CENTRAL BANK POLICY:
THEORY AND PRACTICE[1]

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Any news concerning central bank policy decisions always garners public attention. Statements from the governor of the central bank in the United States, the Chair of the Federal Reserve System (the Fed), or indeed other members of the Federal Open Market Committee (FOMC), about the Federal Funds Rate (FFR), for instance, are always eagerly awaited by markets around the world.[2] In fact, indications of the FFR direction, which are typically linked to statements from the Chair of the Fed or other FOMC members about US inflation and the economy, usually become market speculation. Such conditions have become unequivocal since the Fed announced in May 2013 its plan to normalise the ultra-loose monetary policy stance adopted after the global financial crisis of 2008/09 in order to support the US recovery, which subsequently became known as the Fed's Taper Tantrum. Actual decisions, or even just indications of the policy rate direction, directly influence interest rates on the money market, dollar exchange rates on the foreign exchange market as well as stock prices on Wall Street. Such developments are almost immediately followed by interest rate, exchange rate and stock price fluctuations on global markets and in a number of countries, including Indonesia.

Similarly, in Indonesia, statements released by Bank Indonesia (BI) are constantly in the news across various mass media outlets. The decisions of the BI Board of Governors regarding the BI Rate or even just indications about the possible future direction of the policy rate are increasingly becoming a reference for the markets and banks in terms of the financial transactions undertaken.[3] In actuality, non-resident investors, specifically those that invest in financial instruments such as government bonds (SUN), stocks, Bank Indonesia Certificates (SBI) and corporate bonds in Indonesia, base their investment decisions on statements regarding

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[2] Read, for example, the "Transcript of Chair Yellen's Press Conference", 16th December 2015, Board of Governors of the Federal Reserve System (2015), http://www.federalreserve.gov. At the press conference, Chair Janet Yellen relayed the FOMC decision to hike the Federal Funds Rate (FFR) by 25bps from 0.25% to 0.50% after seven years of a near zero percent rate in order to support the US recovery in the wake of the worst global crisis in the United States since the Great Depression in the 1930s.

[3] Pursuant to the Bank Indonesia announcement, dated 15th April 2016, effective from 19th August 2016 the BI Rate, which is equivalent to the 12-month money market rate will be replaced by the BI 7-Day (Reverse) Repo Rate, representing the 7-day money market rate.

the BI Rate. In addition to policy rate decisions, Bank Indonesia policy in relation to macroprudential regulation and supervision, including downpayments on automotive loans as well as the maximum loan-to-value ratio (LTV) on property and housing loans also attracts the public attention. So too does payment system policy, such as money supply, clearing, card-based payment instruments and electronic money. Decisions relating to the policy rate, macroprudential policy and the payment system are based on rigorous assessments of global and domestic macroeconomic and financial system developments and projections that are regularly delivered by Bank Indonesia.[4]

That brief overview demonstrates the importance of the central bank's role in the economy. Since inception, the central bank has been mandated with maintaining price stability (inflation and exchange rates) as well as financial system stability. That is the primary contribution of the central bank to support sustainable economic growth. Therefore, the functions of monetary and payment system policy as well as the regulation and supervision of financial institutions fall under the auspices of the central bank. Initially, such functions were comparatively simple but have become increasingly complex over time in line with global and domestic economic and financial development. Function in the monetary sector, for example, development has gone from the commercial paper rediscounted by the Bank of England in the 17th century to monetary operations targeting interest rates. The function of the payment system has also progressed from merely printing and circulating banknotes and coins to the regulation and supervision of payment instruments, mechanisms and infrastructure. Likewise, in terms of financial system stability, the function of the central bank has developed from lender of last resort to macroprudential regulation and supervision.

The monetary policy instituted by the central bank to influence money supply and interest rates is one determinant of macroeconomic stability, in particular inflation and exchange rate stability. In the financial sector, the interest rate policy and exchange rate stabilisation policy of the central bank directly influence bank funds and credit as well as stock and bond prices on the capital market. Subsequently, through the influence of such monetary and financial developments on consumption, investment, exports and imports, monetary policy also influences inflation, economic growth and, therefore, the creation of employment opportunities in addition

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[4] Refer to, for instance, the Bank Indonesia Press Release, dated 17th December 2015, that announced the BI Rate would be held at 7.50% in anticipation of pressures from global financial markets, including the impact of the FFR hike, despite stable macroeconomic conditions on the home front, specifically low inflation and a sustainable current account deficit, which provided adequate space to ease the monetary policy stance. The BI Rate was subsequently lowered at the BI Board of Governors' Meeting in January, February and March 2016 by a total of 75bps to 6.75%. At the BI Board of Governors' Meeting in June 2016, in addition to lower the BI Rate by 25bps to 6.50%, Bank Indonesia also introduced macroprudential policy easing by raising the LTV ratio to boost lending and economic growth. In addition to news in the mass media, the decisions of the BI Board of Governors are published as press releases and posted to the official website of Bank Indonesia, http://www.bi.go.id. Bank Indonesia also regularly publishes a quarterly Monetary Policy Report and monthly Monetary Policy Review that contains assessments of economic, financial and monetary developments and projections that underlie BI Rate policymaking.

to the balance of payments. In other words, the monetary policy stance adopted by the central bank has a major influence over public prosperity and welfare.

Similarly, microprudential and macroprudential regulation and supervision are imperative in terms of maintaining financial system stability. Microprudential encompasses the micro regulation and supervision of financial institutions and focuses on the soundness and performance of each individual financial institution. Meanwhile, macroprudential involves the macro regulation and supervision of financial institutions and focuses on systemic risk in order to achieve financial system stability. In many countries, macroprudential and microprudential regulation and supervision fall under the auspices of the central bank. In contrast, several countries, including Indonesia, Australia and South Korea, transferred the microprudential function to a financial services authority, while the central bank maintained control over macroprudential aspects. In its implementation, central banks direct macroprudential policy towards dampening accelerators in the financial cycle, while preventing and detecting a build-up of systemic risk that leads to financial system instability. Regulations concerning the loan-to-value ratio (LTV) for housing loans as well as downpayments on automotive loans in Indonesia are concrete examples of macroprudential policy to combat excessive credit growth in both sectors that could disrupt financial system stability.

In terms of the payment system, currency is printed and circulated in line with the economic requirement and, therefore, supports monetary policy to achieve price stability and macroprudential policy to maintain financial system stability. In addition, payment system policy includes the reliable, efficient and secure transfer of funds, clearing and financial transaction settlement, retail and wholesale, in the economy. Various payment instruments have also been developed in line with the advancement of financial product innovation and information technology development, such as automated teller machines (ATM), debit and credit cards, mobile and internet banking as well as electronic money. Even today, the development of financial technology, or FinTech, has fundamentally changed the business models of various financial services offered by financial institutions to the public. Therefore, payment system development, monetary and financial system stability will affect each other, with all three considered absolutely crucial for economic advancement.

Due to the significant influence policy has on the economy and public welfare, it is understandable that the public, business and financial communities, as well as government and parliament take an avid interest in the central bank. That interest extends beyond policy aspects to the institutional arrangements of the central bank in line with the ongoing change in the global economic and political landscape, with more and more countries applying a market-based economy and democratically elected governments. The institutional arrangements of the central bank are reinforced through the principles of good governance by strengthening the legal framework and in terms of policy implementation. This can be seen by the modernisation of prevailing laws that provide a clear mandate for the central bank as well as independence in the

execution of its duties. Furthermore, greater accountability and transparency from the central bank is now in increasing demand in terms of policy implementation. The various institutional arrangements of the central bank have been an ongoing concern for the past two decades and became increasingly important in the wake of the global financial crisis of 2008/09. These changes reflect growing public awareness in various countries of the need to strengthen the role and standing of the central bank in order to support achievement of the economic policy targets.

Central Bank, Academic Thinking, and Political Economy

From a central bank standpoint, the challenges faced in terms of carrying out the mandate are onerous. In fact, the challenges have become even more complex since the onset of the global financial crisis in 2008/09. In the implementation of monetary policy, for instance, controlling low and stable inflation has become increasingly important to support economic growth and ameliorate public welfare. The volatility of non-resident capital flows and exchange rates in emerging market economies, including Indonesia, have also increased since the global financial crisis with monetary policy divergence stemming from ultra-loose monetary policy in advanced countries and ubiquitous uncertainty blighting global financial markets. The global financial crisis of 2008/09 also showed that price and exchange rate stability alone are insufficient to maintain financial system and macroeconomic stability to support sustainable economic growth. Increasingly rapid and complex development in terms of product innovation and financial operations on the one hand has facilitated economic financing but, on the other hand, has also amplified the risk of financial system instability and affected the monetary policy transmission mechanism in the economy. Likewise, payment instrument development has necessitated increased regulation and supervision by the central bank in order to maintain a reliable, efficient and secure payment system. Institutionally, the strengthening of consistency, independence and accountability as well as transparency and communication have become progressively more important, not only in terms of governance but also to support policy effectiveness and credibility and, therefore, the reputation of the central bank.

Throughout their evolution, economic conditions, political environment, and academic thinking have influenced how a central bank implements its mandate. At its inception in the 17th century, for instance, the role of the central bank in the economy emphasised creating and circulating currency, purchasing government debt, and functioning as Lender of Last Resort (LoLR) for financial system stability. Application of the gold standard strengthened central bank credibility in terms of achieving price, exchange rate and financial system stability because the central bank was charged with maintaining currency convertibility in line with the gold reserves held. Nonetheless, government control over the central bank to finance the post-World War recovery triggered soaring inflation, leading to an economic crisis. Furthermore, central bank credibility was also lost.

Developments over the two decades prior to the global financial crisis of 2008/09 saw central banks focus shifted on price stability. This was in response to soaring inflation, while providing the central bank independence from government control. On the other hand, however, the focus on price stability was also based on the growing acceptance of Neoclassical and Keynesian economics, namely that monetary policy only influences inflation in the long term, despite a short-term trade-off between inflation and economic growth in line with the findings of the Phillips Curve. The economy is assumed to always be in equilibrium and the primary causes of imbalances are price and wage rigidities. Similarly, there is no friction in the financial system, therefore currency and credit are perfect substitutes that are affected by interest rates. Furthermore, non-resident capital flows freely and, therefore, a fully flexible exchange rate system is the optimal choice. Consequently, central bank policy merely needs to focus on stipulating the short-term interest rate in order to achieve price stability, while economic and financial equilibrium will generate economic growth and maintain macroeconomic and financial system stability. Central bank policy governance is strengthened by independence and is in line with rational expectations theory, policy consistency with the rules and the importance of transparency to form and anchor expectations. Such theories and ideas compelled central banks in many countries to target price stability, thereby adopting the Inflation Targeting Framework (ITF).

The global financial crisis of 2008/09, however, turned central bank practices and theories on their head; not because ITF policy had failed but, in contrast, because ITF had successfully lowered inflation in many countries, coupled with low interest rates that had stimulated rapid economic growth. The problem was that long-term stability and economic boom had led to excessive credit growth, asset price bubbles (stocks and housing) as well as high leverage. Financial accelerators caused the financial cycle to amplify the economic cycle. Furthermore, economic stability led to financial system instability that ultimately culminated in the worst crisis in 2008/09 since the Great Depression of the 1930s. Evidently, price stability alone is insufficient to ensure macroeconomic stability if financial system stability is not also maintained; "there is no macrostability without financial stability". In reality, financial friction is an inevitability due to asymmetric information, financial product innovation, price setting and valuation as well as risk-taking behaviour, hence the financial system is constantly in a state of flux that produces financial accelerators and turns fragility to systemic risk.

Consequently, the global financial crisis of 2008/09 taught an invaluable lesson that the central bank should return to its original mandate, namely achieving and maintaining the stability of domestic currency values (inflation and exchange rate), while supporting financial system stability. Central bank credibility and the framework that had been established through ITF became the foundation to achieve that mandate. Nevertheless, that was still not enough. Macro-financial linkages demanded a macroprudential policy response from the central bank to mitigate procyclicality between the financial sector and economic activities that trigger economic and financial crises, such as the global financial crisis of 2008/09. The policies of foreign exchange

market intervention and non-resident capital flow management were also required to stabilise the exchange rate, while remaining in a flexible regime. Such developments encouraged many central banks to apply macroprudential policy and manage foreign capital flows in order to strengthen the effectiveness of monetary policy. In brief, the monetary and macroprudential policy mix became the new central banking paradigm in various countries after the global financial crisis of 2008/09, including Bank Indonesia in 2010. This innovation in central bank policy practices also demands the development of underlying theories and empirical studies.

The previous description illustrates that the theory underlying central bank policymaking has developed with rapidity. Likewise, the practice of policy formulation and implementation at various central banks has experienced a paradigm shift that requires the development of underlying theory. In other words, the advancements have had an advantageous reciprocal influence between the development of financial and monetary economic theory in the academic world and the various schools of thought that underlie practical central bank policymaking. Academia, in the pursuit of clarifying or offering solutions to prevent problems, has contributed greatly to conceptual thinking and theories concerning various phenomena and economic behaviours. The theoretical constructs have become advanced and deep, on a philosophical conceptual level and using quantitative methods along with empirical studies, although in this case relying on certain assumptions that simplify complex economic behaviours.

On the other hand, the central bank has also made various breakthroughs in terms of conceptual ideas and innovative policymaking as a solution to complex financial-economic problems. Oftentimes, policy innovation is also facilitated by close interaction between the central banking community at various global and regional forums and meetings. Theoretical development in academia is clearly a solid foundation for central bank policymaking. Nonetheless, the complexity of existing problems often necessitates an innovative policy response from the central bank, which also encourages the academic world to conduct theoretical studies and seek underlying empirical evidence.

Rapid development in terms of policy concepts and institutional arrangements at the central bank, from the perspectives of both academia and the innovative policy response of the central bank, demands stringent reviews, studies and documentation. The various concepts underlying the policy response of the central bank are a vital reference for the central bank and other policymakers to draw lessons on the general and best practices available to prevent the problems faced as well as for academia to seek clarification and develop the theories further. On the other hand, the relentless development of theories and ideas in academia are a helpful reference for the central bank in terms of policymaking in response to emerging problems.

For academia, the synthesis (or indeed contradictions) that may appear between central bank policy theories and practices represent an interesting study that must be taught to students in order to enhance academic knowledge or, indeed, for further development. This is important to bridge the gap between theoretical ideas in the academic world and the practical policymaking

process at the central bank. Moreover, academia, especially in Indonesia, has limited access to advanced books that discuss central banking policy theories and practices as a reference for postgraduate students, teachers and researchers. In general, existing programs and subjects tend to focus on standard theories, while lacking comprehensive and informed discussions on central bank policy practices and the underlying theories. Similarly, reviews of institutional aspects are also absent from academia.

Institutional Aspects of Central Bank Policy Credibility

During the 1970s and 1980s, the general theme of monetary policy discussions was oriented more towards the selection of appropriate strategic and operational frameworks, while the institutional aspects of policy implementation did not receive much attention. Only in the 1990s did intuitional aspects become the subject of intensive discussions, which was partially precipitated by the emergence of the long debate concerning the formation of the European Central Bank (ECB) at the beginning of the decade. One area that received attention was how to design the right legislative framework for the existence of a central bank so that all parties mandated with implementing monetary policy could act to achieve the policy objectives. In this case, the policy goal was, typically, to achieve price stability (low inflation) in the medium-long term, while paying due consideration to supply and demand-side shocks or output performance in the near term.[5]

An important lesson could be extracted from the empirical experience of policy implementation by nearly all central banks around the world, namely that inflation bias was primarily attributable to the political perspective, which sought to achieve monumental changes in a short period of time. Such conditions necessitated a legislative framework that provided central bankers independence from political interference, coupled with relatively long tenure.[6] In this case, longer tenures were believed to protect the central banker from political interference. Nevertheless, the status of central bank independence, in many countries, raised the question of how the institution could effectively be monitored by the public and representative members of parliament. Monitoring was required because of the risk of incompetent policymaking at the central bank, or the possibility of introducing policy that conflicted with the mandate of the

[5] The increasing shift in policy preference towards achieving price stability was based on the belief that price stability (low inflation) was a prerequisite of sustainable economic growth and, therefore, public welfare.

[6] The issue of central bank independence has been around since the inception of central banks. David Ricardo voiced his support for an autonomous central bank proscribed from financing the government's budget deficit in 1824 (Fraser, 1994). In the dictionary, independence is defined as free from outside influences, instructions or control. When applied to central bank independence, Meyer (2000) interpreted independence as free from government influence, instruction and control, both executive and legislative. Fraser (1994), on the other hand, defined central bank independence as freedom for the central bank to implement monetary policy without political considerations.

central bank. Therefore, mandating central bank independence had the consequence of necessitating accountability.[7]

A study focusing on both institutional aspects (independence and accountability) would be pertinent considering the crucial role both aspects play in terms of improving central bank policy credibility in the eyes of the public. Policy credibility can be defined as central bank commitment to comply with the rules or policy goals articulated in a transparent manner. Simply put, therefore, policy credibility is built through consistency between what is said and what is done. In essence, for a central bank mandated with controlling inflation, credibility is a function of the difference between actual inflation and the central bank's inflation target.

Why is credibility important? Blinder (1999) stated that with credibility a central bank could reassure the public that, through the policy measures taken, the policy goals will be achieved. Therefore, higher credibility at a central bank is generally believed to enhance the implementation effectiveness of monetary policy itself because if a central bank is credible and the public have rational expectations, then delivering commitment or a statement on the planned policy to control inflation will elicit a positive public response, hence the achievement of price stability could be strived towards without sacrificing economic growth. According to Perrier and Amano (2000), a credible monetary authority could form more accurate judgements on economic capacity in terms of producing goods and services, thereby creating job opportunities without stoking concerns regarding the emergence of inflationary pressures. This is an important benefit of policy credibility, particularly when there is uncertainty concerning the output gap.

Although the important role of credibility in terms of monetary policy implementation has long been recognised, modern studies only began to appear at the end of the 1970s through the seminal works of Kydland and Prescott (1977) as well as Calvo (1978). Both studies showed that the rational expectations hypothesis has fundamental implications underlying macroeconomic policy credibility in general and monetary policy credibility specifically. One implication is that monetary policy inconsistency would lead to inflation exceeding its target, or an inflation bias, because the central bank is seeking stronger economic growth. Therefore, if the central bank is not pre-committed to achieving the inflation target, then the subsequent trends that transpire will be inconsistent with monetary policy implementation and a lack of credibility will be conveyed through the policy statement of the central bank.

In this book, aspects of central bank credibility will be discussed along with several measures that could be taken to improve credibility. It discusses the salient institutional aspects of the central bank, namely policy credibility and consistency. A credible central bank can form

[7] According to the dictionary, accountability is defined as the obligation to justify actions or decisions, being responsible. There are two opposing opinions concerning the relationship between independence and accountability. Fraser (1994) opined that accountability could help preserve central bank independence. In contrast, Meyer (2000) suggested a trade-off between independence and accountability, implying that something which increased independence would reduce accountability and vice versa.

public expectations that the policies instituted will always be oriented towards achieving the final target and that the final target can be achieved. If credibility has taken a prolong period to attain and, therefore, the central bank's reputation has already been built, monetary policy will be more effective, whether the response is through interest rates or controlling money supply. In fact, a reputable central bank and thus, strong public expectations, would be consistent with monetary policy and achievement of the final target, which could reduce and even replace the interest rate and monetary policy response.

Eventually, the capacity of the central bank to build policy credibility will depend on efforts to overcome several issues, namely time-inconsistent or sector-inconsistent policy as well as asymmetric information amongst economic agents, economic shocks and even political uncertainty. Therefore, to build credibility, the central bank is recommended to base the policy response on a specific rule rather than discretion, build reputation through consistent policies and strengthen political and public support. This is no mean feat because the internal institutional arrangements of the central bank itself must be strengthened, including professionalism, governance and strong leadership to ensure avowed commitment to the mandate in accordance with prevailing regulations. It is also important to note that improving central bank policy credibility is fundamentally linked to the development of institutional aspects, such as policy independence, accountability and transparency. Furthermore, building public perception through a clear communication strategy is also crucial.

A New Paradigm of Central Bank Policy Mix after Global Financial Crisis

During the two decades preceding the global financial crisis of 2008/09, central banks in various jurisdictions focused on price (inflation) stability to support economic growth. This was driven by academic consensus at the time regarding the trade-off between inflation and economic growth in the near term and monetary policy neutrality in the long term, per a synthesis of Keynesian and Neoclassical economics. From a political economic perspective, that focus represented a reformulation of central banking policy and institutional reforms through crisis resolution in the wake of the Asian financial crisis of 1997/98. In fact, the bank supervision function was transferred away from the central bank in several countries, including South Korea and Indonesia. In practice, a monetary policy framework that targets price stability, otherwise known as the Inflation Targeting Framework (ITF), became popular and was embraced in various advanced and emerging market economies alike.

The global financial crisis of 2008/09 had fundamental implications on the central bank's mandate, policy and institutional arrangements. In terms of the mandate, central banks can no longer merely focus on price stability alone but also on maintaining financial system stability (FSS). To achieve that dual mandate, central banks institute monetary policy, foreign capital flow management and macroprudential policy within an optimal policy mix, in addition to payment system policy. Institutionally, the central bank strengthens internal capacity through

assessments, policy scenarios and decision-making that underlie the policy mix. Furthermore, the central bank also coordinates with the government in terms of macroeconomic policy as well as with other relevant authorities to maintain financial system stability.

It worth noting that, the global financial crisis of 2008/09 fundamentally changed the perspective of the central bank's mandate and policy practices but not because ITF-based monetary operations had failed. In contrast, ITF had successfully achieved low inflation, stimulated economic growth and reduced interest rates in many jurisdictions. In fact, monetary stability had spurred economic booms in many countries, including the US, during an era that became known as the Great Moderation. The problem was that a focus on price stability alone, made central banks less responsive to crisis risks contained in macro-financial linkages. On the other hand, microprudential regulation and supervision focuses on the soundness of individual financial institutions, especially the banks. The US crisis is a concrete example of where macro-financial linkages during an economic boom in a superpower heightened systemic risk that culminated in a devastating financial crisis and impacted all corners of the globe. In addition, the global financial crisis of 2008/09 also had other implications for central bank policy, namely the influx of volatile foreign capital flows to emerging market economies as a consequence of monetary expansion in advanced countries to stimulate the economic recovery process. Such conditions further complicated the central banks' policy response to maintain price (and exchange rate) stability and required the support of financial system stability.

In brief, to support sustainable economic growth, the central bank cannot merely rely on monetary policy to achieve price (and exchange rate) stability alone. Indeed, the monetary policy strategy of the central bank, as well as institutional strengthening, are no longer considered sufficient. Central banks are now required to support financial system stability through macroprudential regulation and supervision from a macro-financial perspective and with a focus on systemic risk. Furthermore, the central bank is also required to apply foreign capital flow management in order to provide the maximum gains in terms of sustainable economic growth, without triggering the risk of macroeconomic and financial system instability due to a balance of payments crisis, external debt crisis and/or sudden-stop capital reversal crisis. The question, therefore, is how the central bank can integrate and combine those three policies, namely monetary policy, macroprudential policy and foreign capital flow management, into an optimal policy mix?

Fundamentally, the central bank policy mix represents the optimal integration of monetary policy, macroprudential policy and foreign capital flow management, as applied by the central bank to achieve price stability and maintain financial system stability. The terminology has a broader scope than the Flexible Inflation Targeting Framework (FIT) proposed in several studies (Agenor and da Silva (2013); Svensson (2009); Ito (2010); Warjiyo (2013); Juhro (2015)). *First,* and departing from FIT, the ultimate target is not only price stability but also maintaining financial system stability. *Second,* and this is similar to FIT, the instruments used

are monetary policy, macroprudential policy and foreign capital flow management in one optimal mix. And *third,* which is also like FIT, policy mix formulation requires an analysis framework and macroeconomic projections that take into consideration macro-financial linkages. Formulation of the central bank policy mix also requires assessments of the more complex transmission mechanisms, not only of the three component policies on price stability but also on support for maintaining financial system stability.

Bank Indonesia's experience of applying a policy mix since 2010 has evidenced its superiority over the standard ITF. Three episodes of macroeconomic and FSS issues in Indonesia have shown that application of the BI policy mix has supported economic resilience in Indonesia and successfully maintained macroeconomic and financial system stability. Underpinning the policy mix formulation process, Bank Indonesia has also expanded the existing macroeconomic projection models to include macro-financial linkages, particularly in the banking system and external sector. Research and analysis has also been developed to broaden our understanding of macro-financial linkages, specifically in terms of credit, property and procyclicality, external debt, foreign capital flow volatility as well as systemic risk assessment in the banking system, particularly in terms of interconnectedness and financial networks in the financial markets and payment system. The policymaking process was further reinforced by the establishment of a joint committee to oversee monetary, macroprudential and payment system policy, which integrates all the three aspects and provides optimal policy mix response recommendations.

Close coordination is also maintained with the Government and other relevant authorities. Nationally, to achieve robust economic growth, while preserving macroeconomic and financial system stability, a national economic mix is required, consisting of: macroeconomic policy, FSS policy and structural reforms. Accelerating structural reform policy aims to boost economic growth from a national production capacity (potential output) perspective. Furthermore, macroeconomic policy coordination intends to manage the economic cycle and prevent internal imbalances, namely high inflation, and external imbalances, such as an excessive current account deficit. Meanwhile, FSS policy coordination aims to manage the financial cycle to dampen boom-bust cycles and prevent a build-up of systemic risk that could culminate in a financial crisis.

Objectives and Utility of the Book

This book aims to analyse various policy theories and practices applied by central banks as well as the institutional arrangements underlying the principles of good governance in terms of policymaking. In other words, this book explores the synthesis between theories, practices and institutional arrangements that underlie central bank policy. The discussion focuses on philosophical conceptual theories and the policies themselves, supported by relevant quantitative analyses as required along with various issues and the latest problems as they emerge. This book aims to bridge central bank policy theories and practices at the intermediate and advanced levels,

which, according to the authors, is currently lacking and, therefore, will provide an invaluable contribution to the world of knowledge.

The goal is to produce a reference book on central bank policy theories and practices in order to advance the understanding and insight of policymakers and practitioners, as a study resource for researchers and academic teaching materials for teachers and students. To that end, the material discussed and contained in this book represents a combination of three perspectives. *Firstly,* a philosophical review and quantitative analysis of the theories underlying central bank policymaking. *Secondly,* the policy practices employed by central banks in various jurisdictions, including Indonesia. *And thirdly,* a study on the influence and implications of central bank policies and regimes to economic, monetary and financial development in the countries concerned. The various empirical studies presented substantively explain and enrich the three dynamic perspectives.

Admittedly, it is not a simple task to author and present such a reference book that bridges policy theories and practices at the central bank. Several challenges forced the authors to review and consider the most appropriate material that represents the overarching purpose. Onerous challenges were confronted not only due to the rapidity of theoretical and practical development, which has already been discussed in various other books, journals and papers, but also because of the panoply of central bank policy practices that do not yet appear in print as a reference for the writing of this book. In this case, the authors benefitted from extensive experience and direct involvement in the policymaking process at Bank Indonesia and various international forums, as well as academic activities linked to various postgraduate programs at several universities in Indonesia. The authors seek to review various theories and constructs under development that are considered relevant and most clearly colour the policy practices at the central bank, without rehashing existing discussions in more detail that can be found in the existing literature on monetary economic theory as taught in academia.

During the writing process, one of the largest challenges was sorting the relevant theories for policymaking as practiced. More specifically, versatility when exploring the plethora of best policy practices employed by various central banks, while simultaneously raising the variety of debates and critiques under development, was imperative. This challenge stemmed not only from the comparatively new policy practices applied, for example the Flexible Inflation Targeting Framework, macroprudential policy or the institutional aspects of diverse central banks but also the review of empirical evidence concerning how policy and institutional arrangements contribute propitiously to central bank and economic performance.

This book is considered a first in terms of comprehensively discussing the latest theories and practices of central bank policy. With the scope of material presented and systematics of writing employed, this book is believed to be a practical reference tool for policymakers at the central bank, practitioners and academia. For the leaders, researchers and staff at Bank Indonesia in particular as well as the financial-banking and business communities in general, the

discussions contained in this book, especially in parts three and four, are fundamental to deepen the various concepts of central bank policy and theory. Similar benefits will also be enjoyed by economists and entrepreneurs in other sectors. Although the discussions are predominantly on a philosophical conceptual level, accompanied by in-depth theory, the rationale and writing of this book is presented in a manner that is readable and easily digestible.

For academia, this book is particularly useful as a primary and essential reference for university students of monetary and financial economics at the intermediate and advanced levels of Master's degrees and Doctoral degrees. Meanwhile, for university students at the senior level of Bachelor's degrees, this book is also very useful as a reference on economic modeling and empirical evidence regarding the issues discussed. Furthermore, this book is also suitable as a foundation for the development of a postgraduate central banking curriculum. Besides, the book is also particularly relevant for teachers and students to deepen central bank policy and theories in the central banking curriculum or, indeed, for other applicable subjects, such as the monetary sector and financial institutions. As stressed previously, this book will furnish teachers and students alike with a comprehensive and deep understanding of relevant economic theories, policy practices and institutional aspects supported at the central bank.

As a primary reference for financial and monetary economics students as well as postgraduate central banking programs, this book was designed to be taught in one full semester. The authors' experience of teaching such subjects at postgraduate programs underlies that belief. Moreover, the chapters of the book are also presented in the correct order to aid the learning process for students. Nonetheless, each respective lecturer maintains the scope to explore certain aspects in more or less depth as preferred. Students, including those taking monetary and financial economics or similar subjects at university, as well as those exploring central bank policy to write a thesis or even to deepen insight into economic policy, will have no problem understanding the materials and concepts put forward in this book.

Over time, the materials presented in this book will be adjusted according to the prevailing requirements and developments in terms of policy practices at central banks as well as input from the readers in line with the requirements brewing amongst the public and in academia. To that end, input from the readers is warmly welcomed for the further refinement of this book. In closing, the authors sincerely expect this book to not only meet the needs of the readers in terms of a deeper understanding of the various salient aspects linked to central bank policy and theories but also to expand our scientific understanding and knowledge.

Hopefully!

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