
Economic and Financial Research in the Reserve Bank in 1999

Introduction

During the past year, research at the Bank examined issues concerning the international financial system and the East Asian financial crisis, the Australian financial system, the framework and operation of monetary policy, and unemployment and the labour market. As in previous years, the results of the research were made available through the Bank's *Bulletin*, its Research Discussion Paper series and in the annual Conference Volume. This article provides an overview of the papers published by the Bank during 1999.¹

Capital Flows and the International Financial System

The Bank's annual Conference, on the topic 'Capital Flows and the International Financial System', provided a detailed examination of international capital flows and the recent financial crisis in East Asia. Bank staff presented three papers at the Conference; a further nine papers were presented by eminent international academic and policy economists. Gordon de Brouwer presented a history of

capital flows to East Asia, which provided a backdrop for the other papers at the Conference. Stephen Grenville and David Gruen examined the issue of which exchange rate regime best equips developing countries to cope with volatile capital flows. They questioned the conventional wisdom that countries must choose between a rigidly fixed exchange rate (like a currency board) and a freely floating rate, arguing instead that, for some developing countries, an actively managed floating-rate system might be preferable to these two extremes. Bob Rankin documented anomalies in the behaviour of the Australian dollar in 1998, which he argued were largely a consequence of the activities of some large global macro hedge funds. The remaining papers presented a range of views on the causes of financial crises and suggestions for reforming the international financial system. The introductory chapter of the Conference Volume was included in the November issue of the Bank's *Bulletin*.

The Australian Financial System

The Bank's responsibility to ensure the stability of the financial system naturally motivates research in this area. Four research

1. Papers referred to in this article are listed in the Appendix. Copies of these papers are also available on the Bank's web site at www.rba.gov.au.

papers were written during 1999, on topics ranging from specific issues of risk measurement to broader concerns about the links between monetary policy and the stability of the financial system.

A paper by James Engel (from the Australian Prudential Regulation Authority (APRA)) and Marianne Gizycki evaluates an important aspect of current practices used in the Australian banking industry for measuring market risk. Australian banks use 'Value at Risk' models as a basis for determining the capital required to cover their market-risk exposure – that is, the risk arising from variability in the value of their assets. It is important to ask, however, to what extent these models can accurately predict asset-price variability. The paper shows that, of the variety of methods currently used to predict return variability, ranging from simple to complex statistical models, there is no strong evidence that any particular method is clearly superior to the others. The paper also documents the need for banks to update these forecast models at least quarterly, as is currently practised in Australia.

A second paper, by Marianne Gizycki and Brenton Goldsworthy (from APRA), considers broader issues of risk measurement, relating to overall bank risk and, by extension, banking-system risk. The risk of bank insolvency depends on the variability of the return to bank assets and the economic value of bank capital, both of which are difficult to measure. The paper uses a model of firm value that allows these components of banks' balance sheets to be estimated and, thereby, generates a market-based measure of the risk of bank insolvency. The results suggest that a rise in the riskiness of banks' assets during the 1990s has been more than offset by an increase in the market-based assessment of capital-asset ratios. The results imply that the risk of bank failure has declined steadily over the 1990s.

The other two papers consider broader issues, highlighting the link between macroeconomic performance and the stability of the financial system. A paper by Chay Fisher and Christopher Kent examines

the two depressions experienced in Australia, during the 1890s and the 1930s. It shows that the financial system collapsed during the 1890s depression, whereas financial system problems were far less severe during the 1930s, despite similar initial falls in output in the two episodes. The worse performance of the financial sector in the 1890s, as compared with the 1930s, does not appear to be explained by differences in the state of the world economy or by domestic government policies. Instead, the difference appears to be a consequence of the fragility of the banking system that developed, and was evident in a range of indicators, in the years before the 1890s depression. The failure of many banks and other financial institutions in the early 1890s helped to deepen and extend the macroeconomic decline for many years. In this way the paper demonstrates that the health of the financial system has a powerful influence on macroeconomic performance during severe economic downturns.

The importance of financial system stability for macroeconomic performance is also the theme of a paper by Christopher Kent and Guy Debelle. The paper discusses the evolution of the Australian financial system and its likely future directions. An underlying theme is the recognition of possible trade-offs between improved efficiency and the stability of the financial system. The paper argues that financial system stability depends not only on the likelihood of a financial disturbance, but also on the macroeconomic impact of such a disturbance. Because of the links between the macroeconomy and the financial sector, central banks need to be mindful of developments in both the financial system and the macroeconomy which have implications for financial system stability. The paper evaluates the potential impact on financial stability and efficiency of three current pressures in the Australian financial system; namely, the possibility of consolidation among large banks, the formation of large financial conglomerates, and the opportunities for smaller niche players provided by technological developments.

Monetary Policy

A series of papers examined different aspects of monetary policy and inflation targeting. Some critics have claimed that the inflation-targeting framework for monetary policy pays too little attention to output. A paper by Guy Debelle responds to this criticism by arguing that inflation-targeting central banks are concerned with achieving both low inflation and output stabilisation. They therefore adopt some flexibility in their inflation-targeting regimes in order to reduce the variability of output. The detailed design of the regime is relevant to this issue; in particular, the width of the target range for inflation and the timeframe over which policy-makers aim to return inflation to the midpoint of the target range. Three recent episodes of monetary policy in Australia are used to illustrate how a flexible inflation-targeting framework works in practice.

The operation of monetary policy is also the focus of a paper by Geoffrey Shuetrim and Christopher Thompson. In general, central banks appear to move the policy instrument more gradually than simple theoretical models suggest they should. A common explanation for this more gradual behaviour is that policy-makers cannot be sure, either about the exact structure of the economy or its response to monetary policy. The paper demonstrates, however, that uncertainty about the structure of the economy can work both ways – some types of uncertainty should lead to more gradual policy responses while others should lead to less gradual responses.

In recent years, structural vector autoregression models have become an increasingly popular approach to modelling monetary policy. A paper by Andrea Brischetto and Graham Voss uses these methods to estimate a model for the Australian macroeconomy. This modelling exercise produces results, for the impact of monetary policy on prices, output and the

exchange rate, that are consistent with previous Australian and overseas research. The paper examines the response of monetary policy to foreign business cycle shocks and to nominal exchange rate shocks; policy appears to have reduced the effects of both these types of shocks.

Another important topic of research is examining how people form their expectations. A paper by Andrea Brischetto and Gordon de Brouwer examines surveys of people's expectations of inflation. It shows that expectations vary systematically with various individual characteristics. In particular, people with better access to information or higher levels of education have expectations that line up more closely with actual inflation. Although the state of the economy has little effect, people's expectations are influenced by changes to monetary policy.

Unemployment and the Labour Market

Issues relating to unemployment and the labour market were also examined in research conducted at the Bank. A paper by David Gruen, Adrian Pagan (from the Australian National University) and Christopher Thompson discusses the relationship between inflation and unemployment – the Phillips curve – in Australia. The paper provides an analysis of research on the Phillips curve in Australia over the past four decades. It discusses the difficulties inherent in estimating Phillips curves and the related concept, the rate of unemployment consistent with steady inflation. The paper presents estimated Phillips curves, and explores the changing role of the Phillips curve within the framework used in the Bank to analyse the inflationary process over the past three decades.

In Australia, as in many countries, people with higher skill levels experience less unemployment than those with lower levels of skill. A paper by James Vickery attempts to understand this widespread pattern. Over

time, there has been rising demand for skilled workers, but this has been matched by a (roughly) equivalent rise in the supply of skilled workers. Unemployment in Australia has increased for both skilled and unskilled workers, but relative unemployment rates across skill groups have remained fairly stable. Higher rates of aggregate unemployment therefore do not appear to be a consequence of changes in relative demand across skill groups.

Two other papers also explore features of the Australian labour market. A paper by Alexandra Heath focuses on the job-search methods used by teenagers. It finds that unemployed teenagers typically use indirect job-search methods, such as newspapers or employment agencies, while employed teenagers usually found their jobs by more direct means: with the help of friends or relatives or by directly contacting employers. The paper discusses whether the local environment in which teenagers live may explain this job-search behaviour. Intuitively, direct methods of job search are likely to be less effective in neighbourhoods with relatively high rates of unemployment, because the people with whom unemployed teenagers have direct contact will tend to have less information about employment opportunities. This intuition is supported by the empirical results in the paper.

Another notable feature of the Australian labour market is the significant rise in the duration of unemployment over the past few decades. A paper by Alexandra Heath and Troy Swann seeks to understand what factors explain the duration of individuals' unemployment experiences. Although an individual's reservation wage (the minimum wage individuals would be willing to accept for a job) would be expected in theory to influence unemployment duration, in practice it appears to have minimal effect. Instead, the main constraint on job seekers seems to be a lack of job offers. The study also finds, however, that around one-fifth of adult unemployed job seekers would have been willing to work for a wage less than the legal minimum.

In addition to the above research papers, short articles on the following topics were published in the Bank's *Bulletin*: demutualisation in Australia; labour demand and the economic cycle; Australian financial markets; exchange settlement accounts; developments in bank lending; bank fees in Australia; and consumer credit and household finances.

As in previous years, the Governor, Deputy Governor and senior officers gave speeches on a range of topics. These speeches were also published in the *Bulletin*.

Appendix: Research Material Released in 1999

Conference Volume

Capital Flows and the International Financial System, edited by David Gruen and Luke Gower, contains papers prepared for the Bank's annual Conference held in August 1999. Gordon de Brouwer, Stephen Grenville and David Gruen and Bob Rankin, members of the Bank's staff, prepared papers for the Conference. Nine papers by foreign authors were commissioned. These were written by Paul A Volcker, former Chairman of the United States Federal Reserve, Michael Bordo of Rutgers University and Barry Eichengreen from the University of California, Michael P Dooley and Carl E Walsh from the University of California, Horace 'Woody' Brock from Strategic Economic Decisions Inc., Joseph CK Yam from the Hong Kong Monetary Authority, Eisuke Sakakibara from the Japanese Ministry of Finance, Jenny Corbett, Gregor Irwin and David Vines from Oxford University, Michael Mussa from the International Monetary Fund, and W Max Corden from The Johns Hopkins University. The papers in the Conference Volume are:

- Paul A Volcker, 'Problems and Challenges of International Capital Flows'.
- Michael Bordo and Barry Eichengreen, 'Is Our Current International Economic Environment Unusually Crisis Prone?'.
- Gordon de Brouwer, 'Capital Flows to East Asia: The Facts'.
- Michael P Dooley and Carl E Walsh, 'Academic Views of Capital Flows: An Expanding Universe'.
- Stephen Grenville and David Gruen, 'Capital Flows and Exchange Rates'.
- Horace 'Woody' Brock, 'Explaining Global Market Turmoil: A Fresh Perspective on its Origins and Nature'.
- Bob Rankin, 'The Impact of Hedge Funds on Financial Markets: Lessons from the Experience of Australia'.
- Joseph CK Yam, 'Capital Flows, Hedge Funds and Market Failure: A Hong Kong Perspective'.
- Eisuke Sakakibara, 'From the Washington Consensus to the New International Financial Architecture'.
- Jenny Corbett, Gregor Irwin and David Vines, 'From Asian Miracle to Asian Crisis: Why Vulnerability, Why Collapse?'.
- Michael Mussa, 'Reforming the International Financial Architecture: Limiting Moral Hazard and Containing Real Hazard'.
- W Max Corden, 'Private Capital Flows, Living with Volatility, and the New Architecture'.

Research Discussion Papers

- 1999-01 David Gruen, Adrian Pagan and Christopher Thompson, 'The Phillips Curve in Australia'.
- 1999-02 Alexandra Heath and Troy Swann, 'Reservation Wages and the Duration of Unemployment'.
- 1999-03 Andrea Brischetto and Gordon de Brouwer, 'Householders' Inflation Expectations'.
- 1999-04 James Engel and Marianne Gizycki, 'Value at Risk: On the Stability and Forecasting of the Variance-covariance Matrix'.
- 1999-05 Christopher Kent and Guy Debelle, 'Trends in the Australian Banking System: Implications for Financial System Stability and Monetary Policy'.
- 1999-06 Chay Fisher and Christopher Kent, 'Two Depressions, One Banking Collapse'.
- 1999-07 Alexandra Heath, 'Job-search Methods, Neighbourhood Effects and the Youth Labour Market'.
- 1999-08 Guy Debelle, 'Inflation Targeting and Output Stabilisation'.

- 1999-09 Marianne Gizycki and Brenton Goldsworthy, 'Australian Banking Risk: The Stock Market's Assessment and the Relationship Between Capital and Asset Volatility'.
- 1999-10 Geoffrey Shuetrim and Christopher Thompson, 'The Implications of Uncertainty for Monetary Policy'.
- 1999-11 Andrea Brischetto and Graham Voss, 'A Structural Vector Autoregression Model of Monetary Policy in Australia'.
- 1999-12 James Vickery, 'Unemployment and Skills in Australia'.

Articles of General Interest in the Reserve Bank of Australia *Bulletin*

- 'Demutualisation in Australia', January.
- 'Labour Demand and the Economic Cycle', February.
- 'Australian Financial Markets', March.
- 'The Role of Exchange Settlement Accounts', March.
- 'Recent Developments in Interest Rates on Bank Lending', April.
- 'Bank Fees in Australia', June.
- 'Consumer Credit and Household Finances', June. ✕