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## **SYNERGY OF ECONOMIC POLICIES AND INNOVATION IN DRIVING MOMENTUM FOR SUSTAINABLE GLOBAL ECONOMIC RECOVERY IN THE ERA OF DIGITAL TRANSFORMATION**

Perry Warjiyo  
Governor, Bank Indonesia

*Ladies and Gentlemen, my dear fellows,* welcome to the 16<sup>th</sup> Bulletin of Monetary Economics & Banking (BMEB) International Conference and Call for Papers, 25-26 August 2022. We are delivering not only the best journal and the best conference, but also the best topic—a topic and theme that is of global relevance. As I recall, during my speech at the same conference last year (the 15<sup>th</sup> BMEB International Conference and Call for Papers), I am tremendously delighted to see the achievement of BMEB over the last few years. Since a couple years ago, the journal has been titled as one of the most respected journals in Indonesia and in the Emerging Market Economies (EMEs). The BMEB has been very successful in providing outlets for outstanding research publications, both domestically and globally.

I also recall highlighting the terms “diminishing globalization, and rising digitalization” at the 13<sup>th</sup> BMEB conference in 2019 in Bali, Indonesia. We were aware of diminishing globalization at that time, but not of rising digitalization, which is now reshaping the entire world, including central banking tasks. The COVID-19 pandemic started in March 2020, and at the 14<sup>th</sup> BMEB Conference that year, I pledged all of us to rethink our macro economy as we know it, and put forward the practices of central banking in the new normal. I argued that the inflation targeting framework is not sufficient and that we need an integrated policy framework. I referred to the framework of macro financial stability that has dual targets of central bank price stability and financial stability through monetary policy and macroprudential policy. I emphasized the importance of macroprudential policy in supporting macroeconomic stability, as well as the need to link macroeconomic and financial linkages, as written in my internationally published book with Dr. Solikin Juhro (from Bank Indonesia) entitled the “Central Bank Policy Mix”. Last year, at the 15<sup>th</sup> BMEB Conference, I provided all of us with some reflections, namely: (i) sustainable-inclusive growth in a post-pandemic world, and (ii) central bank’s challenges to go beyond stability, as the pandemic forced us to rethink our academic and policymaking knowledge. We need to coordinate policy at the national level, to synergize simultaneously the monetary policy, macroprudential policy and fiscal policy.

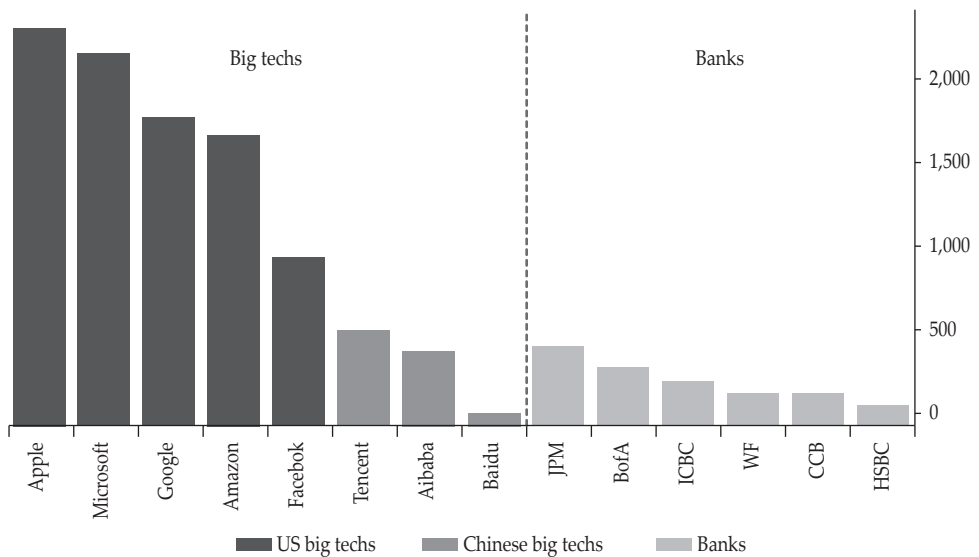
This time, I will talk about my strategic foresight on the future of the central banking practices. Before that, allow me first to deliberate on the global economic challenges and policy responses. I will then talk about my strategic foresight on the future of central banking.

### Three Major Challenges from Global Economic Development

*Distinguished Guests and Speakers, Ladies and Gentlemen*, the ongoing global economic recovery is confronted with three major challenges: a risk of stagflation, megatrend of digitalization, and a new dawn of green economic-finance. The COVID-19 pandemic is starting to subside, but the global economy is “navigating uncharted waters” as it continues to suffer from a series of destabilizing shocks. How we handle these shocks will determine the direction of the global economy going forward. **First**, the increasing risk of stagflation, especially those in the advanced economies. This risk arises from a complex story: the global economic recovery that creates new demand, while the real sector is still experiencing supply chain disruptions. The extreme climate changes experienced globally and the Russia Ukariane war have worsened the supply chain crisis and have seen a rise in energy and global food prices. Furthermore, the Zero COVID-19 Policy (ZCP) lockdown in China, a response to the latest variant of the COVID-19 virus, has also accentuated the global value chain challenges. As a response, many countries have chosen to adopt protectionism policies at the expense of food exports, which is exerting additional pressure on global food prices as reflected in inflationary challenges faced by the global economy. Moreover, interest rate hikes by the Fed to tackle the rising US inflation have induced higher uncertainty in the global financial markets and driven capital outflows from emerging market economies. This has caused more pressure on the currencies of the emerging economies. **Second**, the issue of the megatrend of digitization. Indeed, the megatrend of digitalization has created structural changes in our economy, and the COVID-19 pandemic has accelerated this phenomenon. On the one hand, the use of digital technology has provided us with many benefits, for both economic growth and inclusiveness; but, on the other hand, there is a risk of disruption to the financial system stability, including those related to crypto currencies and crypto assets. This all makes sense considering the megatrend of digitalization is being dominated by the BigTechs (Graph 1).

**Third**, a new dawn of green economy and finance. This issue has become a top priority among global policy agendas, in particular within the G20 – Indonesian Presidency. Research has shown that climate change disrupts not only human aspects but also the economy on a massive scale. To contain such disruptions, we must undertake policies on green economy and finance that are robust, timely and sustainable to mitigate the transition risks to the economy. One example of these issues is a potential problem of high unemployment from the change of the engine vehicles to the electric cars. I believe that the energy transition from fossil-based to renewable is not only a technological process but involves many facets, namely, political, social, environmental, and economics in the construction of energy production and consumption. If not handled properly, the climate change can become the Next Crisis.

**Figure 1.**  
**Market Capitalization of BigTechs & Global Banks (Billion USD)**



Source: BIS (2019) & Refinitiv

### Maintaining Macroeconomic Stability and Bolstering the Momentum of Economic Recovery

*Distinguished Guests and Speakers, Ladies and Gentlemen,* at home, the domestic economy continues to improve, supported by stronger domestic demand, non-building investment, and positive export performance (coal, metalliferous ores and iron, and steel). Our external sector remains solid, although the exchange rate experienced some pressures along with other currencies in the region due to the escalating global financial market uncertainty. Domestic inflation also increased due to high supply-side pressures in line with rising world commodity prices.

In the second quarter of 2022, the domestic economy grew firmly, by 5.44%. The domestic economy has been underpinned by the improvements in several economic sectors, led by the manufacturing industry, trade, as well as transportation, and storage. Spatially, recent economic gains have been supported by all regions of the Indonesian archipelago, particularly Java, Sumatra, and Sulawesi-Maluku-Papua (SULAMPUA). Going forward, Bank Indonesia expects the domestic economic recovery to endure from the increasing mobility, sources of finance, and business activity. The economic growth in 2022 is projected with a bias towards the upper end of Bank Indonesia’s projected range of 4.5-5.3%.

The domestic financial system stability has also been maintained, and the financial intermediation continued to improve. Banking sector also continues to perform impressively. Loan rates in the banking industry continued to decline, owing to the downward trend in the credit risk. A gradual increase in Rupiah reserve requirements also took place without disrupting banking liquidity. Digitalization

of payment systems accelerated, creating a more integrated ecosystem of digital economy and finance in Indonesia.

To maintain the macroeconomic stability and bolster the momentum of economic recovery, Bank Indonesia will fortify the central bank policy mix strategy. We remain vigilant of the rising inflation expectations and core inflation going forward by implementing the fortified central bank policy mix strategy. To mitigate the risks from the heightened global uncertainties, the central bank policy mix increasingly plays the role of a shock absorber, ensuring the stability of the macro economy. It consists of: (i) strengthening monetary operations as a pre-emptive and forward-looking measure to mitigate the risk of rising inflation expectations and core inflation by increasing the interest rate structure in the money market and selling Government Bond (SBN) in the secondary market; (ii) strengthening Rupiah stabilization policy to help manage inflation through the foreign exchange market intervention; (iii) maintaining prime lending rate transparency policy in the banking industry with a focus on consumer loan interest rates; (iv) expanding cross-border QRIS by, among others, accelerating implementation, piloting Local Currency Settlement (LCS) with other Asian countries and organizing National QRIS Week to achieve the target of 15 million new users; (v) ensuring smooth and orderly operationalization of the National Open API Payment Standard (SNAP), particularly for first mover Payment Service Providers (PSP), while preparing for second mover implementation targeted for December 2022; and (vi) strengthening the international policy by expanding cooperation and collaboration with central banks and relevant authorities as well as ensuring the success of the six priority agendas of the Finance Track of Indonesia's G20 Presidency.

On a helicopter view, the national policy mix between fiscal, monetary, and financial sector policies also plays an important role in "maintaining macroeconomic stability and bolstering the economic recovery momentum". Bank Indonesia will continue to strengthen the policy synergy with Financial System Stability Committee (KSSK) to encourage credit/financing from banks and other financial institutions to 46 priority sectors to support national economic recovery. This will support the effectiveness of Bank Indonesia's accommodative macroprudential policy. The government support through the State Budget (APBN) instruments in overcoming the pandemic will also be carried this year, providing fiscal incentives and social protection. Structural reforms are undertaken because they are necessary to help the nation adjust to some critical changes: a new lifestyle post-pandemic, climate changes, and geopolitical conflicts that have affected the supply chain, trade, and global investment. One example of these structural reforms is the improvement of productivity through the development of the labour market, infrastructure, logistics, and financial sector. Some changes on the law and regulations under the Omnibus Law have been accomplished to support the reforms, but challenges remain for its implementation.

### **Towards A Digital and Green Central Banking**

Now we come to the last part of my speech: that is, on a strategic foresight on the central banking practices. What would the future of the central banking look like? My answer would be "a digital and green central banking". This is not a dream.

This is our future. Central banks must take a lead role in navigating the world economy, achieving a sustainable and inclusive growth. Through a holistic digital transformation: central bank policy mix, institutions, capacities, and competencies. The central bank policy mix becomes more relevant post-COVID-19 pandemic and, therefore, it needs to be continuously improved.

I am hoping that the other dimension of the new frontier, rising digitalization, that has emerged in the last three years not only reshapes our economy and finance, but also the way we think, the way we do things every day, the way people do economic transactions, and also reshapes the central banking policy and practices. Thank goodness back in 2019, we already started the digital transformation in Bank Indonesia, and now have the fastest growing digital payment system in the world. We digitalize the payment system by introducing our Quick Response Code Indonesian Standard (QRIS), Bank Indonesia Fast (BI-FAST) Payment, introducing the national open Application Programming Interface (API) standard, pushing further digital banking, integrating those with fintech and e-commerce. Furthermore, I will discuss the Central Bank Digital Currency (CBDC) or Digital Rupiah that we are in the process of issuing.

### ***Why Do We Need CBDC, the Distribution and the Infrastructures?***

CBDC or Digital Rupiah is vital because currency is one of the pillars of the sovereignty of a country. When we talk about currencies in the world, the U.S. dollar, the Euro, the Chinese Yuan, as well as Rupiah, no currency is issued by the private sector. Under our constitution, Bank Indonesia is the sole mandate holder to issue currency. While the difference between digital currency and the currency in our pocket is whether the Rupiah is digital or not, we support our national sovereignty in our Digital Rupiah with the highest level of digital security and the technological platform, such as *khazanah Digital Rupiah*. It facilitates as a reference medium of exchange, unit of account and store of value of all of the digital assets in Indonesia. The Digital Rupiah has the potential to be used in digital banking, e-commerce, and even the metaverse.

These three requirements of digital rupiah, are: (i) conceptual design, (ii) integration, interoperability and interconnection of payment and money market infrastructure, and (iii) technology platforms, which can facilitate cross-border transactions. Bank Indonesia will focus on the distribution of the Digital Rupiah in Indonesia to wholesalers. We are in the process of selecting the wholesalers, who will distribute our Digital Rupiah further to the retailers. The distribution to the wholesalers will use permissioned Distributed Ledger Technology (DLT). We plan to issue the white paper that contains the conceptual design of the Digital Rupiah.<sup>1</sup> Next, we need to prepare the integration, the interconnection, and the interoperability of the payment system and the money market infrastructure. That is why we built the BI-FAST and reformed Bank Indonesia Real Time Gross Settlement (BI-RTGS). So going to the future, BI-FAST, BI-RTGS, National Payment

<sup>1</sup> Bank Indonesia's CBDC White Paper, called "Project Garuda: Navigating the Architecture Of Digital Rupiah" already published on 30<sup>th</sup> November 2022. The white paper could be accessed at <https://www.bi.go.id/en/rupiah/digital-rupiah/default.aspx>

Gateway (NPG), Electronic Trading Platform (ETP), and Central Counter Party (CCP) will be integrated, interconnected, interoperability. Bank Indonesia is in the process of joining other central banks with the best digital platform technology to facilitate cross-border transactions. The ASEAN five succeeded to connect our QR fast payment of the five using our local currencies (Indonesia, Thailand, Malaysia, Singapore and the Philippines) under G20 arrangements. This is a good example to the world on how we build cross-border cooperation, especially in the ASEAN five, and not only focusing on national development.

There are three segments of digitalization in our economy. One segment is of course, the Small Medium Enterprises (SMEs), which plays a significant role. The second part is the manufacturing industry corporations, big corporations. The third part is the digital economy. The digitization of the payment system is also supported by the expansion of the use of the Quick Response Code Indonesian Standard (QRIS) as a national QR Payment standard in payments for various digital economic-financial transactions. The QRIS is already being used by more than 20.5 million users, nation-wide.<sup>2</sup> We are targeting to achieve 30 million users by the end of the year 2022, and 65.5 million in the next two or three years. So, many SMEs in our retail market do not have bank accounts but they participate in the digital economy. We digitalized the SMEs, the smaller segment of our economy through QRIS, BI-FAST, SNAP, integration of e-commerce, fintech, and digital banking, while also pushing and developing startups. For that to happen, we need to understand (i) the design and measure of the digital money process, (ii) the digital money supply, (iii) the digital base money M0, (iv) the money multiplier, and (v) the impacts on monetary transmission, the effectiveness of monetary policy, macroprudential policy and payment system policy. By integrating, interoperability, and interconnecting payment and money market infrastructure, all the payments and money market data will be integrated and become part of the national data in the single digital ID for Indonesian residents. At the end, we can use all the data available for analysis and forecasting, not only using the common modelling tools like econometrics or Bayesian, but also using big data and data analytics. We also need to calculate and mitigate the risks such as systemic risks (cyber risks) and operational risks and their impacts on monetary and financial system stability prudently. We, therefore, support the unicorn, also the integration ecosystem of digital banking, fintech and e-commerce.

Furthermore, the cross-border payment arrangements necessitate changes in capital flow management design. We are in the process of formulating the organization of the policymaking bodies of the ASEAN five countries, which is agreeing on the exchange rate arrangement through the digital platform, on how to connect to the market, and on how to monitor the capital flows, including the related parties who need to be regulated and supervised (banks and payments system companies). Bank Indonesia internally has started our digital policy-making framework and practices, including our business process. We have our monthly board meeting digitally. This is the central banking in the digital area. So this is the central bank of the future now.

<sup>2</sup> There are 22 million user QRIS as 30<sup>th</sup> November 2022

***Some Key Aspects the Future of the Central Banks must Have***

**First**, a central bank remains a vital instrument of a state. A credible and independent central bank is unarguably an equal partner of the Government. As such, a central bank must rise to the occasion during extra-ordinary times, employing all the instruments at its disposal to: (i) ensure the long-run economic viability of the state, (ii) address key vulnerabilities in the financial system, and (iii) look beyond its traditional price stability mandate, although maintaining the stability would remain at the core of the central bank's objective. Maintaining stability amidst the increasing global uncertainties needs a more holistic and multidimensional approach.

**Second**, the central bank policy mix becomes more relevant post-COVID-19 pandemic and, therefore, it needs to be continuously improved. From Indonesia's experience, I would suggest the improvement to include:

(i) a synergy with the government and other authorities to tackle "a crisis like no other" that impedes the economic development without compromising the independency of the central bank. Going forward, the world economy is "navigating uncharted waters", so the central banks can no longer be "the only game in town".

(ii) Adopting the rapid development of technology, innovation, and digitalization. A central bank must play a leading role to optimize the digital dividends amidst the expansion of increasingly hyper-connected network technologies (AI-machine and deep learning, cloud computing, blockchain, distributed ledger, decentralized finance, and the metaverse). This is why 90% of the central banks surveyed by the BIS earlier this year are interested in analyzing the plan to issue CBDC.

(iii) Addressing the need to move towards the green economy and finance. Central banks ultimate purpose is to ensure the achievement of optimal economic welfare - which, at its core, is people's purchasing power -as influenced by market outcomes of price developments, employments, and labor productivity. These factors are increasingly being affected by climate change risks as an external factor that causes market failures. In the future, the central banking must be undertaken in green manners: green monetary policies, green assets in the central bank's portfolio, and green financing.

**Third**, an urgent need for strategic oversight within the central banking practices to complement the well-established research-based policy-making process. The central banking strategic foresight will enable the central bankers in collecting information on the future trends on economics, social, and politics. It will help us prepare the "just-right" policy responses. For now, the strategic foresight for the central banking would be digital and green. We must be well-prepared to move towards it.

**Closing Remarks**

Ladies and Gentlemen, I will end my keynote here. I feel warm-hearted by this event. This is the 16<sup>th</sup> year we have organized this annual international conference, bringing together all talented researchers from all over the world. The BMEB is a catalyst for connecting ideas, advancing knowledge, and empowering policy in



today's digital era. Going forward, we will continue to develop BMEB as a globally respected reference journal on central bank policy, economics, and finance. The theme of this year's conference is timely and monumental, synergizing between economic policies and innovation. For the plenary sessions, we have delicately crafted an interesting and relevant subtheme: "CBDC and Sustainable Economic Growth". It brings together leading scholars we are proud to be associated with: Prof. Markus Brunnermeier from Princeton University (USA), Ms. Benedicte Nolens, the Head of BIS Innovation Hub Hong Kong; and Prof. Chun-Pin Chang from Shin Chien University (China). I am delighted that they will be speaking at the plenary today.

To all Call for Papers' participants, on behalf of Bank Indonesia, I would like to extend my appreciation for your contributions. Given the mix of authors presenting and the quality of their papers, I am confident that this conference will produce a high value proceeding. Finally, with the name of the God Almighty, I officially open the 16<sup>th</sup> Bulletin of Monetary Economics and Banking International Conference and Call for Papers 2022.