and interagency synergy and coordination

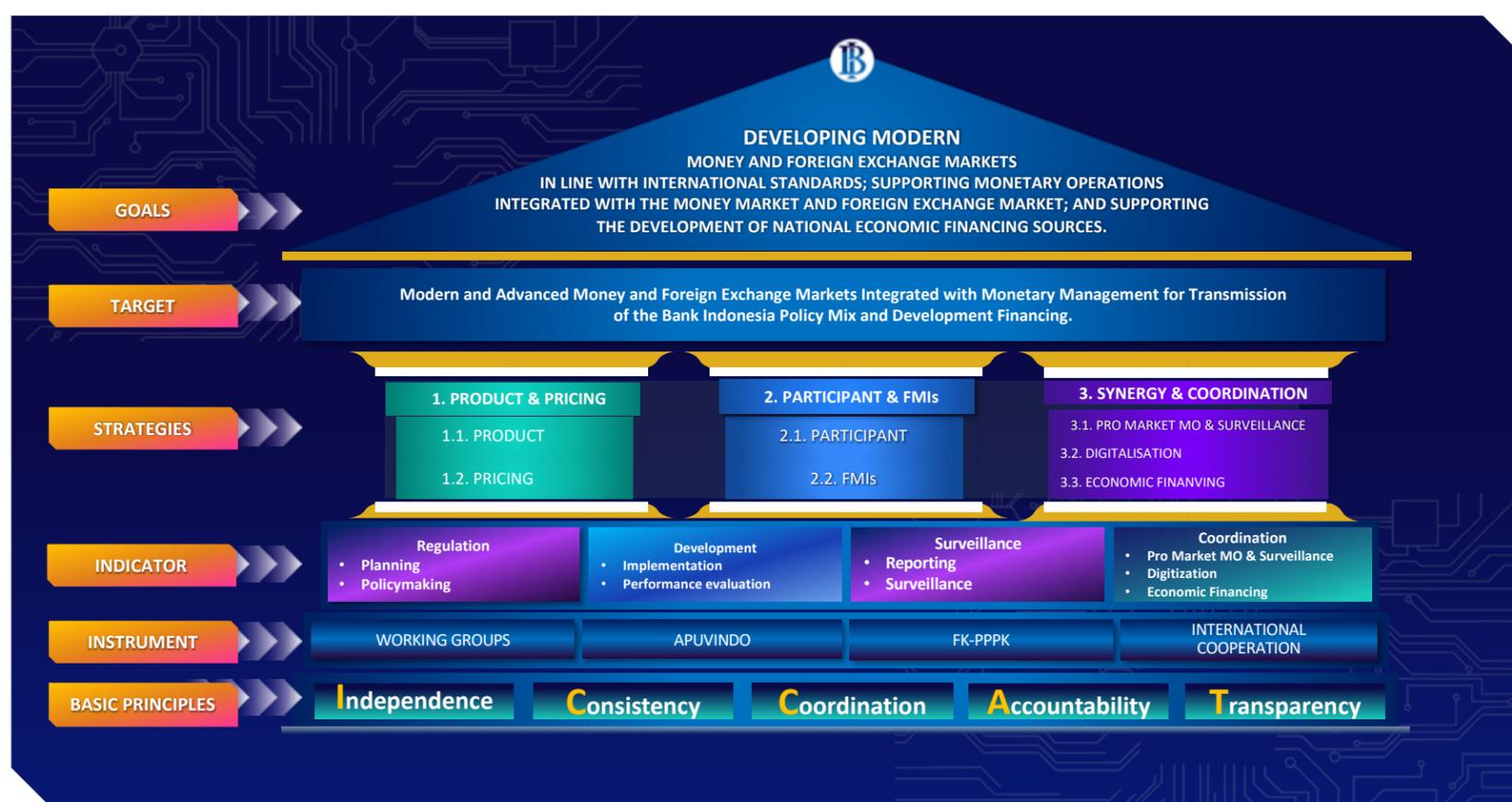


Figure 6 PUVA Deepening Policy Framework



in the context of integrating PUVA deepening with the implementation of pro-market monetary operations and surveillance, digitalisation and economic financing.

Implementation of the three pillars of the PUVA deepening strategy is based on sound management principles, namely regulation, development, supervision, and coordination. Regulation aspects comprise of planning and optimal policymaking for PUVA deepening. Development includes effective implementation in accordance with the strategic business plans, followed by continuous evaluation to measure the achievement of strategic targets, alongside a process of refinement. Meanwhile, supervision covers research, reporting and surveillance to ensure compliance with prevailing regulations and policies. Finally, coordination is conducted with the various parties involved in BPPU 2030 implementation, from market participants to competent authorities and regulators in order to harmonise and align mutually related development initiatives.

BPPU 2030 implementation also involves collaboration with key partners, including working groups, APUVINDO, interagency coordination among financial sector authorities and international cooperation. Collaboration with key partners under the auspices of working groups is strategic to accelerate the implementation of various PUVA deepening initiatives. Collaboration with APUVINDO

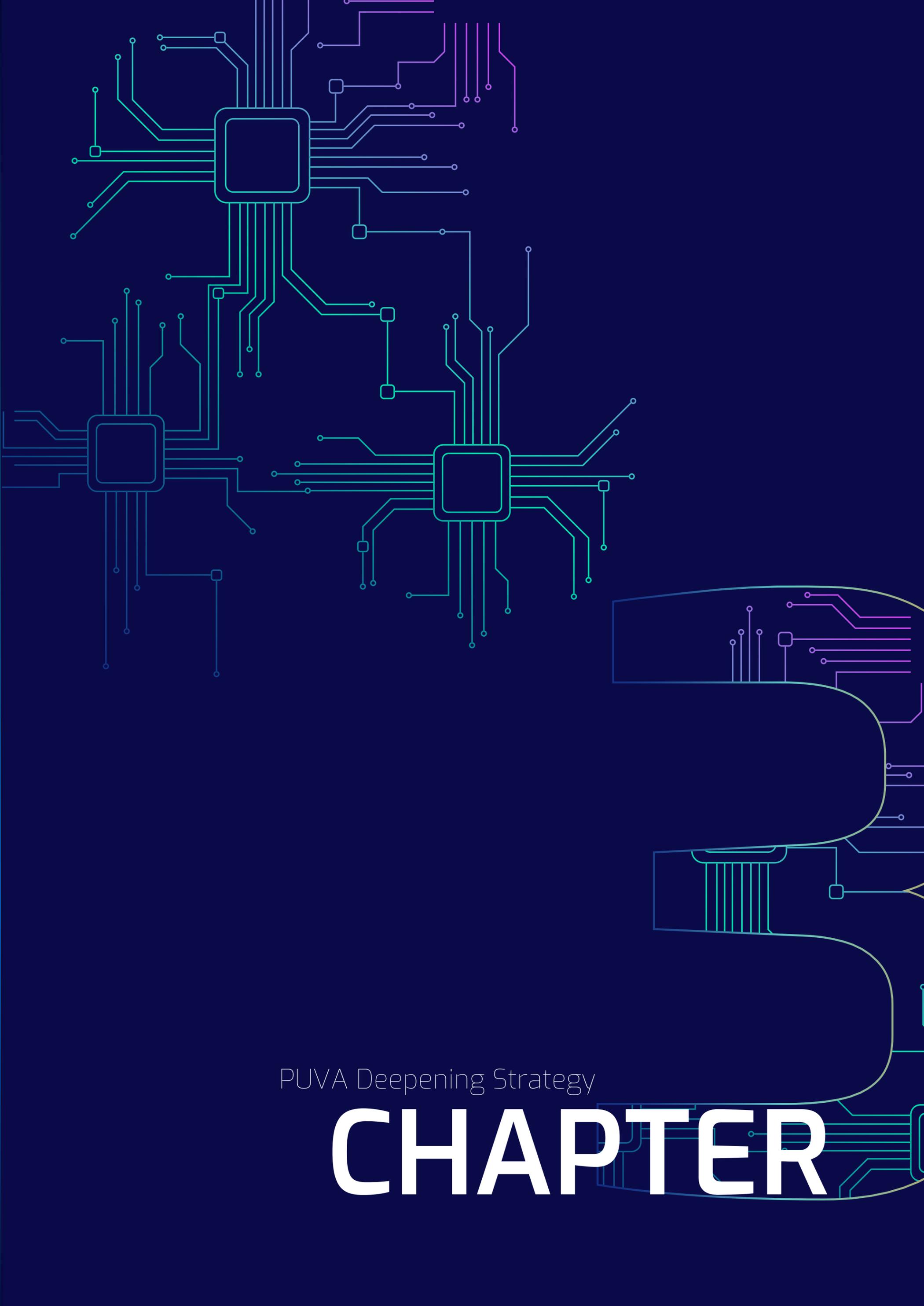
encompasses the association's function to provide input to Bank Indonesia and other partner members, such as technical provisions, along with implementation in the industry. Collaboration through coordination between financial sector authorities aims to ensure PUVA deepening efforts are consistent with other financial sector policies. Meanwhile, international cooperation with other regulators aims to unlock access to global markets and expand the network of market participants alongside the adoption of best practices.

The implementation of PUVA deepening policy is based on the principles of independence, consistency, coordination, accountability and transparency (ICCAT). *First*, independence is reflected in PUVA deepening policymaking and implementation, as mandated by prevailing laws and regulations. *Second*, PUVA deepening policy consistency as reflected in the alignment with the Bank Indonesia policy mix. *Third*, internal and external coordination are conducted in PUVA deepening policymaking and implementation. *Fourth*, accountability is reflected in the accountability of Bank Indonesia to its stakeholders, covering the execution of Bank Indonesia's tasks and duties in terms of PUVA deepening. *Fifth*, Bank Indonesia policy transparency in PUVA deepening through the implementation of an effective public communication strategy as an integral part of good governance.

VISION



Developing and strengthening money market and foreign exchange market infrastructure based on the **3i principles of interconnection, interoperability and integration** to ensure reliability, efficiency and security.

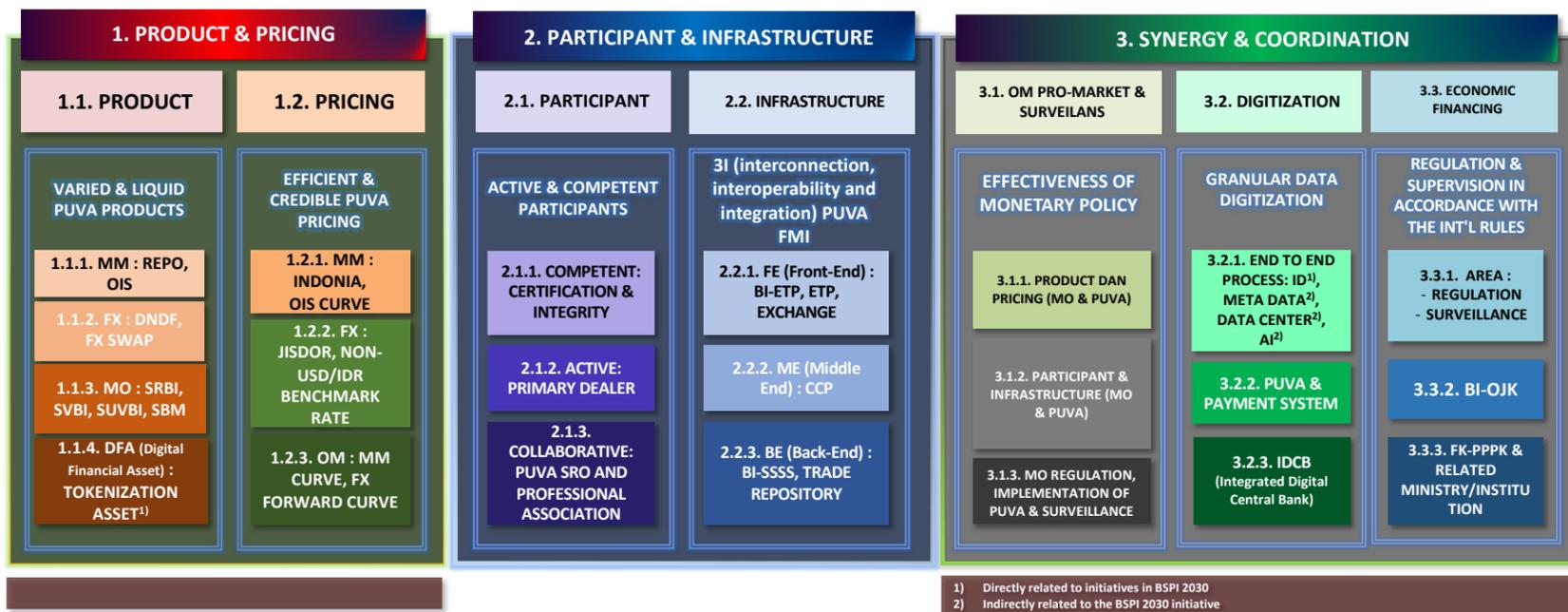


PUVA Deepening Strategy

CHAPTER



The overall PUVA deepening strategy is divided into three (3) aspects, as follows: (1) product and pricing development strategies, (2) participant and infrastructure development strategies, and (3) synergy and coordination strategies.



The key initiatives encompass development of the conventional and sharia PUVA markets

Figure 7 Key Initiatives of BPPU 2030

3.1 Strategy 1: Product Development and Pricing

The product and pricing development initiatives are oriented towards accelerating the increase of liquidity and inflows, nurturing product innovation, as well as strengthening efficient and credible pricing.

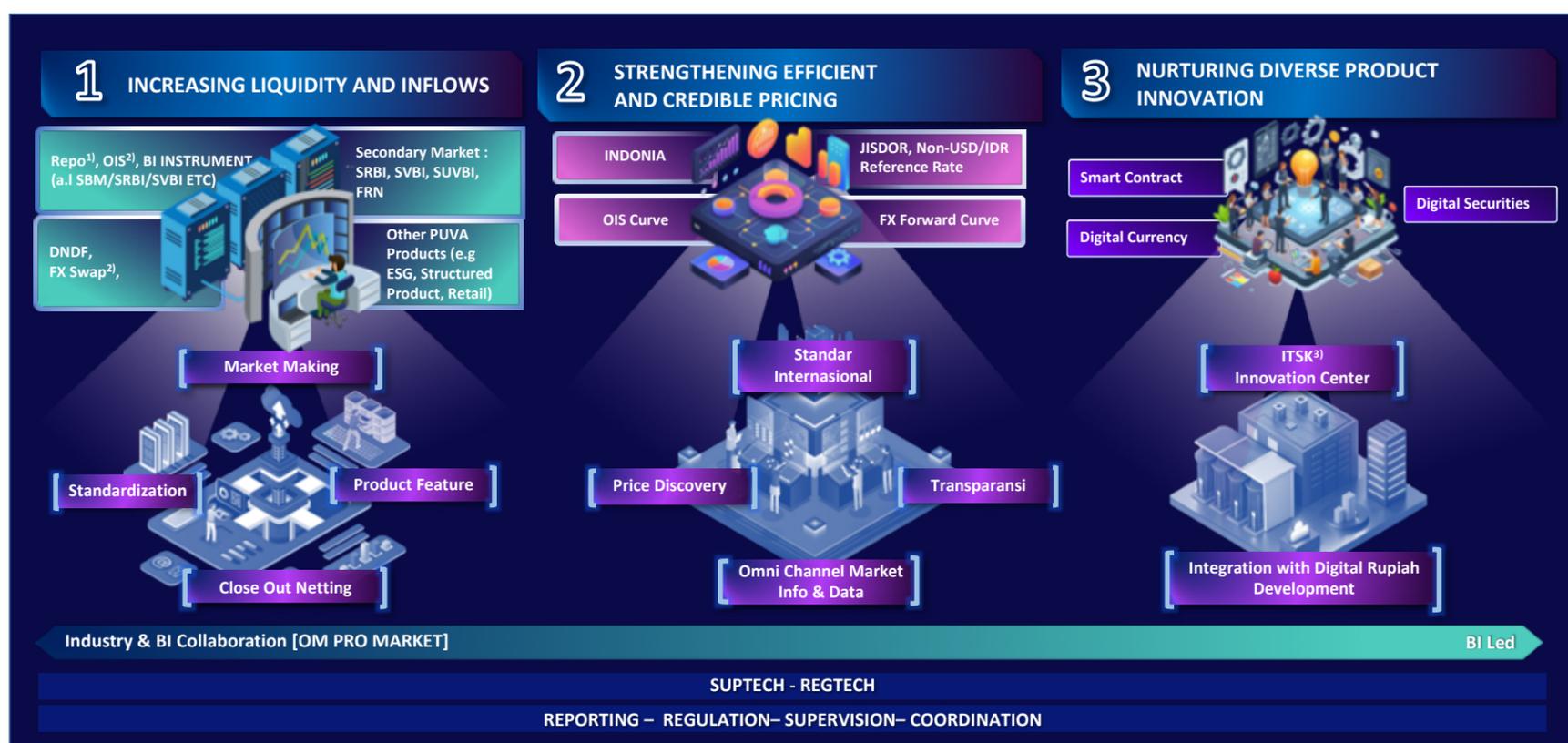


Figure 8 Product and Pricing Development Strategy

3.1.1 Product Development

PUVA product development is oriented towards achieving the strategic targets, namely creating diverse and liquid PUVA product innovation to overcome the gaps in PUVA product development based on market needs and the strategic environment. Product development is focused on the development of money market products, foreign exchange market products, secondary monetary operations products and digital financial assets (DFA).

3.1.1.1 Money Market Product Development

The focus of money market product development is repo transactions through efforts to increase repo liquidity by: (1) strengthening repo market-making by PUVA Primary Dealers (PD), (2) developing innovative product features and repo standardisation, and (3) expanding the participant base and coordinating with financial market authorities and associations. Economically, a repo transaction is a relatively low-risk collateralised borrowing and lending transaction with development potential.

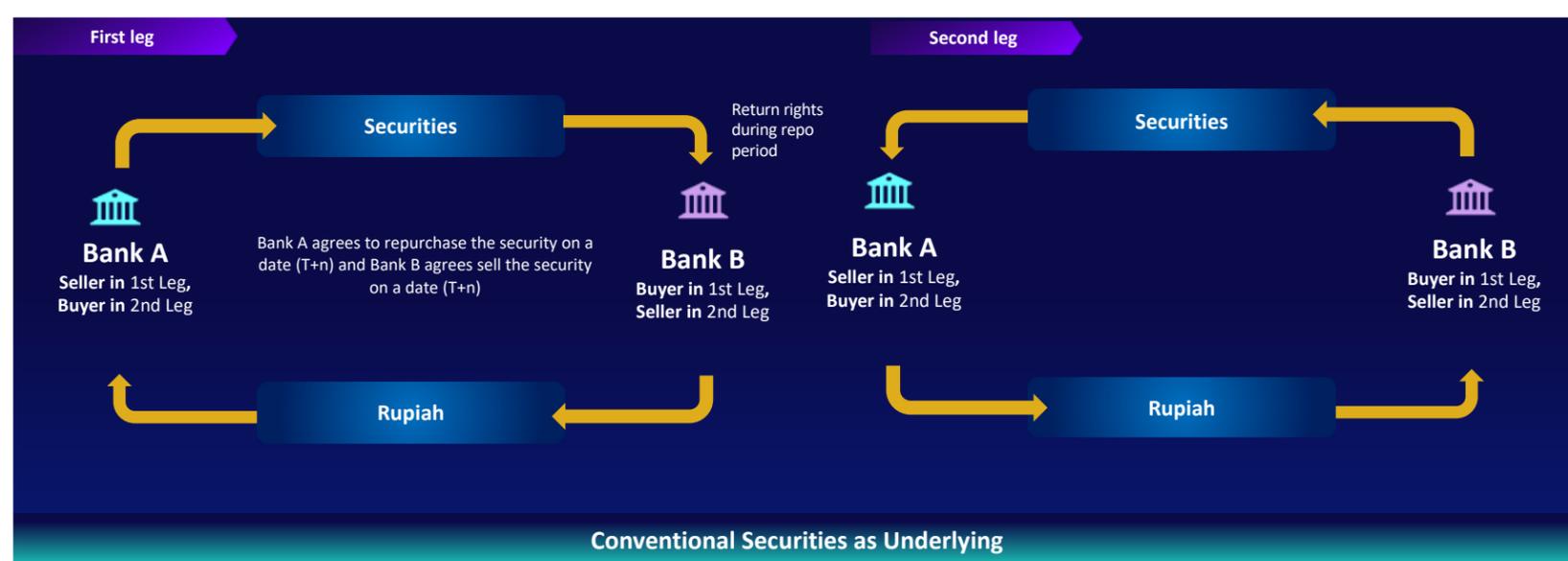
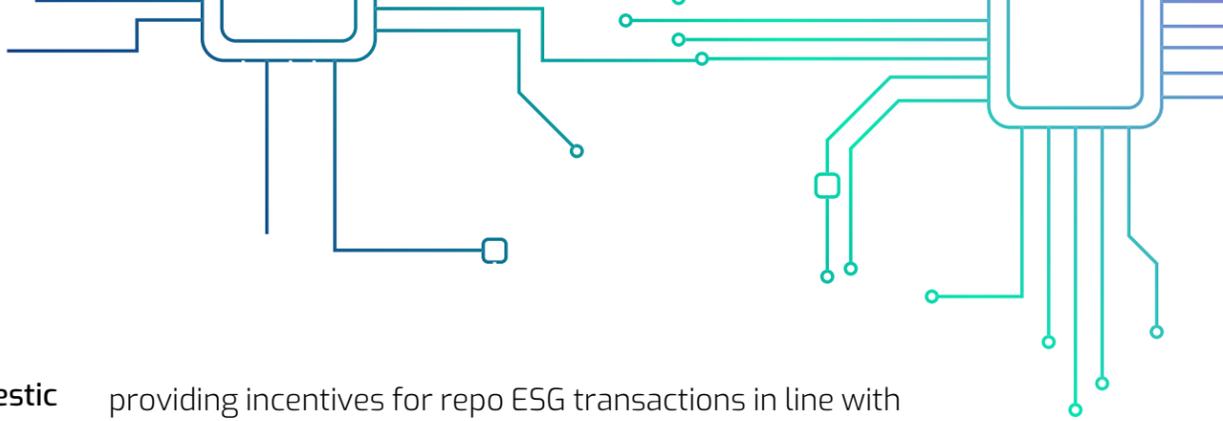


Figure 9 Repo Transaction Mechanism

First, strengthening repo market-making by PUVA Primary Dealers (PD) by encouraging PUVA Primary Dealers to: (1) increase repo line interconnection with other banks, (2) increase repo volume, and (3) expand the use of various repo collateral. Interconnection can be increased by signing a Global Master Repurchase Agreement (GMRA) and establishing repo counterparty lines with new participants. Furthermore, greater interconnection would imply increasing the repo volume of Primary Dealers, as represented by achieving the repo transaction volume target. On the other hand, expanding the diversity of repo collateral also includes the use of Bank Indonesia Forex Securities (SVBI) and other securities.

Second, the development of innovative repo features includes: (1) developing repo variations, such as securities

lending (SecLend) and cross-currency repo (CCR), and (2) repo standardisation to increase repos transacted via electronic trading platforms (ETP) and/or cleared through the PUVA central counterparty (CCP PUVA). SecLend can be structured as borrowing-and-lending transactions with cash collateral, known as securities-driven repo, or borrowing-and-lending transactions with other securities as collateral. CCR can be structured in the form of borrowing-and-lending transactions in rupiah with securities denominated in a foreign currency as collateral or borrowing-and-lending transactions in a foreign currency with rupiah securities as collateral. The standardisation of repurchase agreements transacted via ETP and/or cleared through the CCP focuses on the contractual terms or characteristics of the transaction, such as tenor, value, multiples and other parameters.



Third, expanding the participant base to domestic and foreign banks and nonbanks, accompanied by coordination with financial market authorities and associations. Expanding the repo investor base to foreign participants can be achieved by accelerating the implementation of close-out netting, which facilitates netting in repo transactions, including termination. The target of expansion is to nonbanks are nonbank financial institutions (NBFIs). As large holders of securities, NBFIs have the potential to engage actively in repo transactions to manage short-term liquidity. Efforts to expand repo market participants to NBFIs require close coordination with the relevant authorities, including the Indonesia Financial Services Authority (OJK) and Ministry of Finance (MoF), as well as industry associations, namely the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO). The areas of coordination include the implementation of close-out netting, tax harmonisation across financial markets as well as

providing incentives for repo ESG transactions in line with the Indonesia Sustainable Development Goals (SDGs) Roadmap 2030.

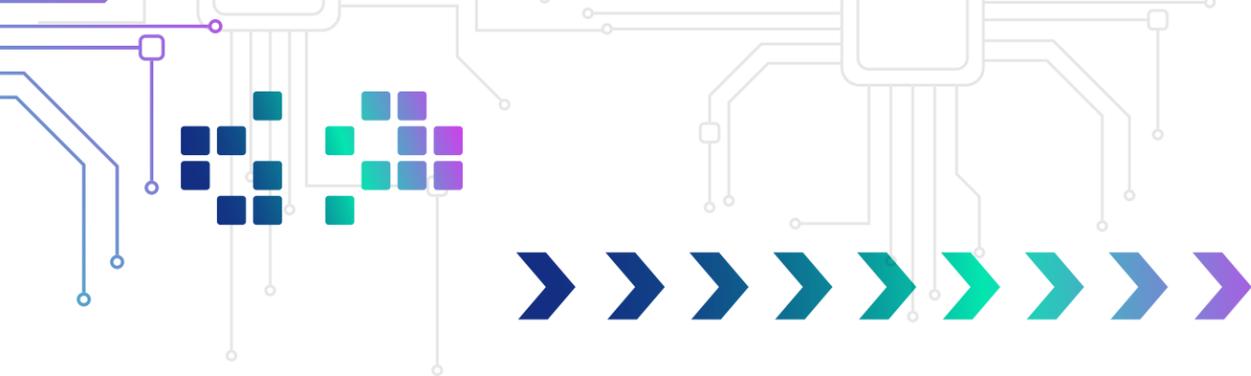
Subsequently, the focus of money market product development is on Overnight Index Swap (OIS) transactions, with efforts to increase liquidity by: (1) strengthening OIS market-making by PUVA Primary Dealers (PD), (2) developing innovative financial products with floating rates linked to IndONIA and the standardisation of OIS transactions, and (3) expanding market participants, while coordinating with other PUVA authorities and industry associations. OIS transactions exchange fixed interest flows for floating interest flows, based on IndONIA. The credit exposure of OIS transactions is low, with significant potential for further development to longer maturities to form a complete money market curve.



Figure 10 OIS Transaction Mechanism

First, strengthening OIS market-making by PUVA Primary Dealers by encouraging Primary Dealers to: (1) increase OIS interconnection with other PUVA Primary Dealers, and (2) increase the volume of OIS transactions. Interconnection can be expanded by signing Master Agreements (ISDA Master Agreement or Indonesia Derivatives Master Agreement – IDMA), followed by opening derivative lines. Increasing interconnection would imply increasing OIS transaction volume by PUVA Primary Dealers, as represented by achieving the OIS transaction volume target.

Second, developing innovative financial products with floating rates linked to IndONIA as well as the standardisation of OIS transactions to increase OIS transacted via ETP and/or cleared through the CCP. The development of financial products with floating rates began with the issuance of Bank Indonesia Floating Rate Certificates (SBMBI) and Bank Indonesia Floating Rate Notes (BIFRN) by Bank Indonesia. Such products serve as a reference when issuing floating rate financial products tied to IndONIA by market participants or the Government. Market participants and the Government can issue floating interest rate products in the form of floating rate notes or floating rate loans. The development of floating



rate financial products will catalyse hedging by market participants through OIS transactions. Meanwhile, the growth of OIS transactions will serve as a solid basis for the development of other financial derivatives, namely interest rate futures linked to IndONIA.

OIS standardisation is oriented towards creating overnight interest swaps that can be transacted via ETP and/or cleared through a CCP. The implementation of transactions through electronic trading platforms (ETP) and/or transaction clearing through a central counterparty (CCP) requires product standardisation to facilitate the automatic matching process between buyers and sellers. OIS standardisation focuses on the contractual terms or characteristics of the transaction, such as tenor, value, multiples and other parameters. By transacting OIS through ETP platforms and clearing through CCP, liquidity, operational efficiency, transparency and risk management will improve.

Third, expanding market participants to domestic and foreign banks and nonbanks, while coordinating with other PUVA authorities and industry associations. Expanding the OIS base between banks is consistent with the implementation of initiatives to increase interconnection. Meanwhile, the OIS base can be expanded to non-resident participants by accelerating the implementation of close-out netting, which allows netting to be applied to OIS transactions, including termination. As large holders of securities, NBFIs have the potential to engage actively

in OIS transactions for hedging purposes. Efforts to expand OIS market participants to NBFIs require close coordination with the relevant authorities, including the Indonesia Financial Services Authority (OJK) and Ministry of Finance (MoF), as well as industry associations, namely the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO). The areas of coordination include the implementation of close-out netting, regulatory harmonisation as well as the development of IndONIA-based financial products. Moving forward, IndONIA-based interest rate futures could be developed given the transfer of the regulation and supervision function for futures from the Commodity Futures Trading Regulatory Agency (Bappebti) to Bank Indonesia.

In terms of the sharia money market, secured transactions (Sharia Repos and Sharia-Compliant Interbank Fund Management Certificates – SiPA) are the primary focus of future development. Secured transactions offer liquidity management alternatives for sharia money market participants given comparatively low credit risk due to the provision of collateral that can be liquidated immediately in the event of counterparty default. Low credit risk creates a compelling opportunity for the expansion of secured transactions to longer maturities and a wider range of participants in line with money market deepening. In addition to expanding secured sharia money market transactions, the PPSK Act also regulates the potential development of sharia-compliant derivative products.



Figure 11 Sharia Repo Transaction Mechanism

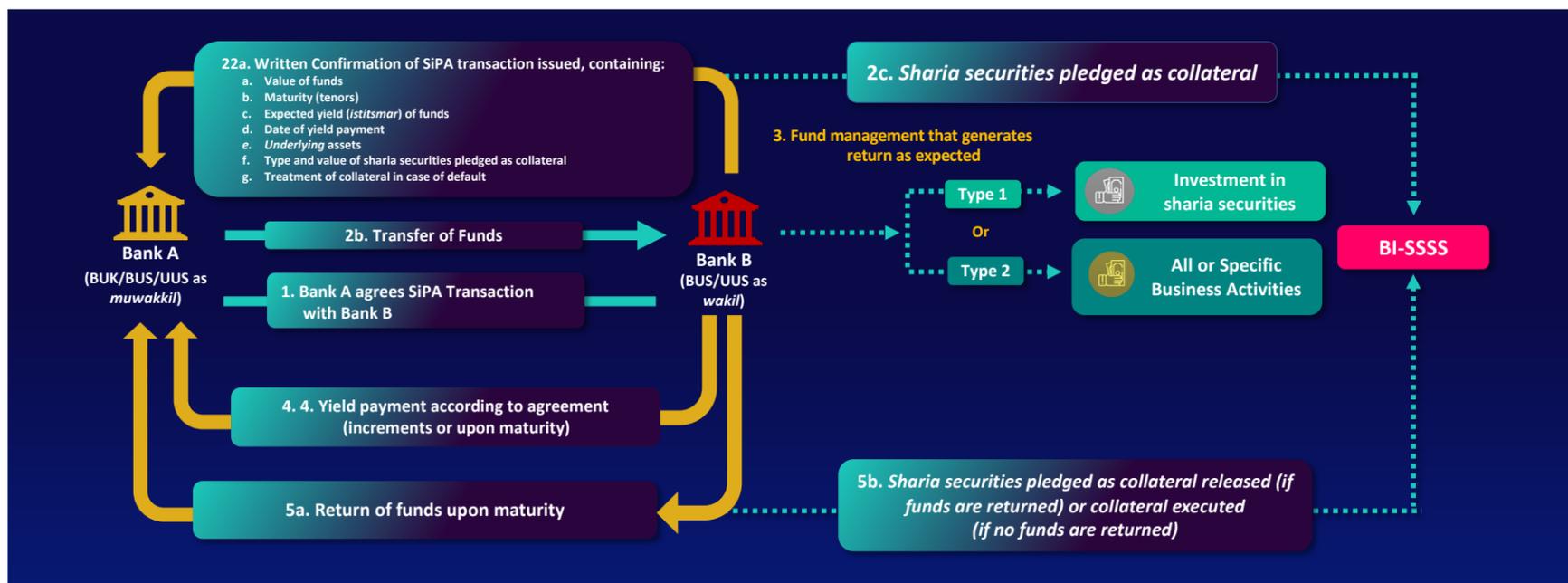


Figure 12 SiPA Transaction Mechanism

3.1.1.2 Foreign Exchange Market Product Development

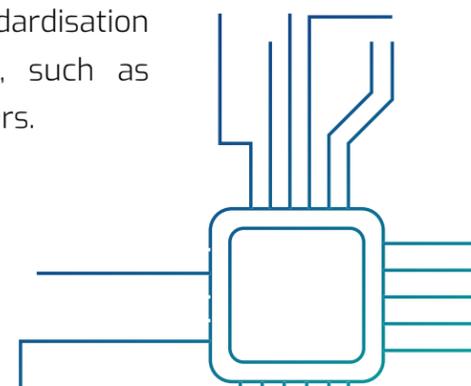
Domestic Non-Deliverable Forwards (DNDF) are the primary focus of product development in the foreign exchange market. DNDF are exchange rate derivatives that contribute to alleviating currency pressures. There are several development initiatives targeting DNDF, as follows: (1) strengthening the function of PUVA Primary Dealers (PD) in DNDF transactions, (2) strengthening the role of DNDF market-making by PUVA Primary Dealers, and (3) developing the features of DNDF products by expanding the underlying assets and DNDF contracts.

First, strengthening the function of PUVA Primary Dealers (PD) in DNDF transactions by activating PUVA Primary Dealers for DNDF transactions. PUVA PD will be oriented towards functioning as DNDF market makers through their networks and access to various market segments, both interbank and institutional, to increase price liquidity in the market. Furthermore, PUVA Primary Dealers will be urged to strengthen competitive DNDF pricing.

Second, strengthening the role of DNDF market-making by PUVA Primary Dealers by: (1) increasing the interconnection of DNDF lines with other banks, and (2) increasing DNDF transaction volume. Interconnection will be increased through the adoption of Master Agreements

(ISDA Master Agreement or Indonesia Derivatives Master Agreement – IDMA) and the opening of counterparty lines. This aims to build broader participation networks, thereby increasing DNDF transaction volume, as represented by achieving the DNDF transaction volume target. The diversification of DNDF participants (banks, nonbanks and offshore) will create more active market dynamics and promote healthy pricing competition to boost efficiency.

Third, developing DNDF product features by: (1) expanding the underlying assets, (2) applying standard DNDF contracts, and (3) DNDF standardisation. Expanding underlying assets includes balance sheet hedging to attract more market participants as well as increase DNDF demand and supply. Applying standard contracts, which includes strengthening the collateral aspects of the contracts in accordance with Indonesian law, such as credit support agreements, will bolster the implementation of marginal rule for non-CCP derivative transactions in line with OJK regulations. DNDF standardisation will be developed to support DNDF transactions on specific platforms, such as ETP MMS interconnected with the CCP. DNDF standardisation encompasses the standardisation of contracts or transaction characteristics, such as maturity, value, multiples and other parameters.



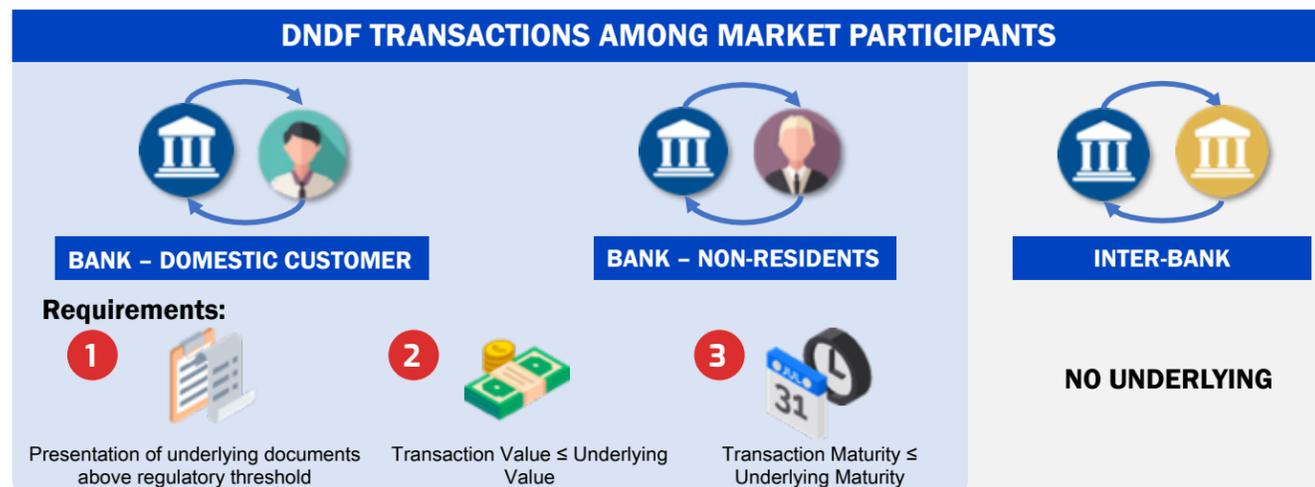


Figure 13 DNDF Transaction Mechanism

Next, the focus of product development in the foreign exchange market is **Foreign Exchange Swaps (FX Swaps)**. The development of FX Swaps will be achieved by creating more diverse foreign exchange instruments to increase FX Swap liquidity and reduce dependence on spot transactions. Reducing dependence on spot transactions will dampen price volatility in the domestic foreign exchange market. The development of innovative FX Swap products will focus on: (1) structured FX Swap products, (2) ESG Swaps and FX Swaps for long-term hedging, and (3) the standardisation of FX Swaps to facilitate transactions via Electronic Trading Platforms (ETP).

First, the development of structured FX Swap products as hedging instruments can increase potential yield through yield enhancement. Such instruments are expected to provide alternative investment options with competitive yields according to the risk profile of the investor. Structured FX Swap products, such as Deposit Linked Swaps or FX Linked Notes, offer a combination of hedging and potentially attractive yields for investors.

Second, the development of ESG Swaps and FX Swaps for long-term hedging in response to evolving market needs and in response to global initiatives that support sustainability. Innovative ESG Swap products allow market participants to manage currency risk, while supporting sustainability targets. Meanwhile, long-term hedging offers protection against long-term exchange rate fluctuations, for example to hedge against long-

term foreign currency debt. Bank Indonesia will amend regulations to facilitate product development in the foreign exchange markets, which includes possible incentives for ESG Swaps as well as long-term hedging.

Third, FX Swap standardisation is required to ensure FX Swaps can be transacted via ETP platforms. Transaction processing through ETP platforms requires product standardisation to facilitate the automatic matching process between buyers and sellers. The ability to perform FX Swap transactions via ETP platforms will boost transaction activity and, therefore, stimulate active trading. FX standardisation encompasses the contractual terms or characteristics of the transaction, such as tenor, value, multiples and other parameters.

Foreign exchange market development also covers the sharia foreign exchange market, focusing on the features of sharia hedging products, such as the types of: (1) schemes, (2) contracts, and (3) underlying assets. Sharia foreign exchange market development aims to accommodate the hedging needs of Islamic banks and their customers with exposure to foreign currencies. Hedging needs also include the needs of foreign parties conducting business in Indonesia based on sharia principles. Coordination with the financial market authorities and APUVINDO will be implemented on a continuous basis in terms of product development in the sharia foreign exchange market. Such initiatives are expected to create more diverse, liquid and competitive sharia-compliant exchange rate derivatives.



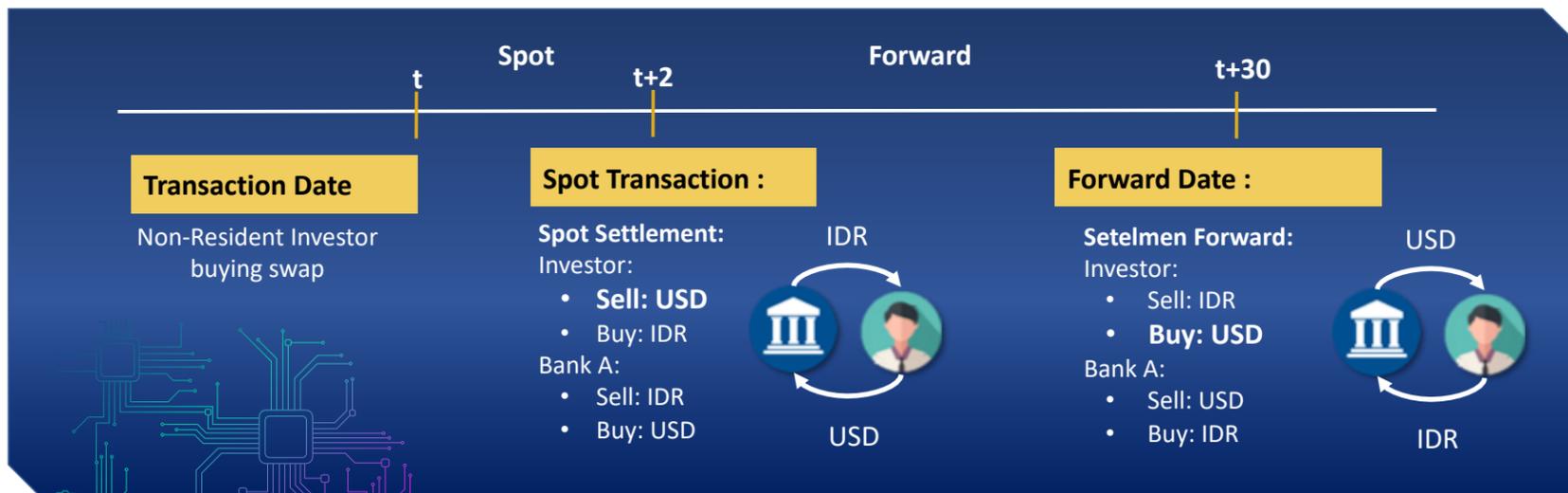


Figure 14 FX Swap Transaction Mechanism

3.1.1.3 Secondary Monetary Operations Product Development

Bank Indonesia issues securities as instruments of pro-market monetary operations to strengthen capital inflows, accelerate money market and foreign exchange market deepening and support effective monetary policy transmission. The securities issued by Bank Indonesia include Bank Indonesia Rupiah Securities (SRBI), Bank Indonesia Forex Securities (SVBI) and Bank Indonesia Forex Sukuk (SUVBI). SRBI, SVBI and SUVBI development is oriented towards initiatives that increase liquidity to accelerate the development of SRBI, SVBI and SUVBI transactions in the secondary market. Such initiatives focus on: (1) strengthening the implementation of market-making by PUVA Primary Dealers concerning the secondary transactions of securities issued by Bank Indonesia, (2) developing a diverse variety of securities issued by Bank Indonesia, (3) developing repos using collateral in the form of securities issued by Bank Indonesia, and (4) coordinating with authorities and market participants.

First, strengthening the implementation of market-making by PUVA Primary Dealers by encouraging primary dealers to increase the secondary transactions of securities issued by Bank Indonesia. PUVA Primary Dealers are required to submit annual business plans containing a market-making strategy for the secondary transactions of securities issued by Bank Indonesia, alongside other targets. Achieving those targets forms an integral part of the PUVA PD assessment conducted by Bank Indonesia.

Second, developing a diverse variety of securities issued by Bank Indonesia, for example Bank Indonesia Floating Rate Certificates (SBMBI). SBMBI holders will have exposure to IndONIA rates and are, therefore, targeted to undertake OIS transactions for interest rate hedging. This will increase the liquidity of OIS transactions, which are used to form the forward-looking term structure of interest rates (TSIR). SBMBI issuances are targeted as a showcase for the future development of other financial products with floating rates tied to IndONIA by the Government and market participants towards issuing floating rate notes by the Government and banking industry or the disbursement of loans with floating interest rates based on IndONIA by the banking industry.

Third, developing repos using collateral in the form of securities issued by Bank Indonesia. The range of repo collateral will be expanded by PUVA Primary Dealers as part of their market-making strategy, targeting Bank Indonesia Forex Securities (SVBI) and other securities issued by Bank Indonesia.

Fourth, coordination with financial market authorities, such as the Indonesia Financial Services Authority (OJK) and Ministry of Finance (MoF), and market participants (including APUVINDO and the Indonesia Bond Pricing Agency - IBPA), as part of the SBMBI secondary market development strategy. Such coordination measures include the tax treatment of securities issued by Bank Indonesia and fair pricing through mark-to-market. Unambiguous tax policy and the availability of fair pricing will attract investors to the secondary market.



In line with the development of SRBI, SVBI and SUVBI transactions in the secondary market, development strategies targeting Bank Indonesia Sukuk (SukBI) will focus on increasing liquidity and, ultimately, strengthening the effective transmission of monetary policy by Bank Indonesia. Development initiatives for SukBI will be implemented, among others, through innovative product features to expand the investor base. A larger investor base is expected to increase SukBI transactions in the secondary market, thereby ensuring that SukBI function as SRBI, SVBI and SUVBI in terms of attracting foreign capital inflows.

3.1.1.4 Digital Financial Asset (DFA) Development

Development initiatives targeting digital financial assets (DFA), consisting of digital cash and digital securities, officially fall under the auspices of Project Garuda. Project Garuda contains initiatives to explore digital cash in the form of Central Bank Digital Currency (CBDC), known as the Digital Rupiah, as well as the digital securities to be transacted with the Digital Rupiah. Digital securities are represented in the form of tokens within DLT-based infrastructure, generated through tokenisation.

Theoretically, digital securities can be created in two ways, namely: (1) the conversion of existing securities that 'live' in conventional infrastructure, and (2) new securities issued directly through DLT-based infrastructure. *First*, digital securities created through the conversion of existing securities with the potential for tokenisation, such as the types of securities currently transacted in the money market and foreign exchange markets. Such securities include the monetary operations instruments of Bank Indonesia, government securities (SBN) and securities issued by the corporate sector. *Second*, digital securities issued directly through DLT-based infrastructure, which can be designed with more flexible and diverse characteristics, enabling them to meet needs that are not fully addressed by the existing ecosystem.

The use of digital securities in money market and foreign exchange market transactions can take the form of securities settled using Digital Rupiah or other assets eligible as collateral for a transaction. The optimal use

of digital securities will be possible if the transaction use cases provide added value and are attractive to market participants. Added value can include transaction lifecycle efficiency on a platform, pricing, or new use cases as required by the market yet unavailable through the conventional ecosystem.

The development of use cases for digital securities is supported by the emergence of smart contracts.

During the experimental phase of Project Garuda, smart contracts were tested across different functionalities. *First*, programmability allows smart contracts to be configured as required. *Second*, composability indicates that smart contracts can effectively combine different transactions into a new transaction. *Third*, tokenisation also relates to the use of smart contracts, specifically for asset tokenisation. Through such functionality, smart contracts can be designed and configured to suit the development needs of digital securities. Smart contracts can be used to achieve various goals, including transaction generation, transaction processing automation with specific prerequisites, as well as asset tokenisation.

Considering future developments in financial technology, the development policy for digital securities, supported by smart contracts, will be determined based on the results of exploration under Project Garuda. The development of smart contracts in line with business logic to support the lifecycle of digital securities will be an integral part of the ITSK innovation hub, integrated with Digital Rupiah development. The development strategy for digital securities will be aligned with the policy stance review based on the results of exploration in Project Garuda, Bank Indonesia policy, particularly pro-market monetary operations, as well as the readiness of market participants in terms of adopting DFA transactions.

3.1.2 Pricing Development

The development of PUVA pricing is oriented towards achieving the strategic target of establishing efficient and credible pricing to overcome various pricing gaps in the money market and foreign exchange market in accordance with future market dynamics and the strategic environment.

3.1.2.1 Money Market Pricing Development

Pricing development in the money market is focused on efforts to strengthen efficient and credible reference prices referring to IndONIA for overnight tenors and the OIS Curve to form a term structure of interest rates (TSIR) from maturities from 2 (two) weeks to 12 (twelve) months. Currently, IndONIA is the reference rate for overnight tenors. The discontinuation of the Jakarta Interbank Offered Rate (JIBOR) created the need for initiatives to develop non-overnight reference rates (term rate) in the form of a forward-looking term rate. The development of reference prices in the money market will be achieved by: (1) forming an OIS curve as the transaction-based term rate for tenors from 2 (two) weeks to 12 (twelve) months through OIS development, and (2) reformulating IndONIA based on overnight repos.

First, formation of the OIS curve or term rate through OIS development on the demand and supply sides. On the demand side, development aims to increase the use of IndONIA as a reference rate for financial products, including loans and securities. Market participants, as users or holders of financial products, are targeted for interest rate exposure, which will encourage them to engage in OIS transactions to hedge against interest rates, thereby increasing demand for OIS transactions. On the supply side, development includes 3 (three) main initiatives, as follows: (1) strengthening the market-making function of PUVA Primary Dealers through the mandatory submission of price quotations and OIS transactions, and (2) refining OIS market conventions by the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO).

Second, reformulating IndONIA based on overnight repos for better credibility in line with achieving the repo transaction target. Although IndONIA is considered credible, the current upward trend of repo liquidity relative to interbank money market transactions necessitates stronger reference rates that reflect actual market conditions. Strengthening can be achieved by reformulating IndONIA away from unsecured overnight

interbank transactions towards secured repo transactions. Reformulating IndONIA will increase the credibility and robustness of money market benchmark rates as the influence of credit risk from the parties involved is reduced. Strengthening IndONIA will be supported by the development of more integrated data infrastructure, thus enabling the robust publication of prices with minimal disruption.

Initiatives to form a reference rate or transaction-based reference rate as the primary focus of pricing development in the sharia money market will continue. Reference rates are necessary as benchmark yields for participants in the sharia money market. During the initial stage, benchmark yields will be available for overnight tenors, calculated based on the volume-weighted average of real transaction data in the sharia money market.

3.1.2.2 Foreign Exchange Market Pricing Development

Pricing development in the foreign exchange market is oriented towards efforts to strengthen more efficient and credible JISDOR and non-USD/IDR reference rates. Currently, 2 (two) reference rates are available in the foreign exchange market, namely JISDOR and the non-USD/IDR reference rate. The development of reference prices in the conventional and sharia foreign exchange market will involve: (1) reformulation of JISDOR, and (2) expansion of non-USD/IDR reference rates.

First, pricing reformulation to strengthen JISDOR. Although JISDOR is considered a credible reference rate for interbank spot transactions, the current upward trend of increasing USD/IDR spot transactions between domestic banks and nonbanks necessitates reference rates that reflect actual market conditions. Reformulation efforts include expanding the scope of transaction sources to form JISDOR, including transactions between banks and selected nonbanks. The reformulation will be implemented in accordance with best practices and market developments. Furthermore, reformulation will be supported by the development of integrated data



infrastructure, including data capturing, data centres, and data portals, to ensure more robust publication of reference prices with minimal disruption.

3.1.2.3 Strengthening Pricing and Alignment with Pro-Market Monetary Operations

Monetary policy transmission is effective if changes in the policy rate are transmitted fully to the pricing term structure of the money market and foreign exchange market, consisting of interest rates and exchange rates. The term structure of the money market is represented by the money market curve, while the term structure of the foreign exchange market is represented by the FX forward curve. PUVA prices serve as a benchmark for pricing other financial market products, including securities, loans and derivatives. The term structure can be strengthened through: (1) product development and pricing in the money market and foreign exchange market, (2) alignment with the pro-market monetary operations strategy, and (3) forming PUVA prices in accordance with international standards, accompanied by greater price information transparency.

First, product development and pricing in the money market and foreign exchange market are split into the development of money market products and foreign exchange market products. In the money market, product development will focus on increasing transaction volume for repo and OIS liquidity. This will be accompanied by the development of efficient and credible pricing, referring to IndONIA and the OIS Curve, to form a term structure from tenors of 2 (two) weeks to 12 (twelve) months. In the foreign exchange market, product development will focus on increasing transaction volume for DNDF and FX Swap liquidity. This will be accompanied by the development of efficient and credible JISDOR pricing and non-USD/IDR reference rates to create a term structure from tenors of 2 (two) weeks to 12 (twelve) months. In the sharia money market and foreign exchange market, product development will focus on increasing the volume of secured sharia-compliant transactions and sharia

hedging transactions to create an efficient and credible term structure in the sharia money market and foreign exchange market.

Second, product development and pricing in the money market and foreign exchange market will be aligned with the pro-market monetary operations strategy. Alignment will be achieved, among others, by increasing the role of PUVA Primary Dealers and the liquidity of SRBI, SVBI and SUVBI transactions in the secondary market to create a term structure in the form of a money market curve and FX forward curve. SBMBI issuances are expected to foster the development of swap transactions (OIS and FX swaps), thereby forming a money market curve and FX forward curve as a reference for the market. In line with the planned formulation of a term structure in the money in foreign exchange markets, a yield curve for the sharia money market will be developed based on the relationship between yields and tenors of an instrument or transaction in the sharia money market.

Third, pricing in accordance with international standards, accompanied by greater price information transparency, to expand the use of reference prices for financial market products. After product development and pricing have successfully created liquidity across all benchmark tenors in the money market and foreign exchange market, the subsequent phase is to formulate a term structure for PUVA prices. This will be based on international standards, including the Principles for Financial Benchmarks issued by the International Organisation of Securities Commissions (IOSCO). Meanwhile, the term structure will be published in synergy with APUVINDO as well as other relevant parties to ensure broad dissemination. Transparency and market access to credible pricing information will be improved by refining and expanding omni-channel PUVA data (information channels) on the Bank Indonesia website, alongside external information providers, the Indonesia Bond Pricing Agency (IBPA) and websites of market associations. Efficient, credible and transparent financial benchmarks will improve the pricing of various financial products by market participants.



3.2 Strategy 2:

3.2.1 Participant Development

Bank Indonesia continues implementing development strategies for PUVA participants to achieve the strategic target of creating competent, active and collaborative PUVA participants.

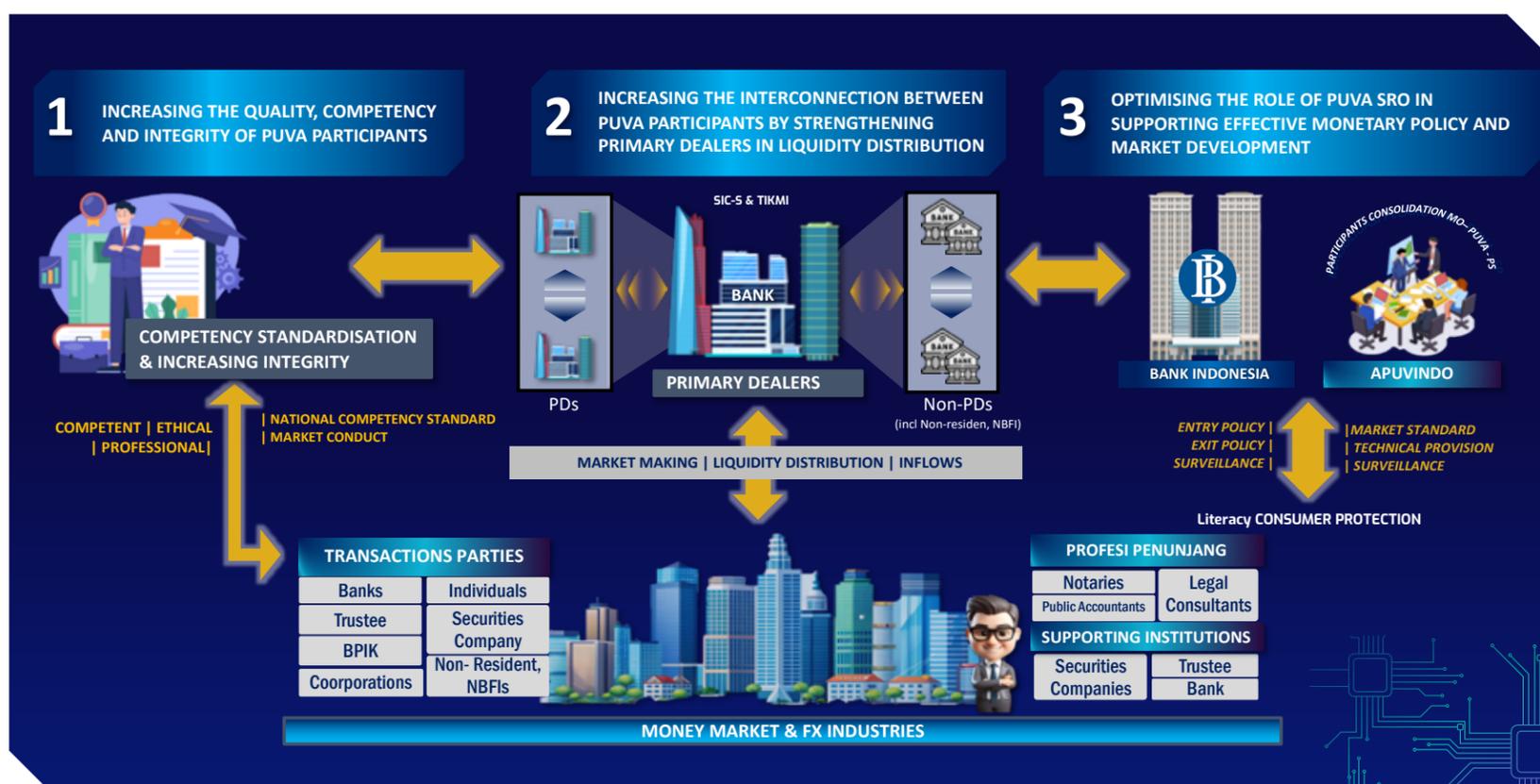


Figure 15 PUVA Market Participant Development

3.2.1.1 Competence Development

Efforts to develop competent, ethical and professional PUVA participants focus on: (1) competence development, and (2) implementing a market code of conduct. Competency development is implemented through competency certification referring to the national best competency standards. Competency certification aims to ensure market participants have adequate knowledge, expertise and market conduct in line with market needs. Competency standardisation is also strengthened to create efficient and trusted markets. In addition, the application of a market code of conduct is based on global best practices, which aims to maintain market integrity

and transparency, while encouraging market participants to act ethically and professionally and support consumer protection principles.

First, competency development targeting PUVA participants through mandatory treasury competency certification issued by a treasury certification institute registered with Bank Indonesia. Bank Indonesia has, therefore, stipulated mandatory treasury competency certification alongside the criteria, requirements and registration mechanisms to become a registered treasury certification institute within Bank Indonesia regulations. Currently, the Association Cambiste Internationale

Financial Markets Association (ACI FMA) Indonesia is the only treasury competency certification association registered with Bank Indonesia. ACI FMA Indonesia has organised certification exams and maintained the competencies of treasury dealers since its appointment as a treasury certification institute on 3rd April 2024. Meanwhile, the treasury certificates held by treasury dealers are required for registration with Bank Indonesia. This is in accordance with the mandate of the PPSK Act, namely that all professions in the financial sector must be registered with the competent authority. The treasury certification issued by ACI FMA will be strengthened and expanded to also include the Sharia Treasury Certification Scheme.

Second, the implementation of a market code of conduct was initiated with the introduction of the Market Code of Conduct (MCoC) and Islamic Financial Market Code of Conduct (ICoC) as ethical guidelines for PUVA participants by Bank Indonesia. The MCoC adopted the FX Global Code (the Code), as a set of global principles and good practices issued by the Global Foreign Exchange Committee (GFXC). On the sharia side, the ICoC is aligned with Islamic financial market regulations, fatwa issued by the National Sharia Board of the Indonesian Council of Ulama (DSN-MUI), and international best practices. Strengthening commitment to the implementation of the code of conduct, Bank Indonesia requires PUVA participants to submit a written statement of commitment to the code of conduct, which must be published on the official website of Bank Indonesia. This ensures the consistent implementation of the code of conduct to maintain the integrity and reputation of domestic and international PUVA participants.

3.2.1.2 Development of Active Participants

Developing active PUVA participants is focused on: (1) strengthening consolidation among PUVA participants, and (2) strengthening the implementation of PUVA Primary Dealers. Bank Indonesia has announced PUVA Primary Dealers (PD) as the main participants in the money market and foreign exchange market and MO partners of Bank Indonesia, which are encouraged to always increase transaction volume interconnection and pricing in the money market and foreign exchange market. Strengthening PUVA industry consolidation, therefore, through the implementation of Primary Dealers is a crucial element of participant development.

First, consolidation among PUVA participants is bolstered by: (1) strengthening the assessment process to ensure participants comply with the established consolidation criteria, particularly in terms of the transactions, interconnection, competencies, risk management and information technology (TIKMI), and (2) strengthening the review process. Consolidation is achieved in accordance with fulfilment of the: (1) general criteria, namely size, interconnectedness, complexity and substitutability (SICS), based on international standards for determining systemically important financial institutions (SIFIs), and (2) specific criteria, namely TIKMI, which act as a reference for structuring participation in monetary operations, money market and foreign exchange market, and the payment system. Participants that also meet the criteria for risk management and information technology are designated as PUVA Primary Dealers. The process for assessing TIKMI criteria, particularly risk management and information technology, as well as the review process for how well PUVA Primary Dealers comply with the TIKMI criteria, are strengthened through the application of granular data and supervisory technology (SupTech).

Second, strengthening PUVA Primary Dealers in terms of PUVA deepening is implemented gradually by: (1) stipulating the scope of activities, obligations and incentives, (2) expanding the scope of OMO transactions available to Primary Dealers, and (3) reviewing the function of Primary Dealers periodically. *First*, during the initial phase, Bank Indonesia determined the scope of activities, obligations and incentives available to PUVA Primary Dealers upon complying with all requirements. During the next phase, Bank Indonesia will harmonise the rights, responsibilities and incentives of Primary Dealers alongside a review of primary dealer implementation. *Second*, the scope of OMO transactions available to PUVA Primary Dealers will be expanded gradually moving forward based on the readiness of market participants and financial market infrastructure support. *Third*, Bank Indonesia will conduct periodic reviews to strengthen the function of PUVA Primary Dealers and, therefore, stimulate transactions and pricing in the money in foreign exchange markets. This is consistent with their critical role to redistribute liquidity, function as market makers and contribute to attracting capital inflows from non-resident investors. Moving forward, the Islamic banking industry will also be required to fulfil the TIKMI criteria to support the development of Sharia Primary Dealers.

3.2.1.3 Increasing Collaboration

Bank Indonesia is collaborating in synergy with the industry association, namely the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO), to deepen the PUVA markets and increase the quality of resources among PUVA participants. *First*, APUVINDO support in PUVA development and deepening includes the expansion of strategic program implementation, increasing the transactions and preparing market standards. *Second*, APUVINDO cooperates in synergy with ACIFMA, among others, to increase the quality of resources among PUVA participants by standardising certification, capacity building and literacy. Such initiatives aim to strengthen the work program prepared by APUVINDO upon establishment as a self-regulatory organisation (SRO) and strategic partner of Bank Indonesia in terms of PUVA deepening. On 5th March 2024, Bank Indonesia designated APUVINDO as a self-regulatory organisation for the money market and foreign exchange market (SRO PUVA), mandated with preparing market standards and technical provisions as well as performing surveillance of its members.

APUVINDO continues to strengthen its institutional arrangements through: (1) membership expansion, and (2) membership of international forums. *First*, APUVINDO membership will be expanded gradually to all PUVA participants, including the banking industry, professional associations and FMI operators. *Second*, APUVINDO will strengthen its representation function for the PUVA industry in international financial markets through membership of the Global Foreign Exchange Committee (GFXC) and serving as a public register for statements of commitment to the market code of conduct submitted by PUVA participants. Membership of international forums aims to increase APUVINDO effectiveness as a strategic partner of the regulator and representative of the PUVA industry. This emphasises the firm commitment of APUVINDO to apply the market code of conduct and create credible and ethical PUVA markets.

3.2.2 Infrastructure Development

Developing and strengthening Financial Market Infrastructures (FMIs), supported by the latest technology, are an integral element of the third vision of BPPU 2030 to strengthen the stability and

reliability of FMIs in accordance with the 3i principles and international standards, including the PFMI. FMI development is expected to expand PUVA products and participants, including sharia PUVA, while supporting policymaking through the utilisation and optimisation of data sourced from the FMIs (data-driven policy). FMI development, which involves technology innovation and data digitalisation, will be supported by stronger cybersecurity and data privacy. Consequently, the goals and strategic targets of FMI development, namely to create and maintain reliable, efficient and secure PUVA FMIs, can be achieved in accordance with the strategic environment.

FMI strengthening encompasses 3 (three) aspects, namely the front end, middle end and back end. On the front end, FMI development involves strengthening the trading venue, including the Bank Indonesia-Electronic Trading Platform (BI-ETP) and Market Operator (MO-ETP). On the middle end, FMI development involves strengthening and developing clearing systems through the CCP-PUVA. On the back end, FMI development involves strategies to strengthen SSS/CSD through the development of the Bank Indonesia – Scripless Securities Settlement System (BI-S5SS), development of the payment system through the Bank Indonesia – Real Time Gross Settlement (BI-RTGS) system, as contained in BSPI 2030, and development of the Digital Rupiah in line with Project Garuda, while also developing reporting systems, focused on the establishment of a Trade Repository (TR).

PUVA FMI development also involves the application of the ISO 20022 international standard for financial messaging issued by the International Organisation for Standardisation to increase transaction efficiency, transparency and security, and in preparation for future PUVA digitalisation. ISO 20022 implementation will facilitate the availability of more comprehensive, granular, structured and uniform data. Such data can be utilised and analysed further to support data-driven policymaking and industry development. In addition, ISO 20022 implementation will facilitate integration between financial market infrastructures given the use of standardised formats and uniform standards. FMI integration is expected to enable Straight Through Processing (STP), which will improve transaction efficiency. STP is necessary in line with the growth of transaction volume and liquidity.



3.2.2.1 Front End: Trading Venue

Development of the Bank Indonesia-Electronic Trading Platform (BI-ETP) aims to facilitate monetary operations and SBN transactions as an integral part of the PUVA integration strategy with pro-market monetary operations (MO). BI-ETP can facilitate auction and window-based transactions. Furthermore, the BI-ETP will also be developed to support innovative digital asset-based MO instruments, thereby accommodating both conventional and digital instruments moving forward.

In addition to the BI-ETP, strengthening the trading venue also encompasses Market Operator-Electronic Trading Platforms (MO-ETP). MO-ETP will be developed gradually to facilitate bilateral and multilateral PUVA transactions, including repo, OIS, DNDF and FX Swaps. Furthermore, market operators will be oriented towards integration with the CCP to facilitate STP, thereby improving transaction efficiency in terms of time and cost, while minimising the risk of human error. MO-ETP could be developed to facilitate transactions for retail PUVA instruments through interconnection with back-end infrastructure, namely the Bank Indonesia – Scripless Securities Settlement System (BI-S5SS) and retail payment system infrastructure (including Bank Indonesia Payment Clear and Bank Indonesia Fast Payment, or BI-FAST). Interconnection is built on the following principles: (1) consistent with the direction of digitalisation, as contained in the Indonesia Payment System Blueprint (BSPI), utilising the Quick Response Code Indonesia Standard (QRIS) and National Open API Payment Standard (SNAP), (2) prioritising interlinked financial technology (Fintech) with the banking industry, and (3) minimal impact of development on associated infrastructure.

3.2.2.2 Middle End: Central Counterparty (CCP)

The development and strengthening of the CCP-PUVA will continue after the implementation of Qualifying CCP (QCCP) by expanding the products and services eligible for clearing via the CCP. Use of the CCP-PUVA is expected to increase PUVA transactional efficiency through novation, multilateral netting and solid risk management, as well as integration with the ETP. CCP-PUVA development will increase the number of products and services eligible for clearing through the CCP, including repo and OIS transactions. Products will be added to the CCP-PUVA gradually based on the readiness of the CCP and market participants.

CCP-PUVA implementation will be strengthened upon recognition by international regulators as a recognised CCP. The international regulators include the European Union, United States, UK and Japan. Obtaining recognised CCP status will strengthen the credibility of the CCP for onshore and offshore participants and ensure operational activities conform with global standards. In addition, future CCP-PUVA development will include cleared foreign currencies and accommodate digital financial assets (DFA).

3.2.2.3 Back End: BI-S5SS, BI-RTGS, Digital Rupiah and Trade Repository

Back-end development encompasses the: (1) Bank Indonesia – Scripless Securities Settlement System (BI-S5SS), (2) Bank Indonesia – Real Time Gross Settlement (BI-RTGS) system, (3) Digital Rupiah, and (4) Trade Repository (TR).

First, development of the third generation (Generation III) BI-S5SS is oriented towards strengthening the stability and reliability of financial market infrastructures (FMIs) through modernisation of the standard message format and settlement features for securities, securities administration, and interconnection. Development is divided into 2 (two) implementation stages. The first stage involves implementation of the ISO 20022 international standard for financial messaging, the development of hybrid registry features, and the development of information clearing. Implementation of the DvP Model 2 in BI-S5SS is an option to increase liquidity and efficiency using settlement netting. The hybrid registry feature is expected to increase settlement assurance for investors registered in the SID. Meanwhile, information clearing is being developed as a process for transmitting, reconciling and confirming transaction information before settlement occurs to increase settlement assurance. The second stage consists of developing interconnections between domestic and cross-border infrastructure, alongside development to facilitate the Digital Rupiah. Cross-border mechanisms will be developed through the BI-RTGS system or through DvP link. BI-S5SS will accommodate tokens in the form of 'digital twins' of securities in a special sub-account in the BI-S5SS system, settled via DvP on the Digital Rupiah platform.

Second, modernisation of the third generation (Generation III) Bank Indonesia – Real Time Gross Settlement (BI-RTGS) system aims to increase financial system stability as well as the effectiveness and efficiency of financial

market services through modernisation of the standard messaging format, along with interconnection and settlement features. Implementation of Gen-III BI-RTGS is divided into 2 (two) stages. The first stage consists of: (1) focusing on multicurrency features for domestic transaction settlement, (2) implementation of the ISO 20022 international standard for financial messaging, and (3) achieving 3i integration with other financial market infrastructures (FMIs). Implementation of multicurrency features in the third generation BI-RTGS system is expected to increase the effectiveness and efficiency of PUVA product settlement. Consequently, real-time foreign currency settlement will be achieved in the Asian time zone. This will be supported by ISO 20022 implementation to ensure the seamless integration of domestic and international FMIs. The second stage of development includes the: (1) development of cross-border settlement, and (2) interconnection with the block chain-based ecosystem. The Gen-III BI-RTGS system will facilitate cross-border transactions through broader multicurrency features, including the use of Local Currency Transactions (LCT) for greater transaction and settlement efficiency. Adoption of the blockchain ecosystem in the financial markets will be addressed through the development of an interconnection model with the BI-RTGS system to support the use of rupiah as a settlement asset for transactions and the innovative development of Digital Rupiah. Gen-III BI-RTGS system development is detailed in the Indonesia Payment System Blueprint (BSPI) 2030.

Third, Digital Rupiah development is oriented towards supporting PUVA deepening through experimentation

with digital securities for various use cases in the money market and foreign exchange market. The experimentation stage is a gradual process through various use cases as follows: (1) issuing, transferring and withdrawing digital securities in the securities ledger, (2) monetary operations and PUVA transactions, and (3) the use of programmability, composability and tokenisation capabilities for PUVA deepening. Digital Rupiah development is formulated in more detail in Project Garuda.

Fourth, implementation of a Trade Repository (TR) is oriented towards facilitating end-to-end data management, data/information disclosure to the authorities and public based on data access matrices, as well as interconnection between Bank Indonesia's data centres and (surrounding) reporting entities. TR functionality will be developed through complementary features, such as trade collection, data sharing and data life-cycle management towards the end-to-end management of granular and aggregate data. Furthermore, the data will be disclosed to regulators, market participants and the public (market data disclosures) as a form of transparency in line with international guidelines, including the PFMI issued by CPMI and IOSCO. ISO 20022 implementation will support TR interconnection with other FMIs, such as the CCP-PUVA, external systems (including the systems of reporting entities as well as cross-border TR) and other supporting systems. This is in line with the goal of optimising FMI data utilisation, particularly in the TR, to support data-driven policy and business development within the industry.

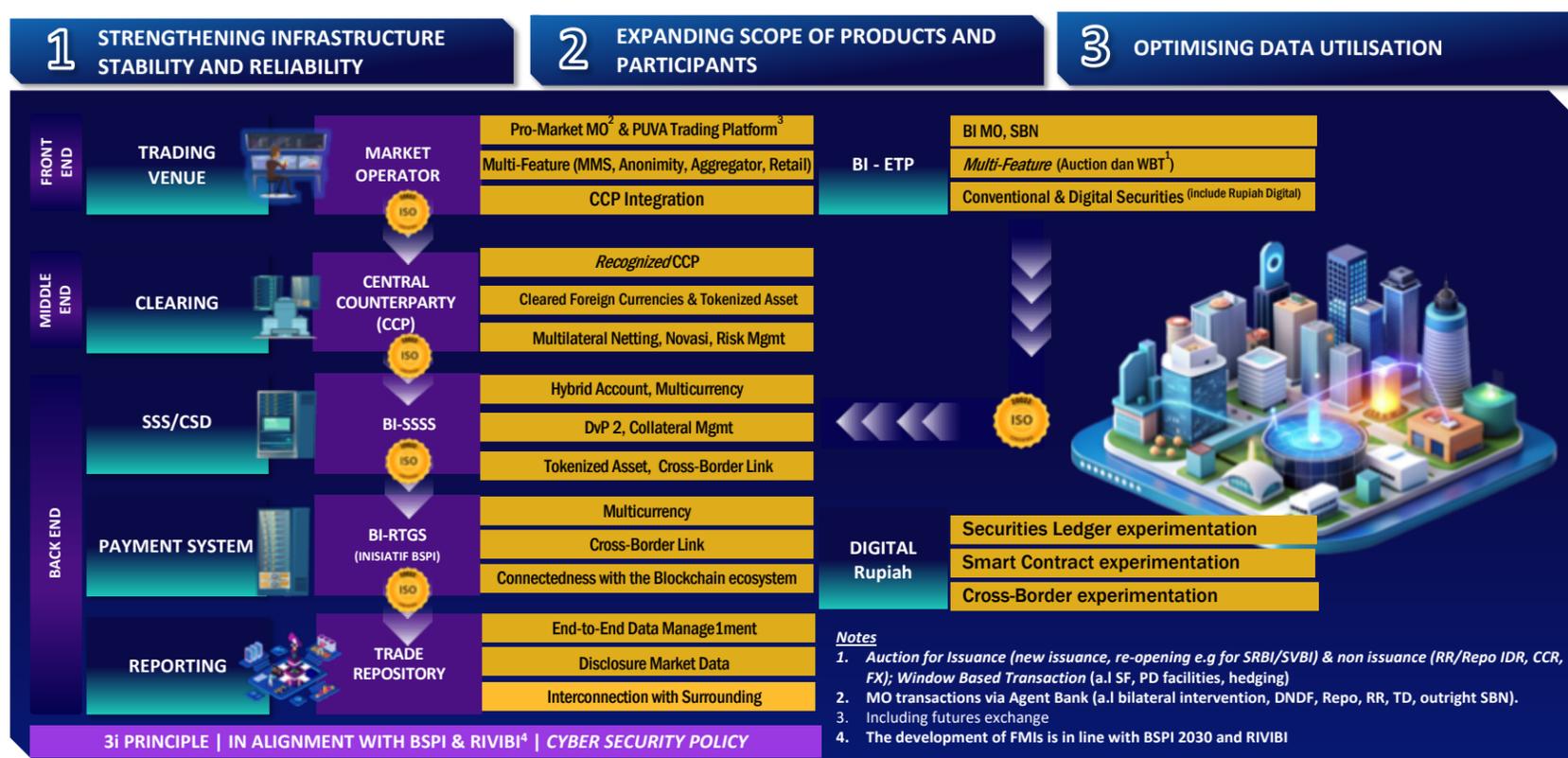


Figure 16 Financial Market Infrastructure (IPK) Improvement Initiative



3.3 Strategy 3: Synergy and Coordination

The third main initiative, namely synergy and coordination in economic financing, is oriented towards supporting the creation of money market and foreign exchange market with good governance. The PUVA deepening synergy and coordination initiative focuses on 3 (three) areas as follows: (1) pro-market monetary operations and surveillance, (2)

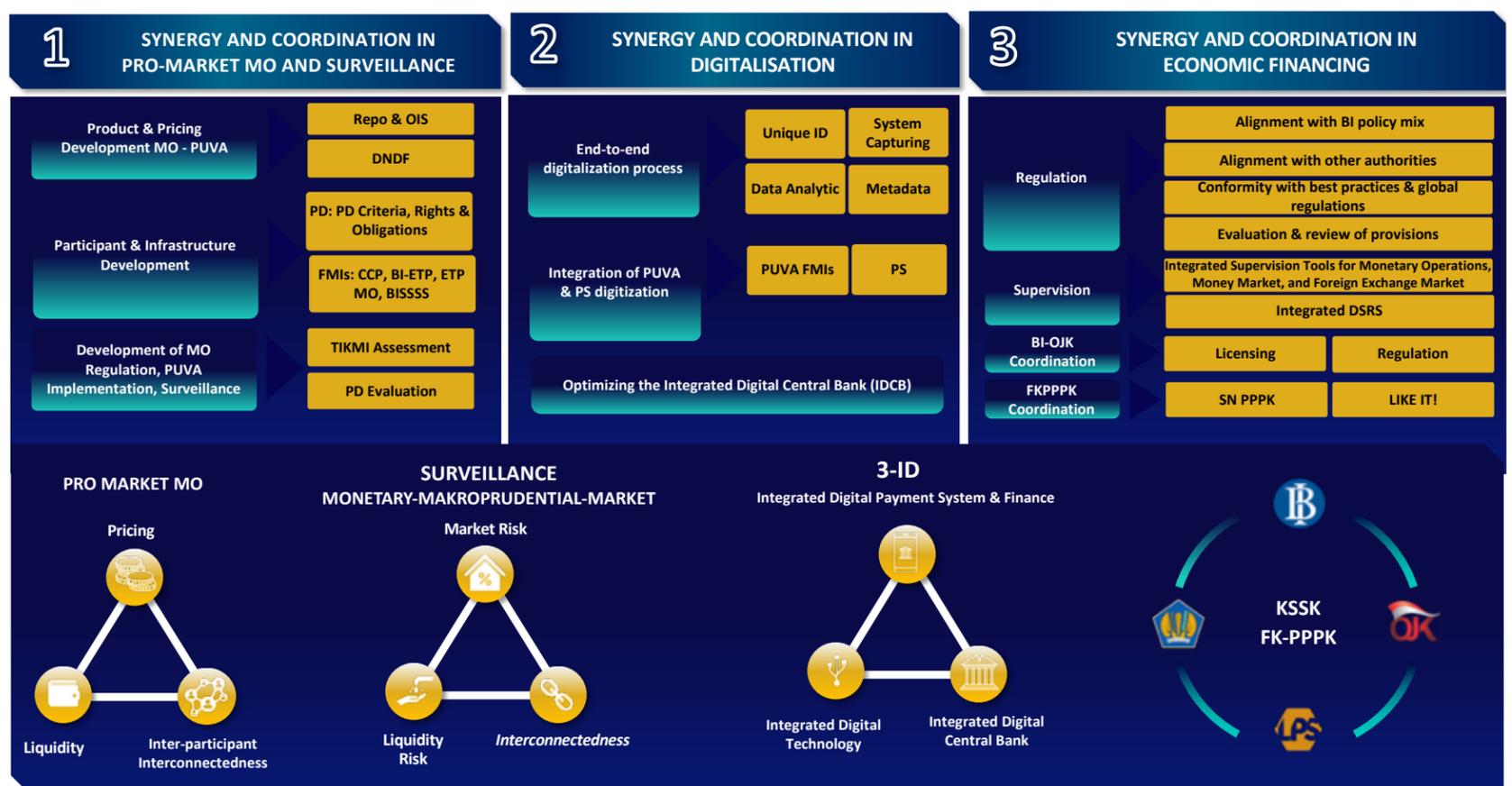


Figure 17 Synergy and Coordination Initiative

3.3.1 PUVA Deepening, Pro-Market Monetary Operations and Surveillance Synergy

The PUVA deepening strategy is integrated with pro-market monetary operations and surveillance to accelerate the growth of liquidity in PUVA transactions, market and infrastructure stability, as well as efficient pricing in accordance with market conduct.

Strategy integration will be achieved through: (1) product development and pricing, (2) participant and infrastructure development, and (3) strengthening pro-market monetary operations, PUVA deepening and monetary market surveillance. The integration of PUVA deepening, pro-market monetary operations and surveillance is targeted to accelerate PUVA deepening, thereby providing a significant contribution to financial sector and real sector development.

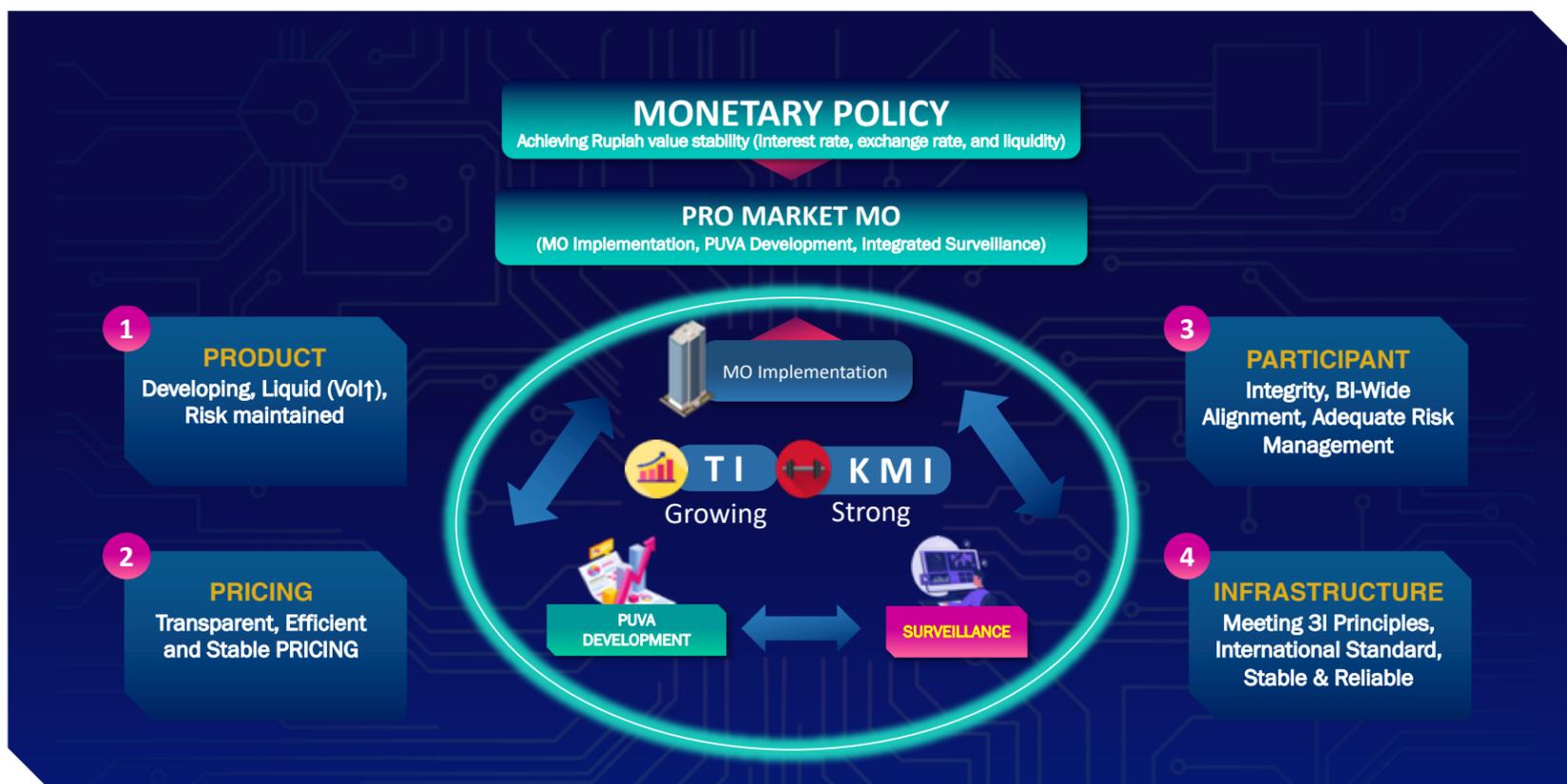


Figure 18 Integration of PUVA Deepening Policy with Implementation of Pro-Market Monetary Operations and Monetary Market Surveillance

3.3.1.1 Integration of the Product Development and Pricing Strategy

Integration of the product development and pricing strategy aims to increase the volume and liquidity of PUVA transactions, while containing and mitigating the risks. Increasing volume and liquidity while mitigating risk are prerequisites for efficient pricing in accordance with market conduct. The integration of product development and pricing with pro-market monetary operations and PUVA deepening is achieved by: (1) aligning product development in pro-market monetary operations and products in the market, (2) formulating PUVA term structures in the form of a money market curve and FX forward curve, and (3) implementing monetary market surveillance, with a focus on products and prices.

Aligning product development and pricing in pro-market monetary operations and in the market facilitates the market-led development of PUVA transactions and prices moving forward. *First*, aligning product development in pro-market monetary operations and products in the market includes: (1) Bank Indonesia repos/reverse repos with market repos, (2) Bank Indonesia monetary operations instruments with secondary transactions, and (3) Bank Indonesia DNDF and FX Swap transactions with market DNDF and FX Swap transactions. Harmonisation primarily focuses on product characteristics (for instance, haircuts, features and valuations) to minimise arbitrage

between products in pro-market monetary operations and products in the market. *Second*, formulation of a term structure of interest rates (TSIR) and FX forward curve will be based on market transaction liquidity, driven by increasing efficiency, credibility and market conduct. *Third*, monetary market surveillance, including products and prices, will be implemented by monitoring liquidity risk and market risk.

3.3.1.2 Integration of the Participant and Infrastructure Development Strategy

Integration of the participant and infrastructure development strategy aims to increase PUVA market and FMI stability. Strategy integration will be achieved by aligning: (1) PUVA Primary Dealers with MO participation, (2) FMI development for PUVA with FMI for Bank Indonesia, and (3) monetary market surveillance of participants and FMIs.

Aligning the development of PUVA participants and infrastructure with pro-market monetary operations, accompanied by surveillance of the participants and infrastructure, will accelerate achievement of the PUVA deepening targets, while managing the risks. *First*, PUVA Primary Dealers will be aligned with MO participation through harmonisation of the criteria to determine PUVA Primary Dealers and their responsibilities with the rights and obligations of PUVA Primary Dealers in

monetary operations. *Second*, aligning FMI development for PUVA with FMI for Bank Indonesia by aligning the implementation stages for PUVA Primary Dealers with the incremental provision of infrastructure as well as adjusting the functionality of existing infrastructure as required by Bank Indonesia, PUVA Primary Dealers and PUVA participants. The infrastructure includes the Bank Indonesia-Electronic Trading Platform (BI-ETP), Market Operator-Electronic Trading Platform (MO-ETP), CCP, and Bank Indonesia – Scripless Securities Settlement System (BI-S5SS). *Third*, implementing monetary market surveillance of the participants and infrastructure by monitoring and managing counterparty risk and operational risk.

3.3.1.3 Strengthening Pro-Market Monetary Operations, PUVA Deepening and Monetary Market Surveillance

Integration of the development strategies for products, pricing, participants and infrastructure is reflected through regulatory harmonisation in the area of pro-market monetary operations as well as the implementation of PUVA deepening and monetary market surveillance, particularly the regulation of PUVA Primary Dealers. Regulatory harmonisation across the three aforementioned areas is crucial considering the close interlinkages between monetary operations, PUVA deepening as well as monetary market surveillance, including the designation, implementation, evaluation and supervision of PUVA Primary Dealers. During the designation/determination stage, a bank will be approved as a PUVA Primary Dealer upon meeting the necessary requirements, including the TIKMI criteria of transactions,

interconnections, competencies, risk management and information technology or infrastructure. Those indicators are a composite of MO indicators, PUVA indicators and surveillance indicators. During the implementation stage, banks approved as PUVA Primary Dealers will gain access rights to monetary operations and specific incentives yet, on the other hand, must fulfil market-making obligations. During the evaluation and supervision stage, the activities of PUVA Primary Dealers are the objects of performance evaluations and monetary market surveillance.

Of the various aspects of regulatory harmonisation, the primary focus is on regulating the criteria for determining and designating PUVA Primary Dealers. The regulatory criteria for designating PUVA Primary Dealers ensure the banks approved as primary dealers have solid and resilient capabilities and capacity to discharge the market-making and liquidity redistribution functions. *First*, harmonising transaction and interconnection criteria by applying an integrative scope of indicators, namely: (1) transaction activity with Bank Indonesia, between PUVA participants and cross-border transaction activity, and (2) interconnectedness between PUVA participants. *Second*, aligning regulatory criteria concerning competencies, risk management and infrastructure by applying fundamental indicators towards achieving the end state of market-led PUVA deepening, namely: (1) level of fulfilment of competency standards by PUVA participants, (2) level of risk management implementation, and (3) availability of adequate interconnected infrastructure equipped for end-to-end STP processing. The fulfilment of TIKMI criteria by PUVA Primary Dealers is evaluated periodically by Bank Indonesia.

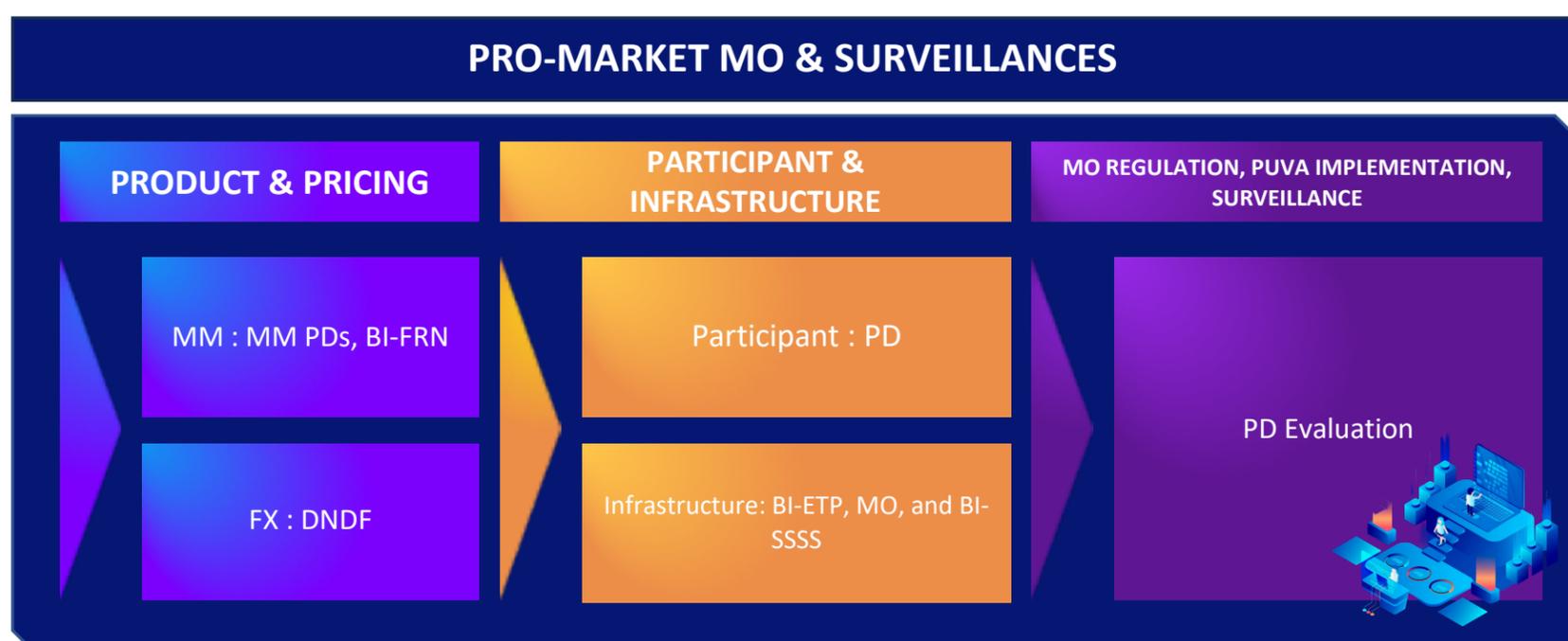
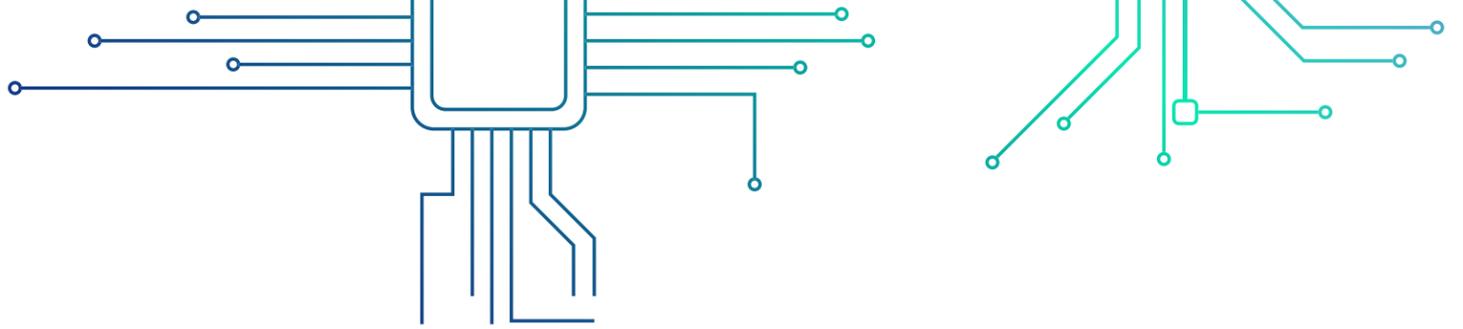


Figure 19 PUVA Deepening, Pro-Market Monetary Operations and Surveillance Integration Initiative Scheme



3.3.2 Digitalisation

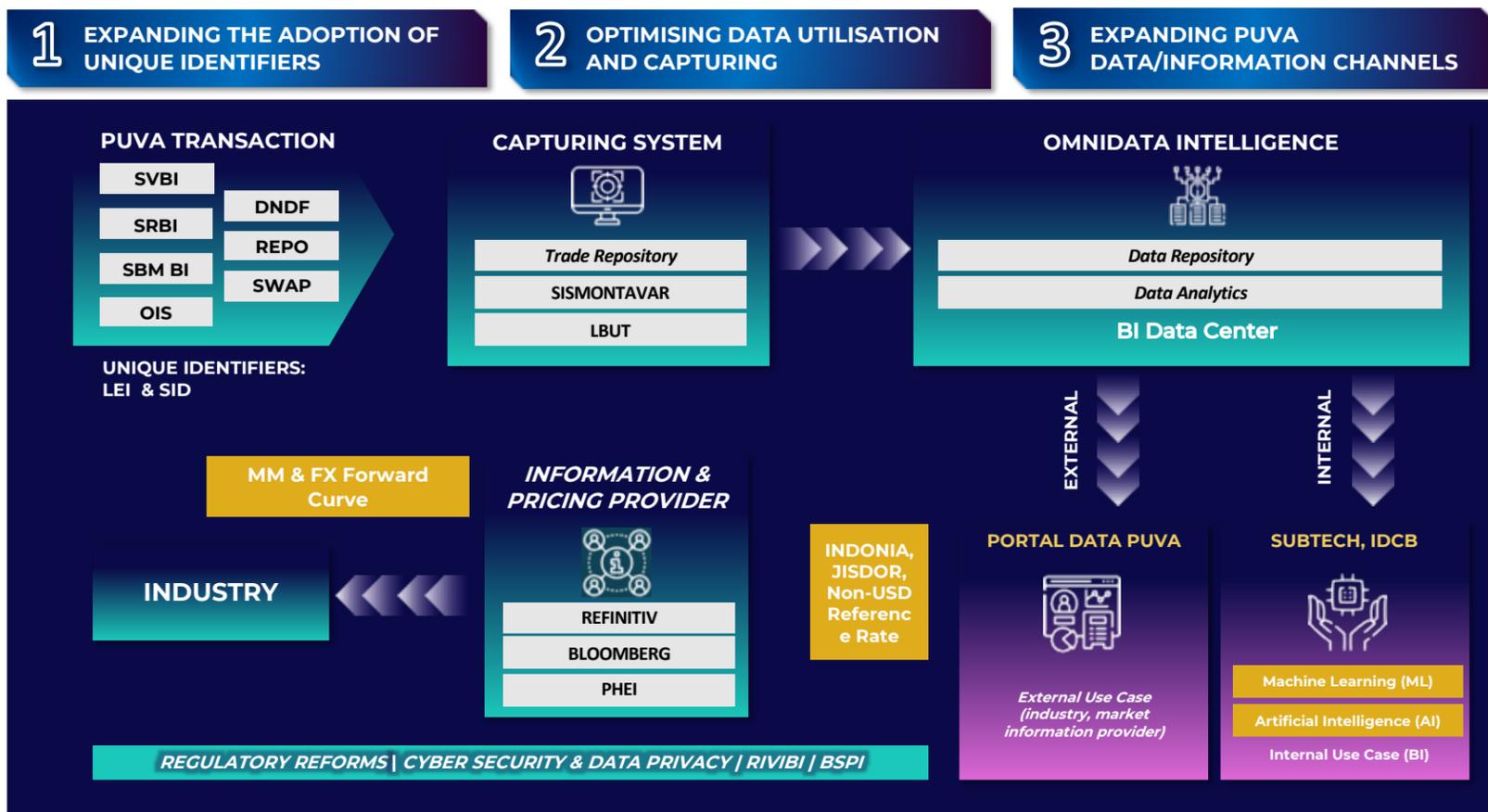


Figure 20 PUVA Data Infrastructure Development

BPPU 2030 digitalisation focuses on digitalisation strategies for PUVA transactions and data management to address the emerging challenges of the financial technology (Fintech) revolution and the implementation gaps concerning the 3i principles. The business processes include end-to-end data acquisition from settlement and the digital management of granular data. In general, BPPU digitalisation is divided into 3 (three) initiatives as follows: (1) end-to-end process digitalisation, (2) integration of PUVA and payment system digitalisation, and (3) optimisation of Integrated Digital Central Banking (IDCB).

3.3.2.1 End-to-End Data Digitalisation Process

The end-to-end digitalisation of granular data is achieved through the: (1) development and adoption of unique identifiers, (2) development of metadata and data capturing systems, and (3) development of omni-data intelligence platforms and use of internal and external

data management outputs. All digitalisation initiatives serve as tangible measures towards establishing Bank Indonesia as a data-driven institution. Strengthening its capabilities as a data-driven institution is necessary to facilitate data-driven and more targeted decision-making at Bank Indonesia.

First, the development of unique identifiers as an integral element of national and international standards, integrated with payment ID, which will be adopted throughout the infrastructure to facilitate granular data. Nationally, Single Investor Identification (SID) is used as a unique identifier at the customer and investor level, including the PUVA markets. Internationally, the Legal Entity Identifier (LEI) is used by global investors at the legal entity level as a unique identifier. The unique identifiers used by PUVA participants will be aligned and integrated with Payment ID development in accordance with the Indonesia Payment System Blueprint (BSPI) 2030 in order to optimise granular data.



Second, the granular data generated will be captured by the capturing and reporting systems and processed into metadata, thereby integrating PUVA and payment system data. The capturing and reporting systems include the Trade Repository (TR) currently under development, the Integrated Commercial Bank Report (LBUT), and the Monitoring System for Interbank Foreign Exchange Transactions Against the Rupiah (SISMONTAVAR). The development of PUVA metadata integrated with payment system data will support omni-data intelligence, namely further data processing through data centres. Metadata contains the data required for data exchange between financial institutions. The implementation of unique identifiers and adoption of ISO 20022 throughout the Financial Market Infrastructures (FMIs) will facilitate the integrative and comprehensive development of metadata.

Third, data management and processing based on omni-data intelligence and data centres facilitates internal use cases for Bank Indonesia as well as various external use cases for the industry. The internal utilisation at Bank Indonesia of data centre output primarily relates to data analytics in the form of forecasting and nowcasting, which underlies policymaking and the calculation of various indicators. Formulating indicators and policymaking analysis in the monetary market, macroprudential and payment system sectors can apply artificial intelligence and machine learning. For example, possible use cases in the monetary market sector involve the analysis of core inflation and domestic GDP indicators, exchange-rate management and monitoring portfolio inflows. Possible external use cases for data centre outputs include the provision of public data/information on transactions or pricing, accessible to market participants to assess investment risk, value transactions or price financial products.

3.3.2.2 Integration of PUVA and Payment System Digitalisation

The digitalisation strategy for PUVA deepening is aligned with other digital initiatives by Bank Indonesia, as contained in the Indonesia Payment System Blueprint (BSPI) 2030, to strengthen the implementation of

digitalisation and data analytics at Bank Indonesia as a data-driven institution. The integration of PUVA and payment system digitalisation includes: (1) aligning the unique identifiers used in the PUVA ecosystem with payment ID, accompanied by the development of data capturing and data analytics infrastructure, and (2) aligning the FMI development strategy with payment system infrastructure.

First, aligning the unique identifiers used in the PUVA ecosystem with payment ID, accompanied by the development of data capturing and data analytics infrastructure, aims to optimise the creation and use of granular data. Aligning the unique identifiers used in the PUVA ecosystem with payment ID, while developing data capturing and data analytics systems for PUVA and payment system data, is performed centrally. This facilitates integrated data storage and utilisation for various use cases.

Second, aligning the financial market infrastructure (FMI) development strategy with payment system infrastructure, primarily through the application of the ISO 20022 international standard for financial messaging issued by the International Organisation for Standardisation. The ISO 20022 standard messaging format will be applied to the: (1) Gen III Bank Indonesia – Real Time Gross Settlement (BI-RTGS) system, (2) Gen III Bank Indonesia – Scripless Securities Settlement System (BI-S555), (3) Trade Repository (TR), and (4) Central Counterparty (CCP). This represents an extension of using the ISO 20022 standard messaging format in the BI-FAST system by Bank Indonesia. The use of ISO 20022 creates interlinks and interoperability between Financial Market Infrastructures (FMIs) and payment system infrastructure, including cross-border infrastructure. The cross-border use cases include: (1) cross-border collateral arrangements using the multicurrency feature in the Gen III BI-RTGS and BI-S555 systems, and (2), interlinking the Gen III BI-S555 system with global CSD to record global investor portfolios of securities issued in domestic markets. The use of ISO 20022 standard messaging format will not only facilitate interlinks between infrastructure but also enable granular data capturing.



3.3.2.3 Optimisation of Integrated Digital Central Banking (IDCB)

The end-to-end initiative for PUVA data digitalisation, coupled with the integration of PUVA and payment system digitalisation, will support the development of a digital business process platform in the policy area. Implementation of the digital business process platform will be achieved through the development of a digital workplace. A digital workplace is a policymaking platform within Bank Indonesia that facilitates end-to-end work processes, from initiation, verification and recommendations to approval of the recommendations, integrated within a single platform.

The digital business process platform will be consolidated with Integrated Digital Central Banking (IDCB). IDCB integrates digital business process platforms in terms of policymaking, institutional arrangements and human resources. Such integration facilitates the use of digital business process platforms to implement digital collaborative work, utilising data available in the data centre and featuring data analytics. The use of such technology will optimise the collection and utilisation of data for more targeted policymaking.

3.3.3 Economic Financing

Modern and advanced money market and foreign exchange market can contribute to developing and expanding sources of national economic financing. Synergy and coordination in economic financing are oriented towards supporting the creation of PUVA markets with good governance. Economic financing synergy initiatives are focused on: (1) regulation and

supervision in accordance with international rules, (2) bilateral coordination between Bank Indonesia and OJK, and (3) interagency coordination in the financial sector.

First, initiatives to strengthen regulations include formulating and harmonising internal and external regulations, coupled with dissemination and evaluation activities. Formulating and harmonising internal PUVA regulations encompasses regulations concerning monetary operations as well as macroprudential surveillance of monetary markets to support financial system stability. The harmonisation of PUVA regulations with the regulations of other authorities, such as the Indonesia Financial Services Authority (OJK) and Indonesia Deposit Insurance Corporation (LPS), is necessary to ensure PUVA regulations are in line with the rules and standards applied by other financial authorities. After drafting a regulation, Bank Indonesia implements capacity building and Focus Group Discussions (FGD) as a form of public consultation to strengthen regulatory credibility. Evaluations and reviews of PUVA regulations are conducted periodically, particularly focusing on Bank Indonesia Regulations (PBI) concerning PUVA. Regulatory strengthening is also implemented through assessments and evaluations of PUVA regulatory compliance with global best practices and regulations.

Next, supervisory strengthening is implemented by refining guidelines, developing integrated supervisory frameworks and utilising supervisory tools. PUVA supervisory guidelines are being refined in line with pro-market monetary operations to achieve conformity with global best practices and regulations, as well as supervision by the competent authority. An integrated supervisory framework and the use of supervisory tools

will be developed and strengthened through integrated dynamic systemic risk surveillance (DSRS). The scope of strengthening efforts includes a conformity review of PUVA regulatory implementation and pro-market monetary operations, accompanied by systemic risk identification, while ensuring oversight aligns with product-pricing and participant-infrastructure aspects.

Second, bilateral coordination between Bank Indonesia and OJK to build synergy and maintain the stability of the financial system alongside economic financing in the context of regulatory and supervisory harmonisation in accordance with international rules. The scope of BI-OJK coordination covers policy and/or regulatory harmonisation in the context of financial markets, planning and accelerating development policy implementation and financial market deepening, regulatory harmonisation in the development of financial sector technology innovation in the PUVA markets and capital market, as well as the preparation of risk mitigation measures for Financial Market Infrastructures (FMIs). Moving forward, coordination between Bank Indonesia and OJK will be strengthened to align various provisions and/or regulations, for example regulations concerning the CCP, such as Non-Centrally Cleared Derivatives (NCCD) and Regulatory Equivalence to Home Countries of Foreign Banks (United States, UK, European Union, and Japan).

Third, coordination between 4 (four) institutions, namely Bank Indonesia, the Ministry of Finance, Indonesia Financial Services Authority (OJK) and Indonesia Deposit Insurance Corporation (LPS), in the financial sector, as mandated by the PPSK Act. First, Article 11 of the PPSK Act mandates coordinated financial sector development under the auspices of a financial sector development coordination forum. The purview of the

coordination forum covers coordinated financial market development by financial sector regulators, namely: (1) the Ministry of Finance in the context of government bond market development for development financing, (2) Bank Indonesia in terms of PUVA deepening, and (3) OJK in terms of capital market development. *Second*, Article 224 of the PPSK Act mandates the development of sustainable finance under the Sustainable Finance Committee. The Committee oversees coordination in terms of development programs for the green economy and fulfilling the Sustainable Development Goals (SDGs) in each authority as follows: (1) the Ministry of Finance in terms of government project and program financing, (2) Bank Indonesia in terms of macroprudential policymaking and PUVA deepening, and (3) OJK in terms of sustainable finance through the banking industry and capital market. The creation of such forums and committees has solidified more efficient financial sector development synergy, thereby encompassing all forms of financing needed in the economy, end to end.

Financial market development coordination also aims to increase financial literacy and inclusion through implementation of the flagship 'LIKE IT' Indonesia financial literacy program. In synergy with the Ministry of Finance, OJK and LPS, Bank Indonesia regularly hosts LIKE IT activities to expand the retail investor base in line with increasing financial literacy in Indonesia. Synergy and coordination between the relevant financial authorities are also increasing Islamic financial literacy and inclusion, alongside coordination with the National Sharia Board of the Indonesian Council of Ulama (DSN-MUI) to ensure compliance with sharia principles and accelerate economic financing growth. Efforts to develop Islamic financial products include the integration of Islamic commercial finance products and Islamic social finance products.



VISION

Developing granular, real-time and secure **money market and foreign exchange market data digitalisation** to support money market and foreign exchange market deepening, monetary policy and financial system stability.



Money Market and Foreign
Exchange Market Development
Blueprint (BPPU) 2030 Roadmap

CHAPTER



4 BPPU 2030 Roadmap

The BPPU 2030 Roadmap contains initiative milestones for each year to achieve the strategic targets in accordance with the strategic environment, existing gaps and challenges, nationally and globally. The BPPU 2030 Roadmap was designed and formulated in line with 3 (three) strategies, as the main pillars of BPPU 2030, namely: (1) products and pricing, (2) participants and infrastructure, and (3) synergy and coordination. Development within the three pillars is implemented incrementally during the period from 2025-2030 in accordance with market development dynamics and policy direction.

First, PUVA product development and pricing are focused on repos, OIS, DNDF and FX Swaps to accelerate the formation of efficient and credible PUVA pricing. Repo and OIS development began with the expansion of repo interconnection as well as OIS and SBMBI development in 2025, followed by repo standardisation and OIS interconnection in 2026 and the development of repo and market products based on floating interest rates from 2027-2030. DNDF development began with the activation of PUVA Primary Dealers to facilitate DNDF market-making alongside the development of swap structured products in 2025, followed by the expansion of DNDF PUVA Primary Dealers and FX Swap standardisation in 2026. In terms of the sharia PUVA markets, product development is focused on sharia repos, Sharia-Compliant Interbank Fund Management Certificates (SiPA) and sharia hedging instruments from 2025-2030.

Product development underlies PUVA pricing in the form of a Term Structure of Interest Rates (TSIR) and FX Forward Curve. PUVA pricing is targeted for completion in 2026, followed by refining and honing through to 2030. Meanwhile, sharia PUVA pricing is focused on establishing a sharia reference rate as a benchmark yield in the sharia money market, commencing in 2027.

Second, participant and infrastructure development

are focused on developing competent, active and collaborative participants as well as developing PUVA infrastructure that fulfils the 3i principles. Increasing participant activity began by strengthening the fulfilment of PUVA Primary Dealer criteria in terms of competency, risk management and infrastructure in 2025, followed by revisiting the PUVA Primary Dealer regulations in 2026. Participant competencies are being strengthened through the implementation of competency standardisation from 2025-2027, accompanied by an evaluation in the following year. Collaboration with the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO) is being increased by expanding APUVINDO membership to the banking industry, PUVA associations and FMI operators from 2025-2027. In terms of the sharia PUVA markets, participants and infrastructure development are focused on creating competent, active and collaborative participants alongside 3i infrastructure from 2025-2030.

FMI development to fulfil the 3i principles encompasses the front end, middle end and back end. Upgrading the Bank Indonesia-Electronic Trading Platform (BI-ETP) to accommodate SBMBI issuances is targeted to go live in 2025. Upgrading the Market Operator-Electronic Trading Platform (MO-ETP) to accommodate DNDF and OIS is targeted to go live in 2025, while MO-ETP development to accommodate repos is targeted to go live in 2026. Upgrading the BI-ETP to accommodate SVBI/SUVBI repos and integrate MO-ETP with the CCP and the Central Counterparty for Interest Rate and Exchange Rate Derivatives (CCP-SBNT) is targeted for 2027-2030. CCP-PUVA development began with tri-party repos in 2025, followed by the CCP Repo going live alongside recognised CCP status by the Indonesia Stock Market Clearing House (KPEI) in 2026, as well as the expansion of recognised CCP status and completion of the CCP resolution and recovery framework from 2027-2030. Bank Indonesia – Scripless Securities Settlement System (BI-S5SS) development began with a system upgrade to accommodate SBMBI issuances and prepare for Gen III BI-S5SS development in 2025, followed by further Gen III BI-S5SS and Trade Repository (TR) development from 2026-2030.

Third, synergy and coordination in the area of PUVA development integration with the implementation of pro-market monetary operations and surveillance, alignment with the digitalisation of end-to-end processes and Integrated Digital Central Banking (IDCB), as well as interagency synergy with government ministries and other institutions. Aligning PUVA and sharia PUVA development with the implementation of pro-market monetary operations and monetary market surveillance is focusing on 3P+I aspects from 2025-2030. End-to-end process development in the PUVA and sharia PUVA markets and payment system involves the aspects necessary for integrated data digitalisation and

IDCB development from 2025-2030. Financial market development synergy encompasses synergy with other authorities and participants from 2025-2030. Synergy and coordination will be facilitated through coordination forums for financial sector authorities to develop innovative economic financing and hedging instruments, while aligning and harmonising financial sector development strategies between different authorities to nurture economic financing. Sharia PUVA development synergy involves relevant government ministries/agencies, including the National Sharia Board of the Indonesian Council of Ulama (DSN-MUI).



Figure 21 BPPU 2030 Roadmap

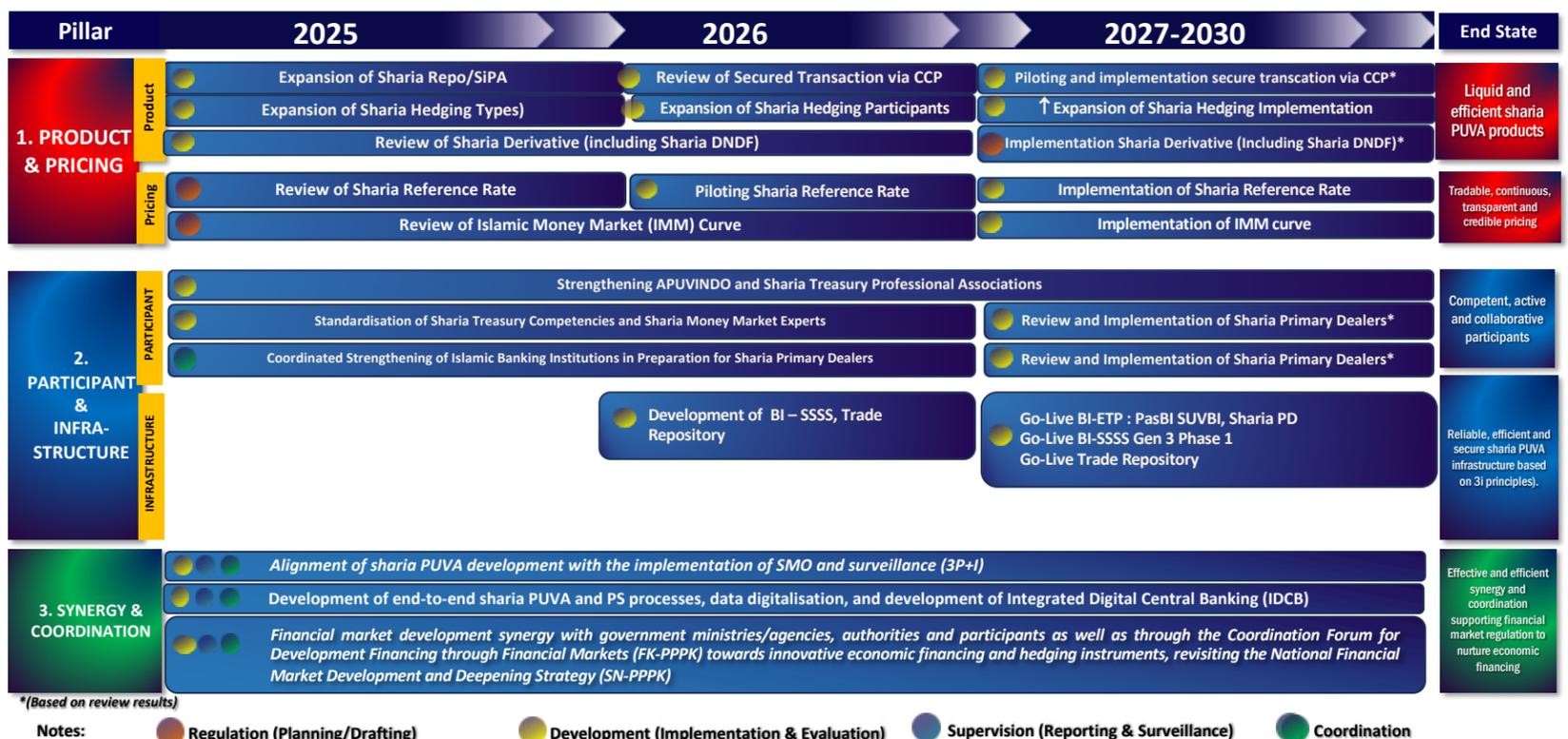
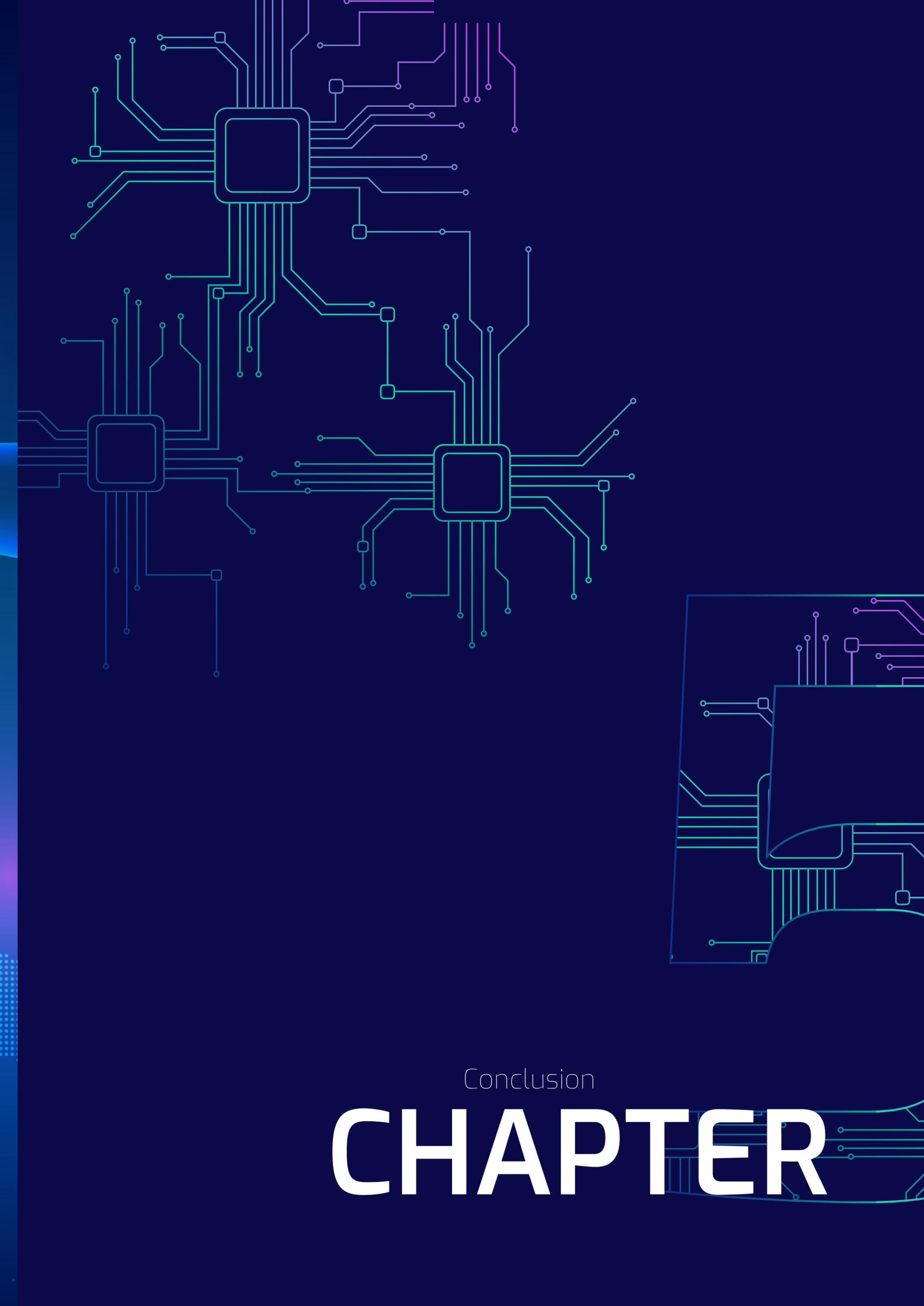


Figure 22 Sharia BPPU 2030 Roadmap

VISION

Strengthening money market and foreign exchange market regulation and oversight based on international standards and best practices, while supporting international cooperation that prioritises the national interest.





Conclusion

CHAPTER



5. Conclusion

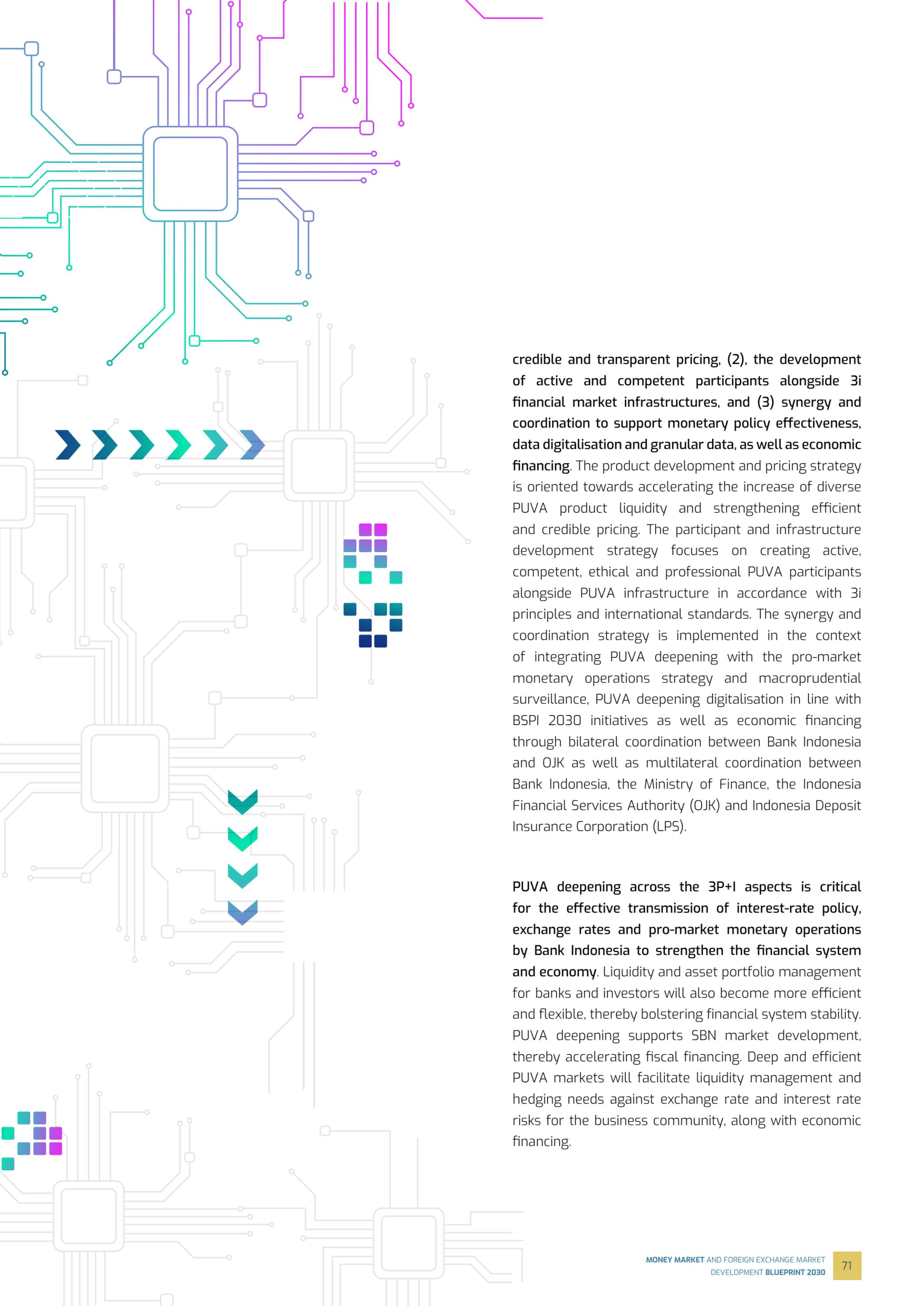
BPPU 2030 serves as a roadmap to navigate the direction of deepening modern and advanced money market and foreign exchange market (PUVA) from 2025-2030. Issuing BPPU 2030 will further elucidate the future direction of PUVA deepening to support monetary policy transmission, financial system stability, and national economic financing. Bank Indonesia has issued BPPU 2030 as part of its mandate and authority in accordance with the PPSK Act. Deep and liquid PUVA markets will strengthen the stability of the financial system, thereby supporting sustainable economic growth.

The direction of PUVA deepening transformation, as contained in BPPU 2030, builds on and strengthens the direction of BPPU 2025 transformation to address the PUVA development gap with peer countries in terms of the products, pricing, participants and infrastructure (3P+I). *First*, strengthening emphasises the integration of PUVA deepening efforts with the implementation of pro-market monetary operations. *Second*, strengthening focuses on the strategic targets in terms of the products, pricing and participants. *Third*, strengthening emphasises the urgency of FMI development based on the 3i principles as well as PUVA data digitalisation. *Finally*, strengthening also focuses on PUVA regulation and oversight in accordance with international standards and best practices as the foundation for achieving the vision of BPPU 2030.

The strategic targets of PUVA deepening, which include measured strategic targets for the products, pricing, participants and infrastructure, were determined based on global and domestic dynamics in the strategic environment. Product development will prioritise increasing repo and DNDF transaction liquidity, targeting respective daily averages of IDR30 trillion and USD1 billion by 2030, as the basis for further product development of interest rate and exchange rate derivatives. Pricing development is oriented towards creating a term structure of interest rates (TSIR) and benchmark yields for key non-overnight tenors, namely from 2 weeks to 12 months. Participant development is directed towards improving competencies based on the Market Code of Conduct (MCoC) in line with global best practices, in collaboration with the Indonesia Money Market and Foreign Exchange Market Association (APUVINDO) to increase participant activity. Infrastructure development targets the implementation of MO-ETP, BI-ETP, CCP-PUVA, BI-S555, BI-RTGS and the Digital Rupiah, as contained within the Indonesia Payment System Blueprint (BSPI) 2030, as well as TR. FMI development aims to fulfil the 3i principles of interconnection, interoperability and integration towards reliable, efficient and secure financial market infrastructures.

Bank Indonesia has prepared 3 (three) strategies to achieve the strategic targets of PUVA deepening as follows: (1) the development of diverse and liquid products, with



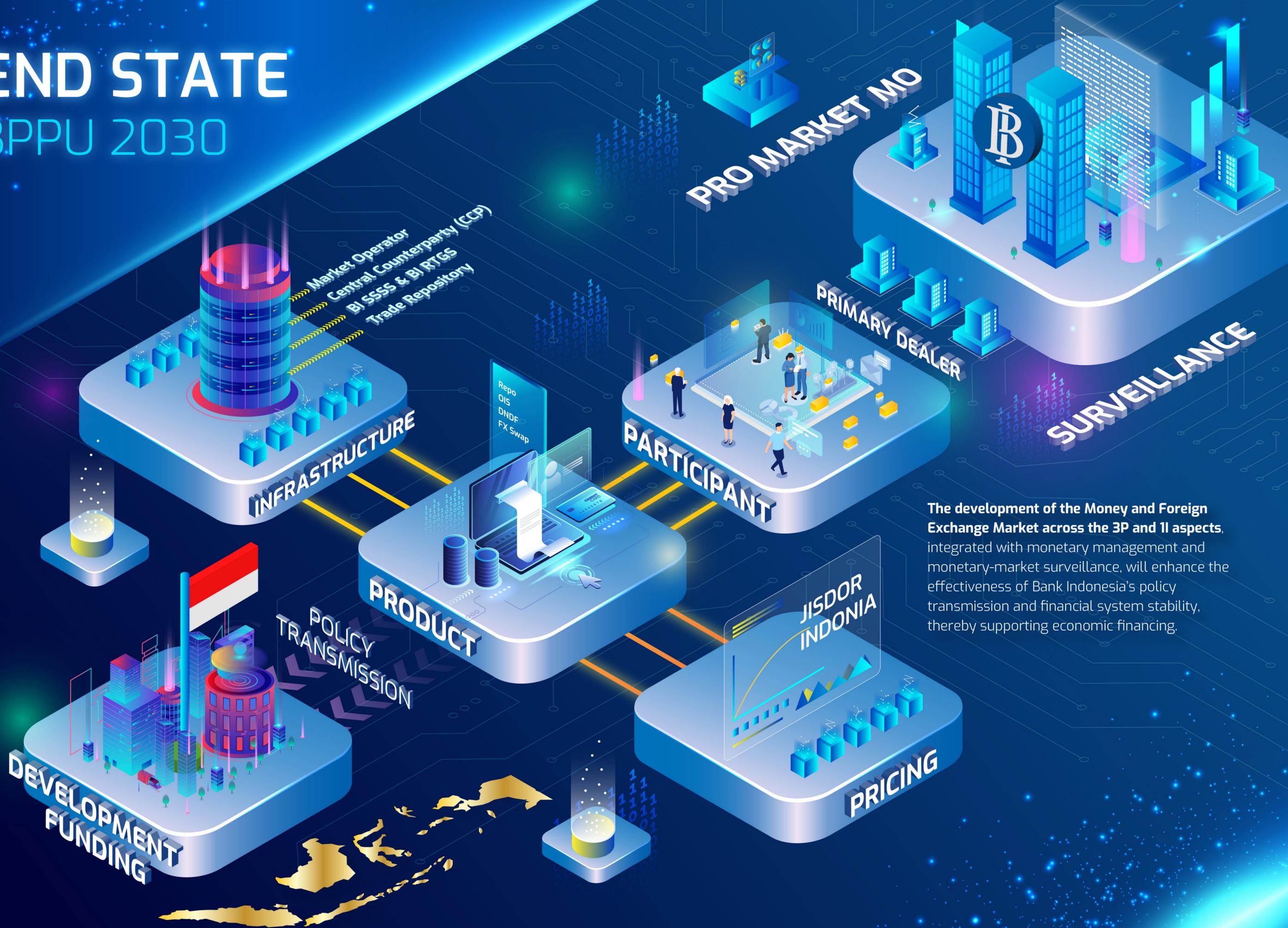


credible and transparent pricing, (2), the development of active and competent participants alongside 3i financial market infrastructures, and (3) synergy and coordination to support monetary policy effectiveness, data digitalisation and granular data, as well as economic financing. The product development and pricing strategy is oriented towards accelerating the increase of diverse PUVA product liquidity and strengthening efficient and credible pricing. The participant and infrastructure development strategy focuses on creating active, competent, ethical and professional PUVA participants alongside PUVA infrastructure in accordance with 3i principles and international standards. The synergy and coordination strategy is implemented in the context of integrating PUVA deepening with the pro-market monetary operations strategy and macroprudential surveillance, PUVA deepening digitalisation in line with BSPI 2030 initiatives as well as economic financing through bilateral coordination between Bank Indonesia and OJK as well as multilateral coordination between Bank Indonesia, the Ministry of Finance, the Indonesia Financial Services Authority (OJK) and Indonesia Deposit Insurance Corporation (LPS).

PUVA deepening across the 3P+I aspects is critical for the effective transmission of interest-rate policy, exchange rates and pro-market monetary operations by Bank Indonesia to strengthen the financial system and economy. Liquidity and asset portfolio management for banks and investors will also become more efficient and flexible, thereby bolstering financial system stability. PUVA deepening supports SBN market development, thereby accelerating fiscal financing. Deep and efficient PUVA markets will facilitate liquidity management and hedging needs against exchange rate and interest rate risks for the business community, along with economic financing.

END STATE

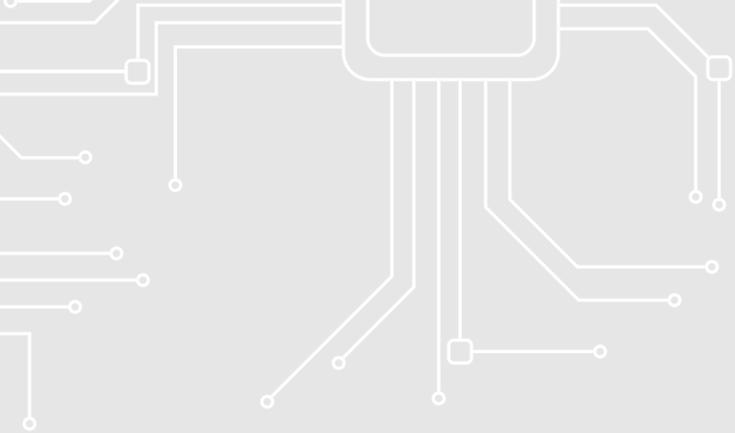
BPPU 2030



The development of the Money and Foreign Exchange Market across the 3P and 1I aspects, integrated with monetary management and monetary-market surveillance, will enhance the effectiveness of Bank Indonesia's policy transmission and financial system stability, thereby supporting economic financing.

Glossary

Bi	Integration, interoperability, and interconnection, characterising the form of connectivity between Financial Market Infrastructures (FMIs).
Artificial Intelligence (AI)	Logic-based analysis and techniques to interpret events, support and automate decision-making and action processes.
Balance Sheet Hedging	A risk management strategy that aims to hedge assets and liabilities on the balance sheet denominated in a foreign currency from interest rate fluctuations.
Bank Indonesia policy mix	The integration of mutually complementary and strengthening policies, namely monetary policy, macroprudential policy and payment system policy, underpinned by supporting policies, coherent and consistent with achieving the goals and mandate of Bank Indonesia.
Bank Indonesia-Electronic Trading Platform (BI-ETP)	Infrastructure that facilitates financial transactions electronically.
BI-FAST	Real-time payment system services operating 24 hours a day, seven days a week, which accelerate the transaction settlement process and is replacing the National Clearing System (SKNBI).
BI-Scriptless Securities Settlement System	Infrastructure that facilitates the administration of transactions and securities electronically.
Blockchain	On demand delivery of computing power, databases, storage, applications and other IT resources through cloud service platforms via the internet with pay-as-you-go pricing. A distributed digital ledger technology that records transactions across a network of computers in a secure, immutable and verifiable manner, enabling multiple parties to share and validate data without the need for a central authority.
Close out netting	The termination of financial transactions through early termination, valuation, and offsetting the mutual obligations of all financial transactions between transacting parties under a single (one) master agreement to a single payable or receivable amount (net amount).
Collateral	An asset pledged by a borrower to a lender to secure a loan or other financial obligation.
Credit Support Agreement (CSA)	A legal document that regulates the terms and conditions of pledging collateral between two parties in a derivative transaction.
Cross Currency Swap (CCS)	A derivative transaction where cash flows are exchanged between 2 (two) counterparties denominated in different currencies according to an agreed schedule over the life of the contract, involving the principal and interest.
Cross Currency Repo	A repurchase agreement with a purchase price in one currency against collateral with a market value denominated in another currency.
Call Money	An unsecured interbank borrowing and lending transaction, also known as the interbank money market.
Central Securities Depositories (CSD)	A financial market infrastructure that facilitates the settlement, custody and administration of securities, while providing asset services that may include several administrative actions, such as corporate actions and redemptions, among others.
Data Capturing	Any method of collecting information from various sources and converting into a digital format that can be read, processed and utilised by a computer.



Primary Dealer in the Money Market and Foreign Exchange Market	Primary Dealers (PB) are banks or other nonbank parties approved by Bank Indonesia to perform specific activities and obligations in the money market and foreign exchange market.
Deposit Linked Swap	A structured financial product that combines a traditional term deposit with a derivative component, including FX Swaps. The return on the term deposit is linked to the performance of an underlying asset, for example, movements in currency exchange rates.
Domestic Non-Deliverable Forward (DNDF)	A foreign currency derivative contract against the rupiah, with settlement in rupiah based on the difference between the agreed forward rate and the reference rate, namely JISDOR and/or a non-USD/IDR reference rate.
Delivery versus Payment (DvP)	A settlement mechanism in which the transfer of securities occurs simultaneously with the corresponding transfer of funds.
ESG Swap or ESG Currency Swap	A derivative instrument that combines a traditional currency swap with ESG-based features. Two parties exchange principal and/or interest payments in different currencies, with terms and conditions linked to the achievement of specific ESG performance targets.
Fintech	Innovative financial services technology to create new business models, applications, processes and/or products.
Forward-looking term rate	A long-term interest rate for a specified future period that reflects market expectations of future short-term rates over that period.
FX Linked Notes	A structured financial instrument where the return is linked to the performance of a particular foreign exchange rate or currency pair.
FX Swap	A derivative transaction in which two foreign exchange transactions, namely spot and forward, are executed simultaneously. A counterparty borrows one currency and lends another at the start date, and the positions are reversed upon maturity.
Global Foreign Exchange Committee (GFXC)	An international forum that brings together central banks and private sector participants to promote a solid, liquid, open and transparent foreign exchange market by strengthening adherence to the FX Global Code of Conduct (The Code).
Granular Data Capturing System	Capturing granular profile and transaction data from external sources (outside the Bank Indonesia payment system).
Indonesia Overnight Index Average (INDONIA)	A reference interest rate index that reflects the weighted average of unsecured O/N rupiah borrowing and lending transactions in the interbank market.
International Organization of Securities Commissions (IOSCO)	A global association of securities regulators that develops, implements and promotes international standards for securities markets. IOSCO establishes global standards known as the IOSCO Principles.
International Swaps and Derivatives Association (ISDA)	A professional association, established in 1985, to promote and increase swap and derivative trading.
Islamic Financial Market Code of Conduct (ICoC)	A formal set of professional moral norms and ethical standards that govern the conduct of participants in the sharia money market and sharia foreign exchange market.
ISO 20022	An open, international standard for financial messaging. It provides consistent, rich and structured data that can be used for a wide range of financial business transactions.
Jakarta Interbank Offered Rate (JIBOR)	A reference interest rate representing the average of indicative rates at which participating banks are willing to lend unsecured rupiah funds to other banks in the Indonesian interbank market for tenors longer than overnight.



Jakarta Interbank Spot Dollar Rate (JISDOR)	A reference exchange rate that reflects the spot value of the US dollar against the rupiah for interbank transactions, including trades conducted between domestic banks and offshore banks.
Non-USD/IDR Reference Rates	A reference rate that represents the exchange rate of a particular non-USD foreign currency against the rupiah.
Local Currency Transaction (LCT)	Bilateral transactions using home (local) currencies through Appointed Cross Currency Dealers (banks).
Margining Rule	Rules on margining requirements in financial transactions, particularly derivatives trading.
Market Maker	A market maker is an entity that shapes financial markets by actively buying and selling financial instruments, providing price quotations and so on. The presence of market makers is expected to encourage other market participants to transact actively.
Market Operator	Non-BI entities that administrate and provide or use systems to conduct financial transactions.
Metadata	Data that describes other data, metadata is structured reference data that helps sort and identify the attributes of the information it describes.
Market Code of Conduct (MCoC)	A formal set of professional moral norms and ethical standards that govern the conduct of participants in the money market and foreign exchange market.
Overnight Index Swap (OIS)	An interest rate swap transaction calculated based on the daily compounding of an overnight reference rate.
Pro Market Monetary Policy	The implementation of monetary policy that integrates monetary management with PUVA development and oversight.
Pre-trade	The process carried out before a financial transaction is executed.
Principle of Financial Benchmark by IOSCO	Global standards issued by the International Organisation of Securities Commissions (IOSCO) concerning governance principles and methodologies for financial benchmarks.
Post-trade	The process carried out after a financial transaction is executed.
Price Discovery	A process by which market participants negotiate/determine the price and yield of a financial instrument.
Qualifying Central Counterparty	An entity that is licensed by the competent authority/supervisor to operate as a CCP in accordance with the products offered.
Recognized Central Counterparty	A CCP that has been officially recognised by the competent authority of another jurisdiction to clear transactions from that jurisdiction.
Repo (repurchase agreement)	Legally, a repurchase agreement (repo) is a contract for the sale of securities with a commitment to repurchase them at a predetermined future date and price. Economically, a repo is a secured borrowing and lending transaction, in which securities serve as collateral.
Digital Rupiah	The design of a digital currency provided by Bank Indonesia to maintain the sovereignty of the rupiah in the digital age.
Securities Lending	A temporary transfer of securities in exchange for other securities or cash of equivalent value (or a combination thereof), with a contractual obligation to return equivalent securities at a specified future date.
Securities Settlement System (SSS)	An entity that enables the transfer and settlement of securities through book-entry records in accordance with a set of predetermined rules. The system also facilitates the delivery of securities either on a delivery-versus-payment (DvP) basis or on a free-of-payment (FOP) basis.
Treasury Dealer Certificate	A certificate awarded to dealers demonstrating competence in treasury activities.

Self-regulatory Organisation in the Money market and foreign exchange market (SRO PUVA)	A forum or institution with legal status in Indonesia, established by Bank Indonesia to support the development and deepening of the money market and foreign exchange market.
Single Investor Identification (SID)	A unique identifier issued by the Indonesian Central Securities Depository (KSEI), used by customers, investors and/or other parties in accordance with prevailing laws and regulations to implement securities transactions and/or use other services provided by KSEI, or by other parties based on KSEI approval or other applicable regulations.
National Open API Payment Standard (SNAP)	A legal framework that regulates the procedures and technical standards for open access to payment data and services through an Application Programming Interface (API)
Tokenisation	The process of replacing sensitive data with a unique, non-sensitive identifier (token) that preserves the essential information without compromising the security of the original data.
Interest Rate Futures	A standardised contract between 2 (two) parties to exchange interest rate exposure in rupiah on a given future date, reflected in the price difference of an underlying asset, which is influenced by a specific interest rate, at a predetermined price.
Sharia-Compliant Interbank Fund Management Certificate (SiPA)	A sharia-compliant interbank funding transaction based on a <i>wakalah bi al-istitsmar</i> contract.
Sharia Repo (Repurchase Agreement)	A sharia-compliant repurchase agreement (repo) is a contract for the sale of sharia securities with a commitment to repurchase them at a predetermined future date and price.
Term Structure of Interest Rates (TSIR)	A curve or slope that depicts the relationship between interest rates and maturities.
Smart Contract	A set of computer program codes that define business logic on a DLT network, which serves as a procedure or requirement for access to the ledger.
Statement of Commitment	A statement submitted by PUVA participants pledging commitment to ethical and professional behaviour in accordance with the market code of conduct.
Supervisory Technology (SupTech)	The use of innovative technology by supervisory institutions to support the implementation of the supervisory and oversight functions.
Cross-Border Transaction	An international transaction that involves the transfer of goods, services, money, information, or people across national borders.
Unique identifier	A numeric or alphanumeric string associated with a single entity in a system.
Yield Curve	A curve or slope that depicts the relationship between interest rates and maturities. A yield curve is used as a reference rate across different tenors.

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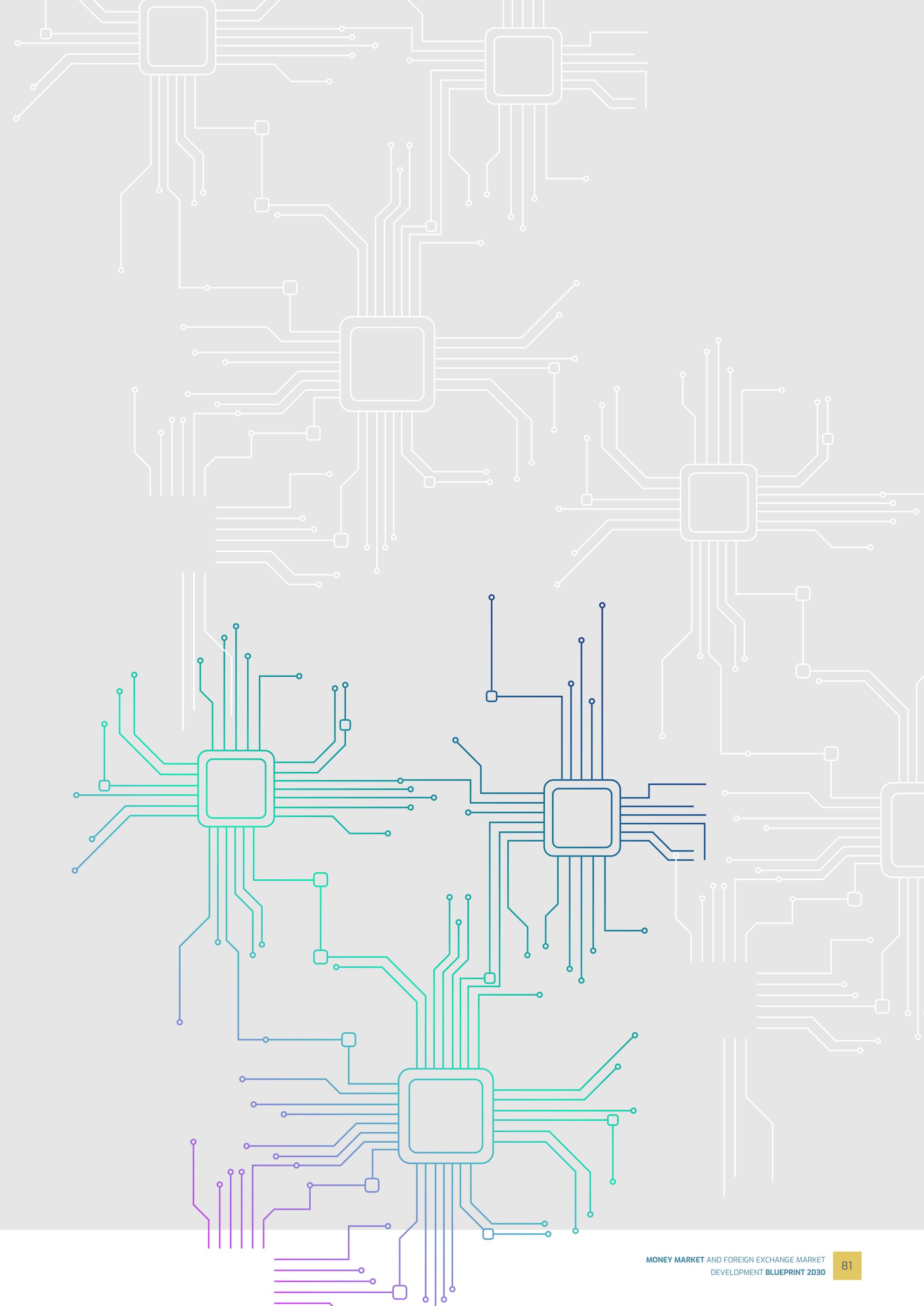
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