Introduction

> He accumulated a vast and various collection of learning and knowledge, which was so arranged in his mind as to be ever in readiness to be brought forth. But his superiority over other learned men consisted chiefly in what may be called the art of thinking, the art of using his mind – a certain continual power of seizing the useful substance of all that he knew, and exhibiting it in a clear and forcible manner; so that knowledge, which we often see to be no better than lumber in men of dull understanding, was in him true, evident and actual wisdom . . . His maxims carry conviction; for they are founded on the basis of common sense, and a very attentive and minute survey of real life . . .
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> (James Boswell's *Life of Samuel Johnson*, p. 511)

Ben Friedman refers in the first volume to Charles Goodhart as the Samuel Johnson of Monetary Policy – and how true a statement that is. The extract quoted above was written by James Boswell of Johnson at the end of his life in 1784 but could equally have been written of Charles's academic career in 2002. Like Johnson, Charles Goodhart has written extensively in many styles and has become synonymous with his subjects of monetary economics and central banking. Although I am not aware that Charles has ever produced a dictionary, he has made substantial contributions to the literature in his field and has on many occasions been the influence that has altered its direction at crucial junctures. He has also been a helpful critic and commentator on other authors' work, an encouragement and a source of wisdom to many younger colleagues. He has combined these features with a great deal of wit and amusement, and I am sure Charles would not mind if I continue to quote from Boswell, who states, quite accurately I believe, that 'Though usually grave, and even awful in his deportment, he possessed uncommon and peculiar powers of wit and humour; he frequently indulged himself in colloquial pleasantry; and the heartiest merriment was enjoyed in his company.'

This volume and its companion are a testimony to the high regard and good will that exist among his fellow economists. Not every economist deserves a Festschrift upon retirement from academic life, since a Festschrift is a mark of distinction reserved for the outstanding academics of their generation. It is an indication that they have made a significant contribution to the development and understanding of their subject. The quality of the economist can be judged by the excellence of the contributions, and there is no doubt that this volume and its companion, that have arisen from a two-day conference held at the Bank of England on 15 and 16 November 2001, have a stellar quality about them. It was a delight to find that the Governor of the Bank of England, Sir Edward George, was able to make time in his diary to open the conference, despite its close proximity to the IMF–World Bank meetings the following weekend. His opening address summed up this point exactly when he said 'I hope the MPC – and the Bank staff who provide us with such wonderful support – will not misunderstand me when I say that I cannot remember ever before having had such a galaxy of academic economist and central banking superstars gathered together under one roof!' As the Governor went on to say 'that is just how it should be as we meet to pay tribute to Charles who has given such a huge amount to his twin professions throughout his working life'.

The comments of the contributors, discussants and members of the audience all confirmed this view. Those who attended the conference were given privileged access to some of the outstanding minds in the vast fields of monetary economics, central banking, financial regulation and exchange rate economics. In view of the outstanding quality of the contributions it was a high priority to make them available to the wider profession. For this reason the original conference papers have been drawn together into two volumes with the help of Edward Elgar to ensure that they reach a broader group of professional economists, central bankers, academics and students of monetary economics.

It has been difficult to know how to divide up the contributions by the various authors into two volumes. All the chapters refer to subjects that have been major research topics in Charles's wide-ranging portfolio, and all are interconnected. It would have been possible to reorganise the chapters in many other ways, and no doubt there will be some who would wish that chapters on certain subjects had been put in the same volume. Indeed the order of the presentations in the conference was different from the order that the chapters now appear, but the timing of the chapters in the conference was driven by the diaries of many busy people. The printed volume is free from these constraints and we have sought to draw together the chapters that have the most in common with each other. All the chapters highlight the contribution that Charles has made to their field whilst also offering a contribution of their own in terms of a summary of current thinking and insights into the latest controversies. The benefit that this volume offers the reader is a summary of subjects from the full range of modern monetary economics. Hardly a single issue is omitted and all the topics blend the clarity of academic thinking with the practicalities of policy; whether that falls into the realm of central banking, financial regulation or international finance. We encourage the reader to read beyond his or her own interests and draw the full benefit from this collection of chapters by economists who are eminent in their field. It is to be hoped that the readers will appreciate them as much as those who heard the presentations at first hand.

The contents of this volume refer to monetary history, crises and exchange rates. The opening contributions are written by some of the most lucid and articulate members of our profession. They have taken as their theme a matter of general application to the economics profession: the role of the history of the subject in the education of economists. The first chapter is written by David Laidler of the University of Western Ontario who provides a delightfully controversial appraisal of 'The role of economic thought in modern macroeconomics'. Laidler stresses that interest in the history of economic thought has progressively declined, and teaching in the subject at the graduate level is now the exception rather than the rule. On the one hand this appears a stylised fact of every discipline. In particular, it is generally argued that there exists a negative correlation between the development of a discipline and the history of that discipline, and as Jean Baptiste Say put it (quoted by Jacques Melitz) 'The more perfect the science, the shorter the history'. However, Laidler stresses the importance of keeping the history of economic thought alive since it has an influence on the development of the subject and policy debates. In particular, he mentions a number of interesting examples in which a better knowledge of the history of economics would have helped in formulating more suitable policy actions. This was a theme that excited some interest. In the reaction to this paper when it was originally given, it was argued that the decline of the history of economic thought cannot be dissociated from the capacity of the scholars to stimulate the profession to take what they have to offer as a serious contribution to knowledge and economic education.

Jacques Melitz's discussion brings out the comparison between Mark Blaug's 'No history of ideas, please, we're economists' published in the winter issue of the *Journal of Economic Perspectives* 2001 and the contribution of David Laidler from the perspective of someone who is in substantial agreement with what both authors have to say. Melitz points out that we need to re-assess the state of the subject in relation to its history, and in so doing we may conclude that the history of economics is not uniform across the sub-disciplines. Macroeconomics may need its history more than, say, microeconomics or econometrics. His conclusion from reading Laidler's chapter is that macroeconomics has great difficulty in distinguishing the subject from the history of the subject. Monetary history and our knowledge of monetary economics are hard to disentangle, not least because some key developments have been made by a careful examination of the monetary history.

The next two chapters are based on monetary history. This was the subject of Charles Goodhart's doctoral dissertation at Harvard completed in 1962, and no better exponents can be found than the authors, Anna J. Schwartz of the National Bureau of Economic Research and Barry Eichengreen of University of California, Berkeley, who both co-author their chapters with Michael D. Bordo of Rutgers University. Michael D. Bordo and Anna J. Schwartz's chapter is entitled 'Charles Goodhart's contributions to the history of monetary institutions'. The chapter first discusses Charles's investigation of US central banking history from 1900 to 1914 and then the equivalent exercise for the United Kingdom, where he examined the adjustment mechanism by which the balance of payments equilibrium was achieved under the gold standard in Britain from 1891 to 1913. The standard view at the time was that if the Bank of England's gold reserves became threatened then it should increase its bank rate inducing a short-term capital inflow and reduce domestic economic activity. However, Goodhart suggested a different mechanism. An increase in economic activity that led to increased bank lending and deposits would maintain stable reserve ratios, if the Bank of England supplied the extra reserves by reducing other assets. This would reduce the gold reserve ratio and would lead to a higher bank rate. This resulting inflow of gold would restore the Bank of England's gold reserve ratio.

The chapter goes on to discuss Goodhart's beliefs about central banking activities. For example, Goodhart believes there to be a need for a central bank since commercial banks are inherently unstable (due to incomplete/asymmetric information and the herding behaviour of banks). Although he has studied systems without central banks, such as currency boards, and free banking, his conclusion has been that central banks are necessary to deal with commercial bank instability. Bordo and Schwartz argue that the instability in the banking sector is the result of unstable monetary policy and ill-advised regulation originating in the central bank. On this matter they agree to differ even after over thirty years of discussion.

Bordo's second chapter is with Barry Eichengreen and refers to 'Crises now and then: what lessons from the last era of financial globalization?'. This considers the differences between the financial crises of a hundred years ago from those of today. Bordo and Eichengreen use data from 32 crises in 21 countries from 1880 to the present day to make comparisons with the analysis of Delargy and Goodhart's *Financial Markets Group Special Paper* of 1999. Their findings are that crises are twice as frequent today compared to pre-1914 and this is due to the greater incidence of currency crises (banking crises have remained just as frequent). They also find that the output loss due to crises is similar now compared to pre-1914 and the recovery time is again similar, although Delargy and Goodhart suggest that the recovery time was quicker in the 19th century than in the 20th century, and this is confirmed in this chapter for banking and for twin crises. An important difference between the crises in the two periods is that banking crises did not previously spill over into currency crises. The reason for this, according to Eichengreen and Bordo, is that there was not a particularly close connection between banking crises and monetisation and thus no expectations of a spillover from the banking sector to create a currency crisis. To some degree this was enforced because the option of devaluing from a hard peg was not available. The conclusion of the chapter is that crises are becoming more common but not more severe in their nature, and in agreement with Delargy and Goodhart, the authors suggest that we have become more prone to twin crises, which the pre-1914 system was better able to handle than our present system.

The discussant of these chapters is Forrest Capie of City University, London. When reviewing Bordo and Schwartz's chapter he emphasises the differences of opinion between the authors and Goodhart. If Goodhart is right, he asks how was it that the banks emerged through their own self-imposed prudent behaviour before regulators were invented? And asks whether Charles is having second thoughts about the view that banks need complex regulation following the enlargement of his views in the recent speech in Brussels (Goodhart, 2001). Capie welcomes the American perspective from Bordo and Schwartz, but asks whether Charles, whose forebears, early life and graduate education were all American, is really British after all. His familiarity is with British institutions, for sure, and the Bank has a prominent place in his thinking but his conclusions are not those that accord with the British experience. When discussing Bordo and Eichengreen's chapter, Capie raises the issue of data quality. UK data in the 19th century is notorious for being suspect, so for the twenty-one countries for which data was available pre-1914, the data is likely to be very unreliable. His 'quibbles' about the dates of peaks and troughs, crises and turmoil, may be the basis for progress when the issue of whether crises are worse now than one hundred years ago is debated in the light of Asia 1997, Russia, 1998, Argentina 2001 and so on.

The topic of international monetary stability for the present day is one that has received some considerable attention from Charles. The following four chapters begin with the 'big picture' of the choice of exchange rate regimes with a chapter by Andrew Crockett, the General Manager of the Bank for International Settlements, which follows naturally from the chapter by Eichengreen and Bordo. The next three chapters work progressively through issues relating to foreign exchange rate intervention discussed by Takatoshi Ito, to the microstructure and high frequency data questions presented by Rich Lyons and Richard Payne.

Andrew Crockett's chapter, 'Exchange rate regimes in theory and practice' discusses the possible stable exchange rate regimes that were initially suggested, separately by Larry Summers at the policy institution end of the spectrum and Geoff Frankel at the research economist end. These were currency unions, currency boards, fully fixed and free float regimes. Crockett argues that since adjustable pegs are considered unstable, so too must currency boards, witness Argentina in 2001–02. Therefore he suggests that only the extreme cases of currency unions and free floats are stable, but the choice of the most appropriate exchange rate arrangement for a particular country is conditional upon a specific set of attributes that the country possesses in relation to its trade patterns, investment and portfolio flows and inflationary policies. Nor are these patterns likely to remain fixed for long, but they will change over time. Crockett notes that a number of countries have opted in favour of exiting from a pegged exchange rate in order to move in the direction of a more flexible exchange rate. He asks the question: how does one exit from a fixed exchange rate at the right time and in the right manner to avoid destabilising the economic and political environment? The answer is to exit while the currency is strong, and the economic conditions are unlikely to cause substantial changes to the prevailing rate. In addition, exit should be gradual, with the appropriate institutional and supervisory mechanisms brought into place before the exit occurs. Last of all an alternative nominal anchor needs to be identified. The move in the other direction is exemplified in the convergence criteria of the Maastricht Treaty for European monetary union. When speculating on future foreign exchange developments, Crockett suggested that only three major currencies might survive: the dollar, the euro and the yen. Smaller currencies may decide to link to one of these currencies, and therefore he implies that more currency unions are likely to emerge.

The discussant, Jose Viñals (Banco de España) talks about the disappearance of the middle between the extremes of free float and currency unions, suggesting that, due to the existence of many managed float regimes, it is in fact only the fixed part of the middle that is disappearing. He also talks about possible non-linear mean reversion when an exchange rate is allowed to move within a band quite freely but is forced back within the band if market forces threaten the existing peg.

The next chapter is by Takatoshi Ito of Hitotsubashi University and the University of Tokyo who asks the question 'Is foreign exchange intervention effective?' He acknowledges up front that the process of foreign exchange intervention is one of the most secretive activities of central banks and a great source of controversy. Some commentators imply that the central bank, as a relatively small player in the market, is therefore unlikely to be able to effectively alter the exchange rate. Others point to the importance of signalling to alter the market's perception of the future direction of exchange rate movements.

This chapter examines the effectiveness of the foreign exchange intervention by the Japanese ministry of finance using a ten-year dataset from April 1991 to March 2001. Ito presents a summary of the data on the size and timing of the intervention and shows that the cut off exchange rate above which the Ministry of Finance bought yen (sold dollars) and below which it sold yen was 125 yen/dollar. This policy, Ito argues, of buying yen low and selling it high resulted in realised profits of approximately 1 trillion yen. When considering the fact that more dollars were bought than sold over this period and since the Ministry of Finance borrowed yen by issuing low-interest bonds and invested in higher-interest-earning US debt, the total gains from the intervention were estimated to be approximately 2 per cent of GDP. Thus the central bank has engaged in effective, stabilising, intervention that has yielded considerable profits, with the intended influence over the direction of the yen that was desired.

Marcus Miller of the University of Warwick evaluates the options proposed by Andrew Crockett for international monetary arrangements. Crockett's four feasible options are contrasted with Morris Goldstein's view that there are 'five horses' in the exchange rate race in his Institute of International Economics article *Managed Floating Plus*. Both Crockett and Goldstein agree that adjustable pegs and crawling bands are too fragile for the present system with large capital flows and sometimes stuttering policy reforms. Miller muses that if Goldstein can add extras what would we like to add to the present floating rate system? His identifies two options – capital controls and soft margins. Capital controls, he argues, are a useful supplement to currency boards, for example Argentina, and to bands, baskets and crawls (the category he labels BBC). Soft margins to target zones as proposed by John Williamson could ensure the expectation of mean reversion even in the midst of a crisis – a feature of the gold standard's stability identified by Charles in his article with Delargy. Last of all, Miller turns to the issue of asset bubbles. Recent research has shown that monitoring bands and 'leaning-into-the-wind' strategies may create non-linear mean reversion but they cannot rule out bubbles. A wider backstop is required, and Takatoshi Ito's article presents evidence that sterilised intervention has fulfilled this role. Miller indicates that how and when sterlised intervention is likely to succeed is of significant interest and will command attention.

Research into the behaviour of high frequency foreign exchange rate data is another theme that has interested Charles Goodhart, and the next two chapters lie within this field. The first is prepared by Mintao Fan and Richard K. Lyons of University of California, Berkeley on 'Customer trades and extreme events in foreign exchange'. They describe the research into the trading of foreign exchange customers – as opposed to 'interdealer' trades – as an expanding frontier for the understanding of how information, which is often dispersed and diffuse, filters into the market. Although inter-dealer trades are the largest part of the market, the customer trades are the underlying demand of the market, and therefore potentially the most interesting. Fan and Lyons start by stressing the traditional difficulty in capturing the dynamics of the exchange rate, with sophisticated exchange rate models notoriously out-performed by a random walk. They have a model based on earlier work by Evans and Lyons in the *Journal of Political Economy* with an interesting description of the microstructure of the foreign exchange market where the crucial innovation is the presence of proprietary traders in between market makers and the public. They focus on a case study of the 10 per cent drop in the yen–dollar exchange rate in October 1998 during a single day. The customer order flow over this data set shows little evidence of mean reverting behaviour, and aggregate customer flow tracks the exchange rate movements at lower frequencies. They show that hedge funds were not responsible for the drop (despite the collapse of the massive Long-Term Capital Management) since they were net providers of liquidity, but rather that the institutional investors such as pension funds, insurance companies and mutuals were responsible. Therefore a chain of liquidity provision arises with the key players being dealers (high frequency liquidity providers), proprietary traders and mutual funds. These same institutions are responsible for creating the large net flows that are associated with the high-frequency exchange rate movements.

Richard G. Payne of the London School of Economics follows with a presentation of the microeconomic determinants of liquidity demand and supply in the foreign exchange market. Liquidity, he notes, is an oft-used but rarely defined concept. The chapter considers the dynamic interactions between trading activity, return volatility and bid-ask spreads at hourly frequencies. There is a great deal of similarity between this chapter and the previous one by Fan and Lyons, and the investigation of the 'order flow', the difference between aggregate number or volume of buyer and seller initiated trades is important. Three questions are raised: 'Is the order flow destabilising?', 'How is market liquidity affected by prior trading and return volatility?' and 'Does liquidity feedback on volatility and transaction frequency?' Payne stresses that the interaction between transaction frequency and order flow are crucial in capturing liquidity demand whilst on the supply side the bid–ask spread and market depth are crucial for determining the supply of liquidity. The data used in the empirical analysis were drawn from transactions in the sterling–dollar exchange rate market. Payne particularly emphasises the importance of testing whether both supply and demand of liquidity are well behaved or exhibit anomalous patterns due to agents' speculative behaviour.

Mark P. Taylor of the University of Warwick discusses both chapters. He notes that Charles Goodhart's inaugural lecture was a major spur to the development of research on the microstructure of foreign exchange markets. Recognising Lyons, Fan and Payne as major contributors to this literature from either side of the Atlantic, Taylor suggests that the findings of these papers on the relationship between customer order flows and exchange rate movements are of considerable significance. The most noticeable result of the first paper is that it appears to contradict the Evans–Lyons model published in the *Journal of Political Economy*. Taylor suggests that the Evans–Lyons paper need not be taken as axiomatic, and further empirical research should be undertaken to investigate the Fan–Lyons chapter presented here. Likewise the chapter by Richard Payne offers intriguing empirical results which could be compared with earlier research on technical analysis. Taylor has in mind a comparison between Payne's findings and those of Allen and Taylor published in the *Economic Journal* which uncovered activity in the foreign exchange markets that was related closely to indicators of overbuying and overselling. Both chapters are regarded as likely to stimulate future research on the drivers of exchange rate movements based on micro analysis of the market structure.

The final chapters in this volume relate to the issue of banking, financial stability and financial regulation. The first chapter in this section by Philipp Hartmann of the European Central Bank and Elena Carletti of the University of Mannheim explains the wave of consolidation that has occurred in the financial sector in recent years. They present a theoretical model on the impact of bank mergers on competition and financial stability. The impact of mergers on the efficiency of the financial sector is debatable, since bank mergers have ambiguous effects on both lending rates and financial stability. Bank mergers reduce competition but at the same time potentially enhance cost efficiency. Regarding financial stability, the impact of bank mergers is related to the changes in the size of balance sheets resulting from competition effects and to the structure of liquidity shocks.

The discussant, Michael Artis, stresses the difficulties of capturing the impact of bank mergers on phenomena like financial instability. He demonstrates that within the European Union at least, there has been less banking competition than we might have expected. The widely expected European arbitrage has only been partial, strengthening the capital markets but not the banking sector, despite the documented differences in efficiency. Artis points out that banks are special, and are not therefore comparable to any other industry, but asks whether this is the whole reason for the sluggish, or even glacial, speed of integration. The illustrations, taken from his adopted home of Italy, point to the common problem of national interests in financial regulation and surveillance which act as barriers to mergers, takeovers and increasing competition from abroad.

Although Charles engaged in research on financial regulation late in his career, he quickly established his position as a key commentator on this issue. The following chapter by Andrew Sheng and Tan Gaik Looi of the Securities and Futures Commission of Hong Kong documents Charles's contribution to financial regulation and asks 'Is there a Goodhart's Law in financial regulation?' Sheng and Tan Gaik Looi draw parallels between the approach that Charles Goodhart applied to an assessment of monetary policy making in Goodhart's Law. They seek to determine whether the same issues apply to the financial regulator seeking to apply regulatory rules 'for control purposes'. They begin by surveying the difficulties encountered by regulators during the recent financial crises and stresses that neither South-East Asia nor Russia had sound financial regulation before their respective problems. Both countries underwent a process of overlending and asset price inflation and deflation facilitated by the lack of adequate scrutiny on the part of regulators – but more regulation by the application of rules is not necessarily the answer. According to Sheng and Looi regulation of the financial system should be pushed too far, in that regulation itself implies costs (not only the cost of resources but also risk of moral hazard). Sheng and Looi argue that there must always be a cost–benefit analysis behind regulatory decisions.

Michael Foot, the Managing Director of the Financial Services Authority presents a chapter on the issue of 'Working with market forces'. Foot stresses that the regulator should always have three targets in mind: the protection of depositors, the prevention of systemic instability and the prevention of money laundering. The regulator should pay attention to a number of 'obvious' market signals like share prices, bond prices and ratings, but also to a number of less obvious market signals like the liquidity of Certificates of Deposit and the cost of funds (both retail and wholesale). In turn, the market itself places constraints on financial institutions, (such as market-based capital requirements) and some market disciplines are progressively developing, like market-based pricing of deposit insurance, a public pre-commitment of the bank not to take excessive risks and the adequate treatment of subordinated debt.

The discussant, Dirk Schoenmaker from the Ministry of Finance, the Netherlands, praises both chapters for their clarity in stressing the pros and cons of a strict financial regulation. He notes that the capital adequacy requirements – known often as Cooke ratios after the chairman of the session – have become important policy variables in the hands of the regulator. This puts in place at least the preconditions for a Goodhart's law of financial regulation. He also points out in passing that there are many parallels between monetary policy and financial regulation, for example time inconsistency of actions, rules versus discretion debates and so on. In dicussing Michael Foot's chapter Schoenmaker analyses the concept of risk in the numerical meaures such as Value at Risk, and the effectiveness of market discipline in financial regulation. He focuses his discussion on the dangers implicit in the new proposals for capital requirements (the so-called Basle II) since they vary with the level of risk, and he points out that for internationally active banks the procyclicality of capital regulation could lead to adverse macroeconomic effects.

The final contribution is by Charles Goodhart. This postscript offers his views on three topics worthy of further study that arise from the contributions of various authors in the two Festschrift volumes. The first topic relates to the treatment of volatility in foreign exchange markets following a major shock. Charles's objective is to seek out a theoretically plausible and institutionally robust explanation for volatility measures such as GARCH. The second topic amounts to a difference of opinion between Charles and Lars Svensson over the shape of the loss function. Charles contends that at the crucial point where a threshold is about to be breached the loss function is very steep, but thereafter it is flat. The fact that this does not correspond to a quadratic loss function raises the issue of how to characterise the authorities' loss function in monetary theory. The final topic relates to monetary history and the gold standard. Charles points out that the historical importance of the inflow and outflow of capital (gold) following a rate rise was an important link in the transmission mechanism. The fact that this is now regarded as unreliable, or even reversible, is a matter of concern and worthy of more research. It is no surprise to find that each of these research 'ideas' lies in a completely different field of monetary economics. Such is Charles's breadth of knowledge and interest!