CENTRAL BANK POLICY

Praise for *Central Bank Policy: Theory and Practice*

The book rigorously discusses the theories, empirical studies and practices of international financial and monetary policy in emerging market economies, including Indonesia. Furthermore, the book is an invaluable policymaking input for the central bank and government, teaching material for lecturers and students as well as an important reference for scientific development in academia.

Prof. Boediono, Vice President of the Republic of Indonesia (2009–2014); Governor of Bank Indonesia (2008–2009)

The world has become increasingly challenging for central banks in both developed and emerging economies. While much has been written on central banks policies in the developed world, less known are the remarkable successes achieved by central banks in the emerging economies. This publication is a valuable source for policy makers in central banking. It not only offers knowledge on the theoretical foundations and institutional arrangements but also on the practical aspects of the policy tools that are at the disposal of central banks, particularly in the emerging world.

Dr Zeti Akhtar Aziz, the 7th Governor (2000–2016) of Bank Negara Malaysia, Malaysia's central bank

This book is a major contribution to the theory and practice of central banking in emerging market economies. Drawing on the accumulated wisdom of many years of academic study and high-level policy experience, the authors provide an encyclopedic yet highly accessible survey and analysis hat bridges theory and practice. No stone is left unturned in this comprehensive study, drawing as it does on economic history, the international monetary system, globalization, and the political economy of macroeconomic policy making.

The volume will be invaluable for a wide audience, including advanced undergraduate and graduate students, academic researchers, policy makers, financial market analysts, and anybody with an interest in contemporary macroeconomic challenges and issues. A highly recommended publication.

Prof. Hal Hill, H.W. Arndt Professor Emeritus of Southeast Asian Economies, Australian National University

When a pure academic writes a book, it lacks practical knowledge and connections; when a pure policy maker writes a book, it lacks academic rigor; but, when an academic who is also an experienced policy maker writes a book, the resultant is a balanced book. It is this balance that the literature lacks and for this reason alone this book, by two experienced academics who have decades of central banking policy making experience, will remain unique.

This book is an amalgam of theoretical percepts, empirical case studies and practical policy debates. While existing reference material would either be too empirical or too theoretical and almost always short of practical policy discussions, this book is far from it. A gap in the history of central banking policies and practices is now immaculately covered. It makes understanding central banking policies and practices easy. The book is both inspirational and thought-provoking. The value and impact of this book will be long lasting.

Prof. Paresh Kumar Narayan, Alfred Deakin Professor, Deakin University

CENTRAL BANK POLICY: THEORY AND PRACTICE

BY

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Preface

Alhamdulillah, with all praise to Allah, the most glorified and exalted, we would like to present this book entitled *Central Bank Policy: Theory and Practice* to the readers, drawing fully on our extensive capabilities, knowledge, and experience to write a book that, to our understanding, does not exist elsewhere, at least in Indonesia. This book also represents an important contribution to central bank and government policymaking as well as teaching materials for lecturers and students and a salient reference for scholarly development in Indonesia and internationally.

The idea for the book emerged from the experiences and concerns of the authors while teaching postgraduate international monetary and financial economics at the University of Indonesia. The teaching materials presented consist of a combination of theoretical studies, empirical reviews, and policy practices at central banks, which garnered an enthusiastic response from the students. Not only could the students explore and deepen the latest theories being developed in academia and empirically model the most interesting research topics, the inclusion of policy practices at central banks also embedded the students into the real world. Consequently, the courses were enlivened by interesting questions and discussions that enriched and enhanced the quality of the teaching.

Unfortunately, we were unable to find a single reference book complete with a combination of theoretical studies, empirical reviews, and policy practices at central banks, thereby motivating us to write this book. This was, admittedly, no mean feat due to the rapid development of policy theories and practices at central banks as well as the fact that most of the materiel had not yet appeared in print as a reference for this book. Fortunately, we could draw on our vast experience and direct involvement with policymaking at Bank Indonesia (BI) as well as our active roles as resource persons or discussants at various international fora. Additionally, one of the author's two-year tenure as Executive Director at the International Monetary Fund from 2007 to 2009 coincided with the global financial crisis, which further served to enrich the understanding and knowledge poured into this book, including the BI policy mix initiated in 2010 as a new policy paradigm at the central bank.

This book is firmly believed to be a first in terms of comprehensively discussing the latest central bank policy theories and practices. The inclusion of the latest material, coupled with clear and logical systematics of the writing, ensures this book's position as an unequivocal reference for policymakers at the central bank, practitioners, and academia. For academia, the book represents an important and leading reference for lecturers and students alike in terms of monetary and financial economics at the intermediate and advanced levels of master's and doctoral programs as well as the latter stages of bachelor's programs. The panoply of theoretical and empirical references contained in this book will facilitate future research among students and researchers. Similar benefits will also be available to economists and those in the business community. 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.

To remain relevant and contemporary, the materials contained in this book will periodically be updated as per the latest developments and requirements in terms of new and innovative policy practices at the central bank. To that end, constructive criticisms and feedback from the readers are warmly welcomed in order to hone the contents of this book.

In closing, the authors would like to acknowledge the important contributions, direct and indirect, of various parties to produce this book. On top of the gratitude felt for the publication of this book, the authors would also like to thank the contributors who could not be named individually, particularly colleagues at the BI Institute for their help in finalizing the book. Hopefully, this publication will expand scientific understanding and knowledge.

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Jakarta, October 2018

Part I

General Review

Chapter 1

Introduction

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.[1] 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 a source of market speculation. Such conditions have become unequivocal since the Fed announced in May 2013 its plan to normalize the ultra-loose monetary policy stance adopted after the global financial crisis (GFC) of 2008/2009. This stance was 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 money market interest rates, dollar exchange rates on the foreign exchange market, and stock prices on Wall Street. Such developments lead to reactions of interest rate, exchange rate, and stock prices 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.[2] In practice, non-resident investors, specifically those that invest in financial

[1]See, for example, the "Transcript of Chair Yellen's Press Conference," December 16, 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 FFR by 25 bps, from 0.25% to 0.50%. This follows seven years of a near 0% rate in order to support the US recovery in the wake of the worst GFC in the United States since the Great Depression in the 1930s.

[2]Pursuant to the BI announcement, dated April 15, 2016, effective from August 19, 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 seven-day money market rate.

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instruments such as government bonds (SUN), stocks, BI Certificates (SBI), and corporate bonds in Indonesia, base their investment decisions on statements regarding the BI Rate. In addition to policy rate decisions, the BI policy in relation to macroprudential regulation and supervision, including down payments on automotive loans as well as the maximum loan-to-value (LTV) ratio on property and housing loans, also attracts 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 BI.[3]

1.1. The Central Bank and Economy

The brief overview in the preceding section demonstrates the importance of the central bank's role in the economy. Since inception, the central bank has been mandated to maintain domestic currency stability (inflation and exchange rates) as well as financial system stability. Maintaining currency and financial system stability is the primary contribution of the central bank toward supporting 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. This can be gauged from the changing role of the monetary sector, from the commercial paper predominance (rediscounted by the Bank of England in the seventeenth century) to monetary operations targeting interest rates. The function of the payment system, on the other hand, 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

[3]See, for instance, the BI Press Release, dated December 17, 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. This resulted despite stable macroeconomic conditions at home. Indonesia, for instance, recorded 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 75 bps to 6.75%. At the BI Board of Governors' Meeting in June 2016, in addition to reducing the BI Rate by 25 bps to 6.50%, BI 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 BI at http://www.bi.go.id. The BI 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.

of financial system stability, the function of the central bank has progressed from been a lender of last resort (LOLR) 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 stabilization 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 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 regulation entails microregulation and supervision of financial institutions and focuses on the soundness and performance of each individual financial institution. Meanwhile, macroprudential regulation involves macroregulation 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 toward 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 LTV for housing loans as well as down-payments 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, in the era of technological progress, 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 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 modernization 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 GFC. 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.

1.2. 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 GFC. In the implementation of monetary policy, for instance, maintaining low and stable inflation has become increasingly important to support economic growth and ameliorate public welfare. The volatility of nonresident capital flows and exchange rates in emerging market economy (EME), including Indonesia, have also increased since the GFC with monetary policy divergence stemming from ultra-loose monetary policy in advanced countries and ubiquitous uncertainty blighting global financial markets. The GFC 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 seventeenth century, for instance, the role of the central bank in the economy emphasized creating and circulating currency, purchasing government debt, and functioning as 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 GFC 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 New Neoclassical and New Keynesian synthesis, 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 GFC, 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 (namely, the GFC) 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 inevitable due to asymmetric information, financial product innovation, price setting, and valuation as well as risk-taking behavior, hence the financial system is constantly in a state of flux that produces financial accelerators and turns fragility to systemic risk.

Consequently, the GFC taught an invaluable lesson that the central bank should return to its original mandate, namely to achieve and maintain 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. Macrofinancial 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 GFC. The policies of foreign exchange market intervention and nonresident capital flow management were also required to stabilize 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 GFC, including BI 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 behaviors. 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 behaviors.

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 innovations are 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.