

**Monetary Theory and Policy from
Hume and Smith to Wicksell:
Money, Credit and the Economy**

©

Arie Arnon*

Forthcoming

Cambridge University Press

* Department of Economics, Ben-Gurion University of the Negev, Beer-Sheva, Israel
and Head, Economics and Society Program, Van Leer Jerusalem Institute.

[Dedication]

To Ruth, my greatest love;

Yes, more than the history of monetary thought and

Peace in the Middle East.

Table of Contents

Preface

Introduction

Part I Analytical and Historical Foundations

Chapter 1 Monetary Theory circa 1750: David Hume

1. Introduction
2. “*Of Money*” and Commodity-Money
3. The Price-Specie-Flow mechanism
4. A Note on Non-Commodity-Money
5. On the Rate of Interest
6. Summary

Chapter 2 Mid-18th Century British Financial System

Chapter 3 Adam Smith: The Case for Laissez Faire in Money and Banking

1. Introduction
2. Money and the Division of Labor
3. Money, Banking and the “Invisible Hand”
4. The Real Bills Doctrine
5. Smith and Hume

Chapter 4 "Monetary Theories of Credit" in Exchange

1. Introduction
2. A Pure Commodity-Money System of Exchange
3. From Money to Credit in Exchange
4. Implications for the Quantity Theory

Part II Debating Monetary Theory under Inconvertibility

Chapter 5 New Reality: The Restriction Period 1797-1821

Chapter 6 Boyd versus Baring: The Early Round in the Bullion Debate

1. Introduction
2. Boyd's Letter to Pitt (1800): A Critique of the Bank of England
3. Boyd's 1796 Proposals
4. Sir Francis Baring (1801): A Defense of the Bank
5. Boyd's Rebuttal: The Second Edition (1801b)
6. Conclusion

Chapter 7 Henry Thornton: Ahead of His Times

1. Introduction
2. *Paper Credit* on the Contraction of the Circulation
3. *Paper Credit* on the Expansion of the Circulation
4. Thornton on Discretionary Policy
5. Defending the Bank Directors
6. A Brief Look Beyond 1802
7. The Bullion Committee
8. Thornton's Pioneering Monetary Ideas

Chapter 8 Ricardo versus Bosanquet: The Famous Round in the Bullion Debate

1. Ricardian Monetary Theory, 1809 to 1811
2. The Bullion Committee
3. Charles Bosanquet (1810): The anti-Bullionist Position
4. Ricardo's Reply to Mr. Bosanquet

5. The Ingot Plan
6. The Resumption
7. Ricardo's Break from the Smithian Theory of Money – 1824
8. Summary

Chapter 9 "Credit Theories of Money" in Exchange and Intermediation

1. Introduction
2. An Accounting System of Exchange (ASE)
3. Credit, Near-Credits and Money
4. The Rise of Near-Credits
5. The Rise of Money
6. Money and Credit in Intermediation
7. Some Implications for the History of Monetary Theory

Part III Debating: Laissez Faire, Rules and Discretion

Chapter 10 From the Resumption to 1837: More Crises

1. Introduction
2. The 1825 Crisis
3. The 1832 Committee and Palmer's Rule
4. Appendix: More Data

Chapter 11 The Currency School Trio: Loyd; Torrens; Norman

1. The Automatism of the Currency School
2. Loyd's Early Formulations
3. Loyd in the 1840's
4. Torrens' (Mature) Monetary Position
5. Norman: A Voice Within the Bank

Chapter 12 The Banking School Trio: Tooke; Fullarton; Wilson

1. Introduction
2. Tooke's Early and Mature Positions
3. An Early Critique of Ricardo
4. The 1844 Text: A Banking School Manifesto
5. Fullarton and the Law of Reflux
6. Tooke on Other Mediums of Payment
7. An Income Theory of Prices
8. Banking, Monetary Policy and the Economy:
An Incomplete Analysis
9. Tooke's Theory of Interest: Consistency in 1826 & 1844
10. Monetary Policy and the Bank After 1844
11. Wilson, the *Economist* and the Public Debate
12. Conclusion
13. Appendix: A Note on J. S. Mill's Monetary Thinking

Chapter 13 Neither Discretion nor Rules: Joplin and the Free Banking School

1. Introduction
2. Joplin
3. Parnell and the Free Banking School
4. The Banking and Currency Schools on Laissez Faire in Banking

Part IV The Road to Defensive Central Banking

Chapter 14 Bagehot and a New Conventional Wisdom

1. Introduction
2. The British Monetary Orthodoxy

3. *Lombard Street*: Addressing Intermediation
4. *Lombard Street*: One Reserve System
5. *Lombard Street*: Defensive Monetary Policy
6. The Government and the Bank
7. The Bank's Structure and Policy
8. Who Influenced Bagehot?
9. *Lombard Street* on Free Banking
10. Summary

Chapter 15 Does Karl Marx Fit In?

1. Introduction
2. Marx's Thoughts on Money -- 1857
3. Marx's Mature Formulation -- 1859
4. Traces of Tooke in Marx's Developing Theory of Money
5. Summary

Chapter 16 Marshall and bi-Metallism

1. Introduction
2. The Oral Tradition
3. Monetary Policy

Part V A New Beginning: Towards Active Central Banking

Chapter 17 Wicksell's Innovative Monetary Theory

1. Introduction
2. The 1898 *Geldzins und Guterpreise*
3. Different Payment Arrangements and Intermediation
4. The Price Level, Interest Rates and the Cumulative Phenomena

5. Wicksell on Monetary Policy
6. History of Monetary Policy in the *Lectures*
7. A Note on Wicksell's Independent Discovery
8. The Classical Dichotomy and Wicksell's Unorthodox Trichotomy

Chapter 18 The Puzzling Slow Rise of a Theory of Central Banking:

Between the Lender of Last Resort, Passive and Active Monetary Policy

1. Introduction
2. Hume and Smith: Neither Defensive nor Active Monetary Policy
3. Thornton: An Early Advocate of Active Central Banking
4. The Bullionists and the Currency School:
 Rules, Without Monetary Policy
5. The Banking School on Monetary Policy after 1844
6. Bagehot and Defensive Monetary Policy in the 1870's
7. Wicksell and the Reemergence of Active Monetary Policy
8. Summary

Bibliography

Index

List of Illustrations

- Figure 2.1 A Schematic Structure of the Banking System in the Mid-18th Century
- Figure 5.1 Prices During the Restriction, 1797 to 1821
- Figure 10.1 The Bank of England, Note Circulation and Bullion, 1750 to 1844

List of Tables

- Table 5.1 Bullion at the Bank of England, Its Note Circulation and Deposits, 1778 to 1797
- Table 5.2 Prices During the Restriction, 1797 to 1821
- Table 5.3 Bullion at the Bank of England, Its Note Circulation and Deposits, 1797 to 1821
- Table 10.1 Bullion at the Bank of England, Its Notes in Circulation and Deposits, 1821 to 1837
- Table 10.2 The Bank of England, Its Note Circulation, Deposits, and Bullion, 1750 to 1844
- Table 10.3 Assets and Liabilities in Great Britain, 1792 to 1865
- Table 10.4 Bank of England Reserve Ratios against Various Liabilities: Great Britain, 1792 to 1896

Preface

I was first attracted to the history of monetary thought many years ago, puzzled by an enduring question: what is the right balance between the visible and invisible hands in economics? I thought then, and still think, that the appeal of the invisible hand is even less convincing in the fields of money and banking than in other fields. The necessity of interventions in money and banking, and more generally in finance, seem so obvious that I assumed that such interventions had a long history. I was surprised to learn that this was not the case. Rather, I soon learned that the classical conventional wisdom, represented by David Hume, by Adam Smith, and by David Ricardo in most of his writings, unreservedly adopted the invisible hand/no policy approach.

Most of the eighteenth and nineteenth-century scholars who thought about the subject believed that the “natural order”, organized spontaneously around the precious metals, would suffice to establish a well-functioning monetary system. As we shall see, there were some dissenting views, but they had little influence. Rather, for many years, the dissenters were almost completely ignored. The recognition that it is up to society to regulate and direct the monetary system came to take center stage only towards the end of the nineteenth century.

The slow rise of a theory of monetary policy is the story told in this book. Understanding this story also means understanding the obstacles and stiff resistance that for so long delayed recognition of the failure of the invisible hand. The debate over the correct balance between the two hands is far from over, both in banking and in spheres outside of banking. Therefore, understanding the obstacles that stood in the way of a theory of central banking may help in present-day and future debates over similar issues. In any case, that is the constant hope of those of us who would study the history of thought not just for its own sake, but in the belief that important lessons can be gained from it.

My personal route in studying the history of monetary theory took me from Karl Marx

back to those who most influenced his thinking about the sphere of money and banking: the Banking School, and primarily Thomas Tooke. In an effort to understand Tooke, I looked further back to the canonical figures of classical monetary theory. Although my journey moved backwards through time, the present book naturally begins with the state of monetary theory in the mid-eighteenth century; in other words, with Hume and Smith, who define the “state of the art” at the time. In the first part of the book, I also briefly review the institutional setup, a decentralized banking system linked to the precious metals. In the last chapter in Part One (Chapter 4), entitled “‘Monetary Theories of Credit’ in Exchange”, I present an analytical summary of a system based on gold, wherein other debts and credits are linked to that anchor. Part Two of the book deals with an exciting period when the sovereign purposefully decided to give up the gold anchor. The Restriction period (1797-1821) brings us to an amazing group of thinkers, most notably Henry Thornton (Chapter 7). Chapters 6 and 8 introduce Walter Boyd and David Ricardo, on the one hand, and Francis Baring and Charles Bosanquet, on the other hand, arguing on opposite sides of the famous Bullionist-anti-Bullionist divide. Chapter 9, entitled “‘Credit Theories of Money’ in Exchange and Intermediation”, presents the analytical perspective most suited to understanding Henry Thornton, the most original thinker. His analytical framework will reappear with Knut Wicksell. Readers less interested in the analytical framework can skip this chapter, but might be tempted to return to it (and to Chapter 4) after perusal of the rest of the book.

Part Three covers the years after the 1821 Resumption, when Great Britain was back on gold. While the famous debates between the Currency and Banking Schools about bank reform are well known, I link them both not only to the phenomenon of reoccurring crises, but also to a relatively neglected aspect of our story: the different roles of the monetary system in exchange and intermediation. The slow rise of a theory of monetary policy and the hegemony of the Currency School for so many years in the mid-nineteenth century, are clearly

two sides of the same coin, as we shall see. In Part Four, we encounter Walter Bagehot, one of the better-known scholars who helped to speed up the slow rise of discretionary monetary policy, though in a restricted form. I argue that Bagehot's achievements were both less original than many think and less comprehensive than those of Thornton, seventy years earlier. Wicksell, covered in the last part of the book, is the scholar who closed the circle that began with Thornton.

In a few of the chapters, I draw on material from published papers. I wish to thank Duke University Press and the *History of Political Economy* for permission to use materials from:

Arnon, A. (1984), "The Transformation in Thomas Tooke's Monetary Theory Reconsidered", *History of Political Economy* 16, 311-326.

Arnon, A. (1984), "Marx's Theory of Money - The Formative Years", *History of Political Economy* 16, 555-575.

Arnon, A. (1999), "Free (and Not So Free) Banking Theories among the Classics or Classical Forerunners of Free Banking and Why They Have Been Neglected", *History of Political Economy* 31, 79-107.

Arnon, A. (2009), "Reexamination of Thornton's Innovative Monetary Analysis: The Bullion Debate during the Restriction Once Again", *History of Political Economy* 41, 545-574;

I wish to thank the Verlag Wirtschaft und Finanzen for permission to draw from:

Arnon, A. (1997), "Thomas Tooke, The Currency Principle and The 1844 Bank Act", Introductory Essay to Tooke's "An Inquiry into the Currency Principle", re-issued in 'Klassiker der Nationalökonomie' series, B. Schefold, (Ed);

and the Oxford University Press and *Oxford Economic Papers* for permission to use:

Arnon, A. (1987), "Banking Between the Invisible and Visible Hands: A Reinterpretation of Ricardo's Place within the Classical School", *Oxford Economic Papers* 39, 268-281.

During my many years of study of the major monetary scholars in the British tradition, I received, directly and indirectly, much help from many persons both deceased and alive. Although experience has taught me that listing one's debts is a dangerous mission, it is a risk well taken. I owe special thanks to Laurence Harris, who guided me during my first steps in this field. Sam Hollander provided advice in many instances, both when he was in Toronto and more recently, when we are closer in Beer Sheva. Neil Skaggs, David Laidler, Cristina Marcuzzo, Bob Dimand, Jerome de Boyer and Mauro Boianovsky all discussed with me, at various stages, the ideas covered in the book. Three anonymous referees of CUP provided excellent and constructive criticism at different stages of writing. I wish to thank all of the above for their advice and contributions. None of them is responsible for the views expressed in the book; any remaining errors are, of course, mine alone.

I wrote most of this book between 2006 and 2009, drawing on drafts written through many years of study and teaching of the history of monetary theory. I spent a sabbatical year in 2006-2007 at UC Berkeley, where I remained in 2008-2009 as the Helen Diller Visiting Israeli Professor in the Department of Economics, the Center of Middle Eastern Studies (CMES) and the Institute for Research on Labor and Employment (IRLE). I thank the Institute and especially its director Michael Reich for their hospitality and intellectually stimulating environment.

Throughout the work on the final drafts, I enjoyed the excellent editing assistance of Wendy Schor-Haim, for which I am very grateful. At Cambridge University Press, the consistent good advice and encouragement of Scott Parris were indispensable.

Last, but not least, I wish to thank my partner in life, Ruth. She and I know well why.

Introduction

Monetary theories, Sir John Hicks taught us, are always closely related to monetary histories, even more than general economic theory is related to economic facts. The institutions making up the monetary system; the mediums used in a non-barter economy; the preconceptions of the participants in the various transactions as to what does and does not constitute money; and even the observers' prejudices, all play crucial roles in constructing theories. Monetary theories have obvious consequences for policy, so much so that positions on the right policies also had significant impact on theoretical discussions.

Monetary Theory and Policy from Hume and Smith to Wicksell: Money, Credit, and the Economy surveys the major developments in monetary theory and associated positions on policy. The book begins with David Hume and Adam Smith, moves through Henry Thornton and David Ricardo, and ends with Walter Bagehot and Knut Wicksell. The period covers the one hundred years of the classical school, from the 1770's to the 1870's, with a brief look before at Hume and a look beyond to Alfred Marshall and Wicksell.

The book covers the period's major monetary theorists and asks: What role did commodity-money, and in particular gold and silver, play in their conceptualizations? How did they explain the roles of the invisible and visible hands in money, credit and banking? What did they think about rules and discretion? Did they distinguish between the two different roles of the financial system: making payments efficiently within the exchange process and facilitating intermediation in the capital market? How did they perceive the influence of the monetary system on macroeconomic aggregates, whether nominal, such as the price level and exchange rates, or real, such as output, employment and the accumulation of wealth? And finally -- and crucially -- what did they think about monetary policy? In particular, a central issue I address throughout this book concerns the puzzlingly slow

development of a theory of central banking.

Henry Thornton stands out among the major figures whose ideas shaped monetary theory, primarily for his innovative analysis of the complicated phenomena that were just taking shape after the introduction of an inconvertible monetary system in 1797. Thornton drew unprecedented conclusions about monetary policy and about the links between money, credit and the “real” economy. Perhaps most important in the present context, he developed a theory of central banking. For reasons which will be discussed in the book, Thornton’s influence was limited. He was not able to convince contemporaries to look beyond the conventional wisdom at the turn of the nineteenth century as defined by Hume and Smith, the founding fathers of classical monetary theory. To Hume, contemporaries owed the analytical apparatus -- known as the Price-Specie-Flow mechanism -- that linked the internal money supply to automatic, international forces and relieved analysts from any worries about its determination. To Smith, contemporaries owed the extension of the "invisible hand" argument to money, credit and finance. Later theoreticians became indebted also to Ricardo for turning the Quantity Theory into the cornerstone of monetary theory. The book will elaborate on the founding fathers’ respective roles in blocking Thornton's pathbreaking ideas on both monetary policy and the feasibility of a well-functioning inconvertible system.

The first part of this book discusses the analytical foundations of classical monetary theory. I survey the monetary theories of Hume, Smith, and Ricardo, which all assumed convertible monetary systems where bank notes could, in principle, be exchanged for commodity money; in other words, these were theoretical discussions of the gold and silver standards. We start our journey by exploring the state of monetary theory in the mid-eighteenth century through the important contributions of Hume. The common view that classical monetary thought was "metallist" owes much to Hume’s conceptualization. I then address the major message of Adam Smith’s monetary theory, namely that the invisible hand

should rule in money and the payments system as well as in credit creation and intermediation, as it should rule elsewhere. Smith's theoretical approach, though not explicitly reliant on Hume, did not depart from the conventional wisdom associated with Hume. Thus, Smith accepted convertibility, granting gold a pivotal role, and supported free trade in banking and finance. The ideas of Hume and Smith influenced many, though by no means all, of the well-known schools that followed.

In this book I argue that the classical hegemonic thinking of Hume and Smith became, in fact, a serious obstacle to the development of monetary theory and stood in direct contrast to Thornton's innovative ideas. The similar theoretical structure used by Hume and Smith concerning money and credit was typical of what came to be termed, after Schumpeter, a "monetary theory of credit." Their theories were based on the unique role of commodity-money; these theories provided the cornerstone of Ricardo's thinking, although his monetary theory must be read against the background of the Restriction period (1797-1821) when bank notes became inconvertible, whereas Hume and Smith analyzed convertible systems. After describing the background for and the basic economic facts of the Restriction, I discuss the critical early round (1800-1802) of the post-1797 debate between the Bullionists and anti-Bullionists and argue that important lessons relevant for later classical and modern debates concerning monetary control can already be found in this early period. I will analyze the early Bullion debate through the ideas of two of its famous contenders, the Bullionist Walter Boyd and the anti-Bullionist Francis Baring.

The Bullion debate provides a context in which to understand Thornton, the most outstanding monetary theoretician of the time and a pragmatic visionary neglected by economists for many years -- but no longer. A major section of the book covers Thornton's innovative ideas and emphasizes his contributions both to the refutation of the invisible hand approach in banking associated with Smith and to the critique of the Price-Specie-Flow

mechanism and the Quantity Theory associated with Hume and later with Ricardo. Perhaps because Thornton's theories were ahead of their time, his impact, while significant, was only indirect; it was felt mainly through the reliance of later economists on his compelling ideas. Thornton formulated many of the elements of modern monetary theory, including a compelling argument advocating central banking; what is surprising is that his groundbreaking ideas did not enter mainstream thinking until the twentieth century. In the concluding sections of this book I try to explain why.

Returning to the major persona, I then devote some attention to Ricardo's well-known contributions to economic theory, beginning with his appearance on the scene in 1809 during the famous second round of the Bullion Debate. Ricardo helped shape classical monetary theory in the tradition of Hume. Unlike Smith, he pushed it in the direction of the Quantity Theory of Money, a well-known and deeply rooted approach. The Quantity Theory has since become such a basic tenet of monetary theory that many scholars believe it to be *the* monetary theory. I will try to convince my readers (a difficult job indeed) that Ricardo's uncritical attitude toward the Quantity Theory became the third obstacle to the development of monetary theory beyond Hume's adoption of the Price-Specie-Flow mechanism and Smith's adoption of the concept of free trade in banking matters.

The resumption of cash (gold) payments, i.e. the return to convertibility, finally took place in 1821. We will follow some aspects of the development of the monetary system from 1821 to the end of the nineteenth century. Since the Resumption, inconvertibility has become a side issue attracting the interest of only a few economists. The focus of the post-Restriction debates concerned various reforms in banking, both in the Bank of England and the other banks. The continuing crises in the economy, in particular those of 1825 and 1836/7, shaped the debate about country banking, small notes and joint-stock banking as well as the major debate around the renewal of the Bank charter in 1832. This led to the famous and defining

exchange between the Currency School, represented by Samuel J. Loyd, Robert Torrens and George W. Norman, and the Banking School, represented by Thomas Tooke, John Fullarton and James Wilson that culminated in the Currency School's victory with the 1844 Bank Act. I will also present some of the figures who belonged to neither school, like Thomas Joplin and Henry Parnell of the so-called Free Banking School. We shall see how this period brought to the forefront the tensions between Laissez Faire, Rules and Discretion that have played out in arguments about monetary policy ever since.

I next discuss the work of Walter Bagehot, who introduced a consistent discretionary policy role for the Bank of England. The major aims of this policy were to maintain convertibility and provide stability. However, I will argue that even though Bagehot is commonly presented as the "father" of modern central banking, his conception of the Bank's role fell short not only of a modern, active theory of monetary policy but also of Thornton's formulations. I then turn to two more political economists, Karl Marx and Alfred Marshall. The former has been strangely neglected in the spheres of money and banking; in my discussion, I attempt to answer the question of how he fits into our story. We will see that his ideas on money and banking drew heavily from the Banking School, though his metallic view of money is tied to his real analysis and is not linked to the Currency School. We will then review the positions of Marshall and address the issue of bimetallism that bothered economists in the last quarter of the nineteenth century and that likely had an important impact on our last, but certainly not least, scholar.

Our review of major figures ends with an examination of Wicksell's contribution to the development of monetary economics, with a particular focus on his innovative articulation of an "active central banking" concept similar both to the one raised by Thornton one hundred years earlier and to that used today. We will show how Wicksell clearly distinguished between financial systems based on commodity-money and those based on pure credit (the

"pure credit system"). The achievements of Wicksell and the progress made by those before him who slowly came closer to active central banking are explained in part by the emphasis on the role of the monetary system not just in supporting the exchange process, but also in facilitating intermediation.

By this point we will have laid the groundwork for an analysis of the slow rise of central banking. To this end I introduce a distinction between what I term “defensive” and “active” monetary policies, policies that differ both from one another and from what is commonly known as the central authority’s role as Lender of Last Resort. I will argue that defensive central banking was first roughly articulated by the Banking School and then, famously and clearly, in the work of Walter Bagehot, who introduced a consistent discretionary policy role for the Bank of England. The major aims of this policy were to maintain convertibility and provide stability; it thus fell short of a fully developed active monetary policy such as that which we know today. Most interestingly, we shall see that Thornton had already developed a theory of active central banking a full seventy years earlier than Bagehot.

The book concludes by bringing together the major themes raised by the Thornton-Banking School-Bagehot-Wicksell link, especially those concerning monetary policy. The clear distinction drawn between the two functions fulfilled by the financial sector -- one in the exchange process and the other in intermediation -- and the different theoretical structures developed to explain these functions are typical of these scholars. Since the two functions deal with very different processes, I emphasize the distinctions theoreticians should have drawn between them, both in Thornton's era and after. This final chapter assesses the reasons for the slow rise of central banking, distinguishing between more ideological obstacles and more theoretical ones, that together delayed an earlier understanding of the importance and contribution of intervention in banking to the economy’s real performance. The explanations

for the slow rise of a theory of central banking follow the tensions -- ideological, theoretical, and political -- throughout the nineteenth century between Laissez Faire, Rules, and Discretion as dominant concepts for analyzing the financial system. These obstacles still seem to be with us today, as those in the field of economics struggle to understand the structural weaknesses in the modern financial system. A better understanding of the past can hopefully contribute to overcoming our present difficulties.