Preface

This volume of case studies is intended to be used as a supplementary companion book to my reference text *Central Banking and Monetary Policy in the Asia-Pacific* (Hossain, 2009). The 2009 text surveyed the major theories, models and approaches to inflation and monetary policy with a focus on selected developing countries of the Asia-Pacific, highlighting contemporary issues in monetary policy for price stability using the benchmark definition of ‘price stability’ in monetary policy practice as ‘low and stable inflation’. Given space constraints, in 2009 only a preliminary discussion could be undertaken of country-specific issues in inflation and monetary policy for some selected countries in an historical context. The contents of the earlier text fall into what has emerged as a central sub-discipline of economics – monetary macroeconomics (Friedman and Woodford, 2011). Monetary macroeconomics, while looking to theoretical developments for the latest analytical tools and directions, is essentially events-driven and policy-oriented in an operational context, revolving around such topics as inflation, monetary policy, capital flows, the behaviour of interest rates and exchange rates in the midst of structural rigidities; and policy restrictions and controls.

Major recent developments in monetary theory and policy have refined and extended key conventional theories, models and approaches to inflation and monetary policy that have been shown historically to be practised, persisted and evolved over centuries (Hossain, 2009). Modern econometric techniques allow empirical validation and interpretive reconciliation of those theories with real-world events and experiences. Major events, such as the East-Southeast Asian financial crisis of 1997–98 and the US-global financial crisis¹ of 2007–09, have brought fiscal and monetary policy issues to the research frontier and shaped contemporary policy debate on the efficacy of monetary and fiscal policies in economic stabilization under a rational expectations paradigm (Taylor, 2009, 2011). The debate began primarily focused on the design and conduct of monetary policy in the United States and its encompassing implications for macroeconomic imbalances and management across the globe. From an even earlier date, the present sustained disinflation-stagnation in Japan that began in the early 1990s raised the fundamental question of whether discretionary monetary policy

could be effective for economic stabilization, as doubted by new classical economists operating under rational expectations theory, or would create a boom-bust cycle as predicted by Monetarist-New Classical theory.

The consequences of financial crises and the mechanics of transmission of monetary or real shocks to the economy remain instrumental to improved understanding of the fundamental principles of monetary macroeconomics. This allows policymakers to draw the implications of monetary, fiscal and exchange rate policies for economic stability in general and price stability in particular. Developing countries, having underdeveloped political and economic institutions, remain vulnerable to global events and shocks, irrespective of their origins and dynamics. One way to minimize, if not insulate, these economies from global shocks is to conduct rule-based monetary and fiscal policies to achieve well-defined policy objectives.

The monetary literature of the 1950s and 1960s is replete with case studies of developing countries, especially in Latin America, that underwent macroeconomic crises arising from populist expansionary fiscal and monetary policies. Partly as a response to that unfortunate experience, developing countries of the Asia-Pacific generally had by the mid 2000s moved away from macroeconomic populism. Consequently, their policy responses to the US-global financial crisis differed fundamentally from the policy expansionism of the United States and some other developed countries. To varying degrees, these countries largely avoided contracting sustained, major economic damage from that crisis. After relatively small, brief slowdowns, they have recovered rapid economic growth with or without some fiscal-monetary stimulus.

It is hoped that the case studies presented in this book will be received favourably as a modest contribution to monetary macroeconomics. It reviews and analyses, in an historical context, country-specific experience and issues in inflation and monetary policy. In doing so, key ideas and views on the sources and dynamics of inflation and monetary policy behaviour are investigated after taking into account those institutional arrangements that impinge upon the formulation and conduct of fiscal and monetary policies in each country considered. The book includes case studies for 12 judiciously selected countries, all at different stages of development and operating under different monetary policy frameworks.² It also includes an expanded discussion on generalized core issues in inflation and monetary policy. These core issues form the theme of the case studies.

Monetary policy frameworks in the selected countries include exchange rate pegging, monetary targeting and inflation targeting under varied restrictions on capital flows. The core issue upon which the book attempts to shed some light is the question of how the selected countries, with their

diverse institutional arrangements, have conducted monetary policy since at least the 1960s, with the varying macroeconomic outcomes observed.

The selected countries have varied characteristics along several dimensions, including the strategy of development adopted and the level achieved, economic openness, inflation history and the monetary policy strategy response. The focus, therefore, is not on a narrow set of analytical themes but rather to highlight some core issues in inflation and monetary policy for investigation under different monetary policy arrangements. Furthermore, the book is not strongly prescriptive in tone and substance. The aim is to highlight key policy issues and investigate some of these econometrically, in a limited form, to draw policy implications.

It is important for the reader to be aware that the major theories of inflation and monetary policy have been devised within the environment and context of robust developed-country society, culture, politics and institutional frameworks and dynamics. These theories have only later been adapted to developing country contexts. Therefore, to set the background of the present analytical exercise, four developed countries are selected for detailed discussion of their inflation histories and consequent experience in the conduct of monetary policy. Policy lessons are drawn, together with some general implications for the macroeconomic management of developing countries. The contemporary monetary literature indicates that concepts and principles in monetary theory and policy, and the econometric techniques deployed for monetary analysis, remain relevant to all countries irrespective of their levels of development and institutional arrangements for conducting monetary policy. Moreover, some developing countries in the sample are rapidly moving towards gaining developed-country status and have already established economic and political institutions for achieving and sustaining monetary and fiscal discipline within an integrated, outward-oriented, market-driven development strategy.

The case studies in the book are not organized following a pre-set format or theme, except that the countries selected are presented in alphabetical order. The case analysis for each country is organized to reflect the evolution of inflationary trends and movements and to discuss the framework of monetary policy targeting stated objectives – usually price stability and economic growth. Each country chapter analyses the available data to yield dynamic information on several key macroeconomic variables, and reports empirical findings on some key monetary relations that have implications for monetary and exchange rate policies. However, the empirical analysis is suggestive and exploratory, not exhaustive given the limited scope of this study. The overall analysis is concise and informed by received economic theory, policy issues and some lessons of experience that the countries may

draw. Importantly, these include institutional issues with respect to the design and conduct of rule-based monetary policy, especially the closely related phenomena of exchange rate arrangements, interest rate controls, credit allocation policy and capital-flow policy.

For econometric analysis, the data are drawn from domestic and international publications. The main source of data is the International Monetary Fund's (IMF) *International Financial Statistics*. Depending on the context of analysis, the historical data are reported in a summary form for individual countries and for the time periods for which data have been collected and are available. To streamline the analysis, econometric techniques are applied to investigate some aspects of inflation, together with the underlying relations in monetary theory and policy determining inflation.

While the econometric analysis is undertaken to provide evidentiary and illustrative findings,³ the book is in no way an applied-econometric treatise. Econometric analysis is secondary to, and supportive of, analytical discussion on policy issues that are all-encompassing in a macroeconomic sense. However, to avoid repetitive discussion for each country, either on analytical issues in monetary policy or on econometric models and techniques deployed for empirical analysis, some topics are selected for brief review and then presented in the form of appendices.

The titles of the appendices provide some indication of their content. They are arranged as follows:

- Appendix 1: Money growth, output growth and inflation
- Appendix 2: Inflation persistence: a brief literature review
- Appendix 3: Non-linearity in inflation and the KSS (Kapetanios, Shin and Snell) test for unit root
- Appendix 4: The Taylor curve
- Appendix 5: Inflation volatility and money demand
- Appendix 6: Inflation, real interest rate, real exchange rate and real output
- Appendix 7: Controls over interest and exchange rates and inflation volatility
- Appendix 8: Money, output and prices
- Appendix 9: A SVAR (structural vector autoregression) model for money, output and prices
- Appendix 10: Money-growth rule and related issues.

Together with their extant sister reference text, the case studies in this book provide materials for at least two separate single-semester advanced undergraduate courses on monetary theory and policy focused on countries of the Asia-Pacific region. Moreover, they can be adopted

as complementary texts for courses on money, banking and finance, including Islamic banking and finance. Although the literature on monetary macroeconomics in general and inflation and monetary policy in particular has expanded rapidly in both quantity and sophistication since the early 1970s, the present book, together with its extant sister reference text, covers the concepts and principles in a moderately rigorous, but not ‘too mathematical’, form needed for expositional purposes.⁴ To make the work accessible to non-specialist readers with some interest in monetary policy issues, the book, like its companion before it, is written in a precise and matter-of-fact style with empirical orientation and policy focus. Most policy issues are analysed and illustrated with real-world events and examples. Readers requiring more in-depth analysis are referred to specialized readings such as journal articles that cover analytical issues or contain advanced empirical analysis.⁵

In writing this book of case studies and the earlier reference text, I have benefited from constructive and useful comments on issues in inflation and monetary policy from many students and colleagues at the University of Newcastle, Australia, and in other places where I taught, worked and visited. I have fulfilled my original intention in writing the 2009 book by adopting it as the prescribed text for my popular course ‘ECON3004 Money and Banking’ at the University of Newcastle, Australia. This has given me an opportunity to interact with advanced undergraduate students, many from countries in the East and Southeast Asian regions and having diverse academic backgrounds. From them I have received generous feedback on aspects of the text from pedagogical and policy viewpoints. This text is used in various courses at universities and institutes across the region. To enable wider use in courses at Indonesian universities, it has been translated into the Indonesian language.

Complimentary comments on the text from students and colleagues encouraged me to accept an invitation from the managing director of Edward Elgar Publishing to prepare this book of case studies of monetary policy. In my 2009 text I hinted that such case studies are essential for improved understanding of monetary relations and policy issues, especially in the rapidly growing economies of the Asia-Pacific region. I remain grateful to Edward Elgar and the production team of Edward Elgar Publishing for their support throughout the completion of this project.

In preparing the manuscript, I have benefited from the support of several institutions and persons. I am grateful to the Faculty of Business and Law at the University of Newcastle for awarding me two research grants to fund part-time employment of a research assistant during 2011–12. I used other research funds to employ a research assistant in 2013–14. I thank my colleague Gregory Bauer for his excellent work since the inception of

this project as research assistant. He has been a reader, commentator and critic of earlier drafts of the book and assisted me in preparing the figures, tables and data compilation. In addition, he identified errors, omissions and weaknesses in the texts and provided suggestions for raising both the quality of analysis and presentation of materials in a reader-friendly form.

I conducted some research for the book while visiting at the University of Melbourne and the University of Malaya for about five months in 2012 as part of my 'outside studies programme' (sabbatical leave). I am grateful to Professor Robert Dixon of Melbourne University and Professor Eu Chye Tan of the University of Malaya for inviting me to work at the economics departments of these reputed universities. I am grateful to the authorities of these universities for providing me with the facilities needed to undertake research and other professional activities.

Time has passed so fast since I joined the academic profession that this is a perfect opportunity to acknowledge my substantive intellectual debt to some of my former teachers and colleagues and to a few professional economists with whom I had the opportunity to work in a challenging environment at both the IMF-Singapore Regional Training Institute (IMF-STI) and the Bangladesh Bank (central bank of Bangladesh) as World Bank Resident Economic Advisor.

Although somewhat autobiographical, I would like to indulge a little to make my debt public as part of an intellectual journey that began in Bangladesh at a difficult time in its recent turbulent history. I completed my BSc (Hons) and MSc degrees in Economics at Jahangirnagar University, Dhaka, Bangladesh during 1975–82. After my graduation and a brief period of teaching, I left Jahangirnagar to undertake higher studies in Australia and later settled in this beautiful country to work and raise a family. Nevertheless, I still cherish the quiet, picturesque campus life of Jahangirnagar University located, as it is, in a spacious, rugged-bushy area on the outskirts of Dhaka. Student life in the Al-Beruni Residential Hall at Jahangirnagar University where I resided was 'slow and monotonous' but 'beautiful and meaningful' for poets, philosophers and those who have romantic disposition. I was not one of them, at least overtly. Hence, it was fine for me to learn 'dry' economics as much as possible in a highly competitive academic environment. I remember fondly five professors, including the late Professor Mirza Md. Mozammel Hoque and the late Professor Mofizuddin Ahmad. Together with Professor Amirul Islam Chowdhury, Professor Khandaker Mustahidur Rahman and Professor Amin Muhammad Ali, they taught me economics – 'fundamentals of economics' – and a lot of it: passionately and quantitatively and with a sense of purpose. Professor Hoque and Professor Ahmad have passed away but left a sweet memory for me. Without any formal arrangement,

they became my natural de facto mentors and played a role in my smooth navigation through the university phase of my life without any major scratch, mental or physical.

Professor D. Barry Hughes brought me to the University of Newcastle in 1989 as a new recruit from Melbourne, where I had completed my post-graduate degrees at the University of Melbourne and La Trobe University. Although Barry left the University of Newcastle after a few years for full-time professional work at Credit Suisse First Boston investment banking, I remained in touch with him for many years, only occasionally lately. I have found him a kind-hearted person and conscientious colleague and a valuable mentor at an early stage of my career. I cherish his friendship, empathy and words of wisdom.

Having moved from the university ivory tower to work at an international organization of repute, the International Monetary Fund, I found myself somewhat short of being fully prepared to comprehend the intensity and enormity of the day-to-day tasks of the IMF, dealing with macroeconomic problems and issues, mostly practical in nature; and this, despite already having been strongly influenced by policy-oriented writings of such economists as Rudiger Dornbusch, Stanley Fischer, Victor Corbo, Sebastian Edwards and others. Mohsin Khan's writings in particular were influential in my PhD research on macroeconomic and monetary policy issues in developing countries. Later – within the last few years, in fact – from Khan's writings, some with Professor Abbas Mirakhor and others, I developed some interest in monetary theory and policy in the context of a newly emerged sub-discipline of economics: Islamic banking and finance. Finally, I mention the names of two of my colleagues at the IMF-STI with whom I worked closely during 1999–2002. They are Dr Donal J. Donovan and Dr Jerome R. La Pittus. I enjoyed their friendship and support, which made my work experience at the Institute productive, rewarding and memorable. They taught me how to conceptualize, analyse and empirically investigate both monetary policy and exchange rate policy issues in developing countries within the framework of IMF's flagship *Financial Programming and Policies*. This framework is broad enough to design stabilization and structural adjustment policies for developing countries facing macroeconomic crises. During the first half of 2004, I worked at the Bangladesh Bank as World Bank Resident Economic Advisor. This gave me an opportunity to work with the top management, including Dr Fakhruddin Ahmed, Governor, to establish a unit for conducting research in monetary policy and also providing intensive training to 22 selected staff members for undertaking research on contemporary issues in monetary policy and central banking.

In general, my work experience at both the IMF-STI and the Bangladesh

Bank were, and remain, both germane and useful to my later and current research on policy-oriented issues in Bangladesh and Indonesia, in particular and, more generally, developing countries of the Asia-Pacific. For me, the East-Southeast Asian financial crisis of 1997–98 was a real-world laboratory case study for understanding the interrelations among fiscal, monetary and exchange rate policies in an open and deregulated financial environment. Moreover, for understanding the practical issues of macroeconomic management in developing countries, I benefited from discussions with many high officials from central banks and different economics ministries of about 30 countries of the Asia-Pacific, who either attended various professional courses at the IMF-STI over three years or whom I met with later in other forums and occasions. Therefore, this book of case studies in central banking and monetary policy can be considered an outcome of my research interest that was generated when I worked for the IMF-STI in Singapore at a challenging time not too long after the East-Southeast Asian financial crisis.

At a personal level, I take this opportunity to thank my wife, Nilufar, and our children, Andaleeb, Ayeeda, Afeeya and Azleena, for their support and understanding of my academic research and professional works. They have grown up ‘rather quickly’ and are able to appreciate the burden and responsibility of academic research. Of course, my wife was not amused by one excuse or other that I provided for avoiding household chores and many family and social events. Special thanks go to Ayeeda and Afeeya, undergraduate students at the Australian National University, who read some parts of the book and made valuable suggestions to make the materials more useful to undergraduates, especially to give a greater focus on the historical evolution of monetary policy in a changing economic environment.

Finally, I will feel amply rewarded if students, policymakers, central bankers and researchers working in and on the Asia-Pacific in particular find the book, together with the 2009 text, useful to improve their understanding of inflation and its dynamics and to design and implement appropriate monetary policy strategy to achieve and sustain low and stable inflation in a rapidly changing economic environment.

Any remaining errors and shortcomings of this book are my sole responsibility. Productive comments and suggestions are welcome from readers for updating the book, if any opportunity arises, and for my future research on related topics and policy issues in the Asia-Pacific.

NOTES

1. The financial crisis originated in the United States in 2007 and then spread across the globe, including the Eurozone economies.
2. The selected countries include the inflation and monetary policy experience of four developed countries, namely, Australia, Japan, New Zealand and the United States. The remaining eight developing 'countries' are China (Mainland), Hong Kong, SAR (Special Administrative Region) of China, India, South Korea, the Philippines, Singapore, Sri Lanka and Thailand. Hong Kong, SAR of China is not a country but its macroeconomy is useful as a separate economic entity since its unique currency board exchange rate system carries major policy implications. I have written a book of case studies, *Central Banking and Monetary Policy of Muslim-Majority Countries* (Hossain, 2015), which examines the inflation and monetary policy experience of nine Muslim-majority countries, namely, Bahrain, Bangladesh, Egypt, Indonesia, Iran, Malaysia, Pakistan, Saudi Arabia and Turkey.
3. The conventional econometric techniques deployed include the multiple regression analysis, unit root tests, ARCH-GARCH (autoregressive conditional heteroskedasticity-generalized autoregressive conditional heteroskedasticity) modelling and VAR/VECM/SVAR (vector autoregression/vector error correction model/structural vector autoregression) modelling. The key references are Hill et al. (2011) and Stock and Watson (2012). To supplement discussion on the commonly used ADF (augmented Dickey-Fuller) and KPSS (Kwiatkowski, Phillips, Schmidt and Shin) tests, Appendix 3 provides an outline of the KSS test conducted, if needed, within a non-linear framework.
4. The mathematical symbols used in this book are not standardized but are chapter- or model-specific. They are defined as frequently as needed for exposition at the risk of repetition. This allows the reader to navigate through the text without any risk of distraction by having to refer back to the symbols and their meanings defined earlier.
5. In drafting the text I have drawn and synthesized materials from a wide range of published sources, including specialist texts, journal articles and other publications, such as working papers and raw drafts. While I have given references for materials drawn from sources that can be identified and attributed to certain authors, I have avoided providing detailed references, given the space constraint, on themes and ideas that are generic and have been developed by many scholars in different contexts over time. Any specific material drawn from any identifiable source without appropriate acknowledgement or citation is an entirely unintentional oversight.

REFERENCES

- Friedman, B.M. and M. Woodford (eds) (2011), *Handbook of Monetary Economics*, Vols 3A and 3B, Amsterdam: Elsevier Science.
- Hill, R.C., W.E. Griffiths and G.C. Lim (2011), *Principles of Econometrics*, New York: John Wiley and Sons.
- Hossain, A. (2009), *Central Banking and Monetary Policy in the Asia-Pacific*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Hossain, A. (2015), *Central Banking and Monetary Policy in Muslim-Majority Countries*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- IMF (International Monetary Fund) (various years), *Financial Programming and Policies*, Washington, DC: IMF.
- IMF (International Monetary Fund) (various years), *International Financial Statistics*, Washington, DC: IMF.

- Stock, J.H. and M.W. Watson (2012), *Introduction to Econometrics*, New York: Pearson Education.
- Taylor, J.B. (2009), 'The lack of empirical rationale for a revival of discretionary fiscal policy', *American Economic Review (Papers and Proceedings)*, **99**(2), 550–5.
- Taylor, J.B. (2011), 'An empirical analysis of the revival of fiscal activism in the 2000s', *Journal of Economic Literature*, **49**, 686–702.