palgrave pivot

CENTRAL BANK RATINGS

A New Methodology for Global Excellence

Indranarain Ramlall

Central Bank Ratings

DOI: 10.1057/9781137524010.0001

Other Palgrave Pivot titles

Stephen Paul Miller: **The New Deal as a Triumph of Social Work: Frances Perkins and the Confluence of Early Twentieth Century Social Work with Mid-Twentieth Century Politics and Government**

Nicholas Pamment: **Community Reparation for Young Offenders: Perceptions, Policy and Practice**

David F. Tennant and Marlon R. Tracey: **Sovereign Debt and Credit Rating Bias**

Jefferson Walker: **King Returns to Washington: Explorations of Memory, Rhetoric, and Politics in the Martin Luther King, Jr. National Memorial**

Giovanni Barone Adesi and Nicola Carcano: **Modern Multi-Factor Analysis of Bond Portfolios: Critical Implications for Hedging and Investing**

Rilka Dragneva and Kataryna Wolczuk: **Ukraine between the EU and Russia: The Integration Challenge**

Viola Fabbrini, Massimo Guidolin and Manuela Pedio: **The Transmission Channels of Financial Shocks to Stock, Bond, and Asset-Backed Markets: An Empirical Analysis**

Timothy Wood: **Detainee Abuse During Op TELIC: 'A Few Rotten Apples'?**

Lars Klüver, Rasmus Øjvind Nielsen and Marie Louise Jørgensen (editors): **Policy-Oriented Technology Assessment Across Europe: Expanding Capacities**

Rebecca E. Lyons and Samantha J. Rayner (editors): **The Academic Book of the Future**

Ben Clements: **Surveying Christian Beliefs and Religious Debates in Post-War Britain**

Robert A. Stebbins: **Leisure and the Motive to Volunteer: Theories of Serious, Casual, and Project-Based Leisure**

Dietrich Orlow: **Socialist Reformers and the Collapse of the German Democratic Republic**

Gwendolyn Audrey Foster: **Disruptive Feminisms: Raced, Gendered, and Classed Bodies in Film**

Catherine A. Lugg: **US Public Schools and the Politics of Queer Erasure**

Olli Pyyhtinen: **More-than-Human Sociology: A New Sociological Imagination**

Jane Hemsley-Brown and Izhar Oplatka: **Higher Education Consumer Choice**

Arthur Asa Berger: **Gizmos or: The Electronic Imperative: How Digital Devices have Transformed American Character and Culture**

Antoine Vauchez: **Democratizing Europe**

Cassie Smith-Christmas: **Family Language Policy: Maintaining an Endangered Language in the Home**

DOI: 10.1057/9781137524010.0001

palgrave pivot

Central Bank Ratings: A New Methodology for Global Excellence

Indranarain Ramlall
Senior Lecturer, University of Mauritius

palgrave
macmillan

DOI: 10.1057/9781137524010.0001

Softcover reprint of the hardcover 1st edition 2016 978–1–137–52400–3

First published 2016 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

Palgrave® and Macmillan® are registered trademarks in the United States, the United Kingdom, Europe and other countries.

ISBN: 978–1–137–52401–0 PDF
ISBN: 978–1–349–70666–2

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

www.palgrave.com/pivot

DOI: 10.1057/9781137524010

Knowledge is like a fathomless sea, the more one dives, the more one discovers new things and this may reiterate in life-birth cycles, all requiring GOD to set a culminating point – the ultimate equilibrium

Dedicated to my parents who gave me education and to all those who are striving hard for a better world

DOI: 10.1057/9781137524010.0001

Disclaimer

All the information provided has been carefully checked with utmost care taken to ensure accurate reporting of information. However, the author accepts no liability for the current validity, correctness, completeness or quality of the information made available.

DOI: 10.1057/9781137524010.0001

Contents

DOI: 10.1057/9781137524010.0001

List of Illustrations

Box

Figures

DOI: 10.1057/9781137524010.0002

Tables

DOI: 10.1057/9781137524010.0002

Preface

Central banks play preponderant roles in the world. Despite the fact that the mandates of central banks may differ, yet, there is usually a convergence in most central banks with respect to price stability. The Federal Reserve Bank strives to maintain both price stability and full employment. Hong Kong Monetary Authority adheres to strict exchange rate and price stability with respect to US rates under its well-founded currency board mechanism. The US Subprime crisis magnified the crucial role of central banks in terms of their abilities to absorb financial system casualties. In essence, central banks are endowed with core long-term liabilities known as currency in circulation which do not pose substantial costs. When the crisis broke out, central banks in both the US and UK undertook massive assets purchase programmes which unleashed considerable increase in assets. Cross-border spillover effects were also noted on Asian economies. These balance sheet adjustments may eventually gnaw at the profit-earning capacities of central banks. In extreme cases, negative equity can manifest. However, in spite of being imbued with negative equity, central banks can still operate being the sole financial institution that can still work under negative equity such as the glaring cases of Chile and Czechoslovakia. Nonetheless, quasi-fiscal costs are likely to loom large in the economic horizons.

As at date, no study has been undertaken in the area of central bank ratings. Above all, there is still no yardstick established that can be used to set the benchmark in terms of knowing which is the best central bank in the world.

DOI: 10.1057/9781137524010.0003

Such a benchmark is particularly required in view of establishing best international practices. The aim of this book is geared towards filling in such a vacuum. A large set of metrics is employed to gauge on the quality of central banks. Different criteria are used such as accounting body, research, presence of stress-testing exercises, inflation targeting framework, staff efficiency, and communication languages used with the public, amongst others. The study undertaken is unique and is expected to contribute to the area of central banking by providing a boost for central bank governors to strive their best in improving on each yardstick so that central banking enjoys continued progress in the decades to come. The author clung to a meticulous and careful approach to spawn a holistic central bank rating system with no stone being left unturned when it comes to the quality of analysis undertaken. The study is expected to be fruitful for researchers, academicians, central bankers. Rating agencies can also use it as a medium for country ratings.

This book would not have been made possible without the assistance of some people. I express my sincere thanks to Palgrave Macmillan for their remarkable professionalism in processing the manuscript. In the same vein, I would like to thank the anonymous reviewers at Palgrave Macmillan for finding my work unique and innovative. Last but not the least, I am grateful to Professor Chris Brooks for his useful comments and suggestions. I hope that many of you will find this book very interesting.

Comments, suggestions or any other queries are most welcome. You can write to me on the following email addresses: iiramii3@gmail.com, i.ramlall@uom.ac.mu.

DOI: 10.1057/9781137524010.0003

www.palgrave.com/pivot

1
Introduction

Abstract: *Chapter 1 provides a historical background of central banking along with a discussion of the various functions performed by central banks worldwide. The theoretical underpinnings of monetary policy are reviewed. The major challenges faced by central banks, chiefly in light of the crisis such as proper interest rate setting to shun off excessive deviations from fundamental values, are also given due consideration. The motivation that drives the construction of an internationally sound central banking ratings system is discussed in this chapter. In essence, the objective is geared towards establishing an internationally recognized ratings system which would leverage on the quality of central banking in the world.*

Ramlall, Indranarain. *Central Bank Ratings: A New Methodology for Global Excellence*. Basingstoke: Palgrave Macmillan, 2016. DOI: 10.1057/9781137524010.0004.

1.0 Introduction

The objective of this chapter is to provide the readers with a general historical and functional overview of central banking worldwide. First, the historical background of central banking is discussed. Then, the multi-dimensional tasks of central banks are considered which is then followed by the theoretical underpinnings of monetary policy. The challenges that buffet central banks' activities are also addressed. Finally, the chapter ends by laying out the motivations behind a proper ratings methodology to set the pace for excellence in central banking worldwide.

1.1 Brief history of central banking

In spite of the fact that central banking constitutes a rather new phenomenon in human history with some four centuries of experience, yet, central banks are now deemed as important instruments of stability, spanning from monetary to financial, all inclusive. Prior to the creation of money, man resorted towards metals such as gold as a means of transactions. Gold exhibited some very nice features such as medium of exchange and store of value. Eventually, these metals were standardized as to take the form of coins. With time, paper money was created and central banks played prominent roles in ensuring price stability.

Many different monetary systems came to birth. Under the gold standard, central banks were able to issue money as per the value of gold they held in stock so that less focus was laid as to the amount of money required to really boost the economic activities. Emphasis was laid to keep the value of money fixed to gold. Post the end of World War I, many central banks were subject to dearth in gold stocks leading to a drift towards the gold exchange standard. Under the latter, countries simply pegged their currencies' values to gold. Much to the credit of the famous economist in the 1950s, John Maynard Keynes, that many central banks became aware of their inherent monetary policy power in influencing economic activities. This led towards the adoption of the Bretton Woods system and the collapse of the gold standard. Under the Bretton Woods system, the United States would simply peg the US dollar to gold per ounce and all other countries would then fix the value of their currencies to US dollar. However, the Bretton Woods system became problematic

DOI: 10.1057/9781137524010.0004

as countries were not able to support their pegged currencies, all paving the way towards the floating exchange rate regime.

With time, central banks realized that money printing generated more detrimental effects than positive impacts so that rule-based approach (see Taylor, 1993 and Clarida, Gertler and Galí, 1998) in lieu of discretionary-based approach became the new monetary policy development. Monetary policy underwent a new era of development in 1989 when the Reserve Bank of New Zealand pioneered the inflation targeting framework in its monetary policy implementation strategy. The crux of such an approach is that it best helps to anchor inflationary expectations so that credibility is being induced along with transparency and accountability. As new risks spurted out, central banks adjusted their monetary strategies. During the US subprime crisis, some central banks resorted towards non-conventional monetary policies in the form of quantitative easing in view of scaling down the level of financial casualties. Today, modern central banking requires adherence to both monetary and financial stability, as vital ingredients, to spur economic growth.

1.2 Multi-tasking central banks

Considered as the forefront actors in financial systems, central banks play preponderant roles when it comes to safeguarding the price stability function. However, with the impacts of globalization, central banks have been subject to constant pressures in view of being more flexible in terms of multi-tasking or multi-dimensional tasks. Financial systems tend to be either bank-based or market-based (see Demirgüç-Kunt and Levine, 1999). As financial systems became more integrated and sophisticated, central banks were called upon to play more critical roles such as safeguarding the health of the financial system based on their vested powers of monopoly over issuance of currencies, reserves management and close links with the governments. The most prominent of these tasks relates to maintenance of financial stability with proper containment of systemic risks. Unfortunately, price stability or financial stability merely constitutes one of the other attributes that characterize a sound and properly functioning central banks. For instance, a central bank may be very successful in these functions but fares badly when it comes to timely and detailed reporting of its financial statements. These financial statements are particularly vital to gauge on the transparency and sound corporate

DOI: 10.1057/9781137524010.0004

governance status of a central bank (see Ingves, 2011). The objective of this book is to construct a complete and full set of metrics to assess all the intricate activities of central banks in the world. In essence, a unique and innovative global central banking ratings system is developed. The ratings system can be used by international authorities to leverage the quality of central bank activities in the world and thereby establish a benchmark for comparative analyses.

1.3 Theoretical underpinnings of monetary policy

The most basic foundation of monetary policy relates to the quantity theory of money as captured by Fisher's (1911) equation of exchange where the product of quantity of money and velocity in circulation is tantamount to the product of price level and the level of output generated. It is assumed that the level of output and the velocity of circulation are constants so that any rise in the quantity of money translates into increasing price level in the long-run. However, in the short-run, monetary policy can be used to stimulate economic activities and scale down unemployment but at the expense of inciting higher inflation. Such a phenomenon became captured by the Phillips curve which essentially depicts an inverse relationship that subsists between unemployment and inflation. The basic intuition behind the Phillips curve relates to ability of central banks to decide about the inflation level and then let the corresponding level of unemployment to prevail. In the long-run, such inverse relationship evaporates as unemployment is stuck as its natural rate, succinctly labelled as the natural rate of unemployment and also known as the non-accelerating inflation rate of unemployment (NAIRU). With time, it came to note that NAIRU could be adjusted over the long-run through structural policies. In the 1970s, a breakthrough manifested in the arena of monetary policy, usually formalized as Lucas critique[1] (1976). It came to note that monetary policy became ineffective when policy-makers relied solely on historical relationships among macroeconomic variables so much so that it was deemed best to rely on rational expectations instead of adaptive expectations to shun off systematic bias. Lucas critique heavily impregnates monetary policy in today's world. Indeed, sophisticated Dynamic Stochastic General Equilibrium models obviate Lucas critique problem by focusing at the parameters of microeconomic units. Sargent and Wallace (1976) pointed out that, based on

DOI: 10.1057/9781137524010.0004

rational expectations, change in monetary policy stance would be fully anticipated by economic units so that the full impact would be nullified, leading to policy ineffectiveness or impotency. Kydland and Prescott (1977) came up with the time inconsistency problem. They argued that monetary authorities should cling to the announced policies or stick to rules to give credibility to their policies.

1.4 Challenges facing central banks

Today, central banks are subject to a myriad of challenges. A report issued by Deloitte (2011) pointed out certain, though not thorough, challenges faced by central banks such as reputational risk, accounting framework and valuation challenges, management of currencies in circulation, confidentiality versus transparency, governance and retaining people. Reputational risk is particularly demanding during stressful times such as those witnessed during the 2007 US crisis. The ability to undertake sound policies during critical times constitutes a major catalyst that shapes reputational risk. The latter is undeniably and inherently linked to credibility which is emphasized for countries that cling to inflation targeting strategies (See Bernanke and Mishkin, 1992; Mishkin, 2007). As the book later shows, central banks fail to adhere to consistent accounting policies as they tend to adopt their own way of reporting. Such a state of affairs was highlighted in Deloitte (2011) report as: "Many central banks are permitted by their Central Banking Act to adopt a national or global accounting standard or to develop their own specific financial reporting rules to accommodate the unique circumstances of central banks." Model risks present considerable challenges when it comes to proper valuations as history may not repeat itself of systemic shocks. Apt inventory controls should be established to ensure proper management of currency in circulation. Transparency in terms of operating activities and information constitutes an important driver for a smooth functioning central bank. Risk management of the financial system lies on the back of central banks as demonstrated by quantitative easing measures undertaken to endorse the economy. The list of challenges pointed out by Deloitte (2011) is not exhaustive as it fails to incorporate other important components such as language of dissemination, adherence to green concept, efficiency, amongst others.

One of the most vital challenges which cropped up in light of the crisis pertains to proper interest rate setting. As a matter of fact, it has been

DOI: 10.1057/9781137524010.0004

observed that low interest rates were one of the main causes of the US Subprime crisis and they induced excessive borrowing well beyond the repayment capacity of borrowers. Central banks have the responsibility to thereby establish sound macro-prudential policies in view of curtailing asset price increases beyond their fundamental values. Globalization also present similar challenges as deregulation and liberalized markets instil a culture of free capital flows and movements of goods and services. These capital inflows may consolidate on speculative local asset price bubbles. Ironically, sudden cease in capital inflows may destabilize the whole gamut of the financial system. Central banks therefore have a major role to play to shun off asset price bubbles with proper regulatory measures to ensure that excessive inflows and outflows of capital flows do not disrupt the smooth functioning of the financial system.

Capital and reserve requirements constitute the backbone of modern central banking in view of consolidating the soundness of the banking system. Since 1988, central banks clung to the capital requirement guidelines as stipulated under Basel I and issued by the Committee on Banking Supervision. The ultimate philosophy embedded in Basel I pertained to how much capital banks should maintain to cushion against distinct risks embodied in various assets so that credit risk is properly contained. To circumvent the shortcomings in Basel I, Basel II was subsequently introduced in 2004, namely to give due consideration to both liquidity and operational risks with more stress being exerted on off-site supervision activities. Post the onset of the crisis, Basel III was consequently introduced in 2010 with the introduction of three pillars and minimum global liquidity standard (liquidity coverage ratio and net stable funding ratio) and additional capital buffers for systemically important financial institutions. The objective behind reserves requirements is to ensure that banks are equipped with ample liquidity to obviate any liquidity risk situations. Despite the fact that reserve requirements constitute part of monetary policy tools, yet, central banks tend to shun off their uses due to considerable costs being exerted on the banks. For instance, a hike in reserve requirements ratio may compel banks to claim back their loans to have enough cash to be deposited as reserves, thereby imposing strenuous costs on both banks and their customers. Hence, maintenance of proper capital and reserve requirements constitutes any important challenge to central bankers.

Sound regulatory measures often characterize many central banks in the world. Such apt regulatory framework is heavily based on on-site

DOI: 10.1057/9781137524010.0004

and off-site examination of banks. On-site examination relies heavily on CAMELS ratings to capture capital adequacy, asset quality, management, earnings, liquidity and sensitivity to market risks. Off-site examination refers to analysing the gleaned data to address any deficiencies.

The crisis has shown that central banks' roles should not only be confined to monetary stability but should not extend as to incorporate financial stability and also a satisfactory dose of employment in a country. Technically speaking, monetary stability assists economic agents to effect out their investment-consumption decisions in an optimal manner. For instance, a low and stable inflation rate constitutes the best mechanism to ensure confidence in an economy so that households and firms are motivated to invest and consume more. As at date, there is no single definition for financial stability but it can be considered as a state where an economy is properly functioning without any disruptive forces impregnating on its financial system. The need to maintain employment level during crisis times has been one of the modern roles of central banking, as witnessed during the recent crisis, in spite of the fact that full employment does not happen to fall under the purview of all central banks' mandate in the world. Overall, central banks are now subject to strike proper balance among the trident roles of monetary stability, financial stability and a satisfactory employment level.

1.5 Establishing a benchmark for international excellence in central banking

Based on the aforesaid challenges, it becomes *sine qua non* to set up metrics that can assess the quality of central banking worldwide. The metrics used should be holistic and capture all the important aspects of central banking. It is with this quest in mind that the book has been written. Basically, the objective is to glean, based on availability and accessibility of data, a full set of metrics that would capture the quality of operational activities of central banks in the world. Consequently, a unique and innovative ratings system is set up. The ultimate aim is to rate each central bank to thereby emerge with a sound classification in terms of rankings. The chief purpose of establishing such a global central bank rating system is to put forth a benchmark for excellence so that, with time, central banks can leverage on the quality of their activities. Furthermore and most importantly, the rating system will assist

DOI: 10.1057/9781137524010.0004

international authorities to focus more on poorly rated central banks, those found at the lower rung of the ratings ladder. It is anticipated that the newly developed ratings system will be widely used by the international authorities when it comes to gauging on quality of central banks worldwide.

Mishkin (2010) argued that in light of the US subprime crisis, monetary policy task has become more difficult on ground of a plethora of reasons. First, monetary and financial stability are highly intertwined. Second, financial disruptions imply the need to cling to non-linear monetary policy framework. However, Mishkin (2010) pointed out good news in that research is now put into task in view of generating further refined models that will best help policymakers in devising better strategies. This will keep the stamina on monetary policy research as an ongoing field for the decade to come. It is with this excitement in mind that the current work has been undertaken in view of generating a better framework for central banking worldwide which will undeniably ricochet back on monetary policy strategies.

Note

1 A somewhat similar concept to the Lucas critique pertains to Goodhart's Law (1989) which states that once changes are effected on variables for control purposes, they will trail behind an irregular historical pattern in the data.

DOI: 10.1057/9781137524010.0004

2
An Overview of Central Banking

Abstract: *The objective of this chapter is to provide an overview of central banking activities in the world. Focus is laid on the distinct functions fulfilled by central banks. The monetary transmission mechanism constitutes another important lens of investigation with due consideration being also given as to the drivers that impede on its proper functioning. Research, reserves management, sterilization operations, special drawing rights and assets and liabilities side definition of money supply, are discussed. Concepts like electronic money, currency board, seigniorage income, components of central banks' balance sheets and income statements, central banks' balance sheets in light of the crisis, covered bond purchase programmes and special central banks' features are examined in this chapter.*

Ramlall, Indranarain. *Central Bank Ratings: A New Methodology for Global Excellence*. Basingstoke: Palgrave Macmillan, 2016. DOI: 10.1057/97811375240l0.0005.

An overview of central banking

Central banks constitute core financial institutions usually endowed with price stability function. However, based on steadily growing sophistication of the global financial system, there are increasingly demanding requirements that central banks are expected to fulfil, thereby enlarging its functional space. This chapter focuses on the various aspects of central banks worldwide such as functions to be undertaken, monetary policy transmission mechanism channels, special drawing rights, seigniorage, currency in circulation, money supply, electronic money, currency board, structure of their income/expense components, central bank balance sheets in light of the crisis, covered bond purchase programme and special features of central banks.

2.1 Functions of central banks

The functions of central banks may be split into a multi-dimensional perspective as follows:

1. Maintain price stability; usually representing its mandated or core function
2. Ensure proper provision of banking services to the government-government's banker
3. Oversee the financial system to safeguard its financial stability
4. Fulfil the task as lender of last resort, as magnified by the recent crisis
5. Ensure smooth operations of the payments and settlement systems
6. Establish sound Business Continuity Management
7. Promote financial market developments such as establishment of proper zero coupon yield curve
8. Fight against money laundering
9. Contain systemic risks through proper macro-prudential policies
10. Improve on data collection and statistical analyses
11. Induce proactive risk management of the financial system like provision of emergence liquidity assistance under exceptional circumstances as witnessed during the crisis
12. Promote sound corporate governance

DOI: 10.1057/9781137524010.0005

13 Enhance financial literacy via regular educational programmes to boost effectiveness of the monetary policy transmission mechanisms
14 Consolidate stakeholder relationships to ensure maximum cooperation from them
15 Set up measures, procedures and policies to properly contain systemic risks
16 Mitigate dysfunctions in the foreign exchange markets
17 Regularly conduct stress testing exercises to identify vulnerabilities and subsequently undertake proactive policies
18 Correctly assess on the level of reserve requirements in view of setting up the right level of insurance for commercial banks' obligations
19 Demonstrate strong commitment towards greener activities to set the pace for commercial banks to follow suit
20 Establish and review guidelines as and when required with respect to activities such as credit activities, foreign currency open positions, and large credit exposures
21 Undertake both on-site and off-site supervisions in the case supervision falls under its purview of their operations
22 Set up capital adequacy to cushion the interests of the depositors
23 Establish proper licensing requirements.

The above list of functions is not exhaustive. Nonetheless, price stability predominates as the major task of nearly all central banks in the world with different functions hinging on the type and stated objectives of the central bank. Research has gained momentum in light of the crisis on certain specific aspects of central banking. For instance, Aizenman and Inoue (2013) found that central banks stuck to passive maintenance of gold stocks, irrespective of the price patterns of gold. Rhee and Turdaliev (2013) assessed the transparency of monetary policy in a dynamic stochastic general equilibrium framework. They found that social welfare did not depend on the level of transparency when preferences are logarithmic in consumption or linear in leisure.

2.2 Monetary policy transmission mechanism

Monetary policy is usually analysed through its various transmission mechanisms, namely credit, exchange rate, expectations, asset price

DOI: 10.1057/9781137524010.0005

and interest rate channels. Central bankers are usually concerned about the interest rate channel as it is where their actions are most likely to spawn changes in the level of economic activities. The exchange rate channel represents a vital monetary policy channel mainly for countries clinging towards floating exchange rate regimes. The expectations channel is best controlled via high credibility as inspired by the inflation targeting framework (see Svensson, 2008). The asset price channel calls forth sophisticated and well-developed financial markets that can instantly transmit any ramifications in the monetary policy stance. The credit channel of monetary policy works through the availability of credit to market players in the economy, mostly encompassed under the bank lending and balance sheet channels. The balance sheet manifests chiefly through the value of collaterals for households and firms, which subsequently impacts on their respective wealth effects. The balance sheet channel is sometimes deemed to be corollary to the asset price channel.

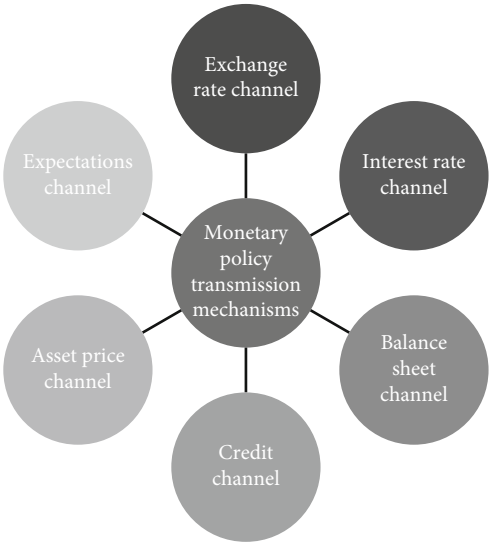

FIGURE 2.1 *Monetary policy transmission channels*

Source: Author's illustration.

DOI: 10.1057/9781137524010.0005