

The Liquidity Theory
of Asset Prices

Gordon Pepper
with Michael J. Oliver



John Wiley & Sons, Ltd

The following are quotes about the course ‘The Monetary Theory of Asset Prices’, Module 3, Practical History of Financial Markets, Edinburgh Business School; run by the Stewart Ivory Education Company (SIFECO) and taught jointly by Gordon Pepper and Michael Oliver.

‘An excellent series of lectures’.

‘Quite inspirational’.

‘Very interesting course making me more aware of monetary influences – very worthwhile’.

‘I shall look forward to reading more if not all of the book’.

‘Excellent, stimulating and in my view very important subject’.

‘Very insightful. My eagerness to learn more has increased’.

‘The back to basics. Clear, pithy and informative’.

‘Good double act of academic/professional’.

‘A very interesting course which I plan to follow up with further reading’.

‘Michael Oliver: Highly enthusiastic, very thorough; Gordon Pepper: Very practical – steeped in the real world. An authority on money supply’.

‘Excellent topics and materials. This is cutting edge work’.

‘Excellent combination of presenters – academic background combined with practical examples’.

‘My objective was to make some sense of my experiences over the past thirty years and gain some framework for assessing the future by listening to some of the finest minds in the City and the academic input – I HAVE NOT BEEN DISAPPOINTED’.

The Liquidity Theory of Asset Prices

For other titles in the Wiley Finance Series
please see www.wiley.com/finance

The Liquidity Theory
of Asset Prices

Gordon Pepper
with Michael J. Oliver



John Wiley & Sons, Ltd

Copyright © 2006

Gordon Pepper

Published by

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester,
West Sussex PO19 8SQ, England

Telephone (+44) 1243 779777

Email (for orders and customer service enquiries): cs-books@wiley.co.uk

Visit our Home Page on www.wiley.com

This book is published in association with the Institute of Economic Affairs, 2 Lord North Street, London, SW1P 3LB. The mission of the Institute of Economic Affairs is to improve public understanding of the fundamental institutions of a free society, with particular reference to the role of markets in solving economic and social problems.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except under the terms of the Copyright, Designs and Patents Act 1988 or under the terms of a licence issued by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London W1T 4LP, UK, without the permission in writing of the Publisher. Requests to the Publisher should be addressed to the Permissions Department, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England, or emailed to permreq@wiley.co.uk, or faxed to (+44) 1243 770620.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The Publisher is not associated with any product or vendor mentioned in this book.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold on the understanding that the Publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

Other Wiley Editorial Offices

Wiley have other editorial offices in the USA, Germany, Australia, Singapore and Canada.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Library of Congress Cataloguing-in-Publication Data

Pepper, Gordon T., 1934-

The liquidity theory of asset prices / Gordon Pepper with Michael J. Oliver.

p. cm. — (Wiley finance series)

Includes bibliographical references and index.

ISBN-13: 978-0-470-02739-4 (cloth: alk. paper)

ISBN-10: 0-470-02739-8 (cloth: alk. paper)

1. Monetary policy. 2. Liquidity (Economics). I. Oliver, Michael J. II. Title. III. Series.

HG230.3.P455 2006

332'.041501—dc22

2005034997

British Library Cataloguing in Publication Data

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

ISBN 13 978-0-470-02739-4 (HB)

ISBN 10 0-470-02739-8 (HB)

Typeset in 11/13pt Times by TechBooks, New Delhi, India

Printed and bound in Great Britain by TJ International Ltd, Padstow, Cornwall

This book is printed on acid-free paper responsibly manufactured from sustainable forestry in which at least two trees are planted for each one used for paper production.

Contents

Foreword by Russell Napier	xiii
Acknowledgements	xvii
About the Authors	xix
List of Tables, Figures and Charts	xxiii
Introduction	1
Appetiser	1
Structure of the book	2
Language and jargon	2
Academic theories	3
Modern Portfolio Theory	3
The Efficient Markets Hypothesis	4
Forms of investment analysis	4
Fundamental analysis	4
Monetary analysis	5
Technical analysis	5
The intuitive approach	6
What the book is going to say	6
PART I THE LIQUIDITY THEORY	9
1 Types of Trades in Securities	11
1.1 Liquidity trades and portfolio trades	12
1.2 Information trades and price trades	12

1.3	'Efficient prices'	12
1.4	Expectations of further rises or falls	13
2	Persistent Liquidity Trades	15
2.1	Demand for money	15
2.1.1	Transactions demand for money	15
2.1.2	Savings demand for money	16
2.1.3	Interest rates and the demand for money	16
2.2	Supply of money	16
2.2.1	Printing-press money	16
2.2.2	Fountain-pen money	17
2.2.3	Interest rates and the supply of money	17
2.3	Monetary imbalances	17
2.4	Excess money in the economy	18
2.5	Summary	19
3	Extrapolative Expectations	21
3.1	Sentiment	21
3.2	Intuition	21
3.3	Decision-taking inertia	22
3.4	Crowds	23
3.5	Fundamental and monetary forces in the same direction	23
4	Discounting Liquidity Transactions	25
4.1	Speculation	26
4.2	Timing	26
4.3	Short-term risk versus profits in the longer term	26
	Appendix: Speculation and market patterns	27
5	Cyclical Changes Associated with Business Cycles	37
5.1	Introduction	37
5.2	Direct and indirect effects of money on asset prices	38
5.2.1	Money, business cycles and inflation	38
5.2.2	Business cycles and fundamental factors: the 'indirect effect' on asset prices	38
5.2.3	The combination of the indirect and direct effects	39
5.3	Strategy	39
5.4	Timing	40

	Contents	ix
5.5 Sequences	41	
5.6 Triggers	42	
6 Shifts in the Savings Demand for Money	43	
6.1 The peak of a business cycle	43	
6.2 Running down bank deposits	44	
Appendix 6A: Some bond arithmetic	46	
Appendix 6B: Government bond markets	47	
PART II FINANCIAL BUBBLES AND DEBT DEFLATION		49
7 Financial Bubbles		51
7.1 Detection of a bubble	51	
7.2 Phases	52	
7.2.1 Chronically dangerous	52	
7.2.2 The burst	52	
7.2.3 Acutely dangerous	52	
7.3 Crosschecks	53	
8 Debt Deflation		55
8.1 The cure for debt deflation	56	
8.1.1 Money supply policy	56	
8.1.2 Fiscal policy	57	
Appendix: Ignorance of Irving Fisher's prescription	58	
PART III ELABORATION		59
9 Creation of Printing-press Money		61
9.1 The UK in more detail	63	
9.2 Four policies	64	
10 Control of Fountain-pen Money and the Counterparts of Broad Money		65
10.1 Control of bank lending	65	
10.1.1 The teaching in textbooks	65	
10.1.2 How central banks operate in practice	66	
10.2 Bank capital	66	
10.3 The UK in more detail	67	

10.4	The ‘counterparts’ of changes in broad money	68
10.5	Relationship between the counterparts	68
11	Modern Portfolio Theory and the Nature of Risk	71
11.1	Summary	71
11.2	Expected yield	72
11.3	Risk	74
11.3.1	Risk and the circumstances of the investor	77
11.3.2	Variation in risk – life assurance funds	77
11.3.3	Investment managers’ personal risk	78
11.3.4	Unacceptable risks	79
11.4	Exploiting skewness	79
12	Technical Analysis and Crowds	81
12.1	Trends and trading ranges	81
12.2	Crowd behaviour	82
12.3	Information	82
12.4	Trends and momentum	83
12.5	Approaching a turning point	83
12.6	Turning points	84
12.7	Further reading	84
13	The Intuitive Approach to Asset Prices	87
13.1	Intuition that is a reflection of monetary forces	87
13.1.1	Biased reaction to news	87
13.1.2	Technical reactions	87
13.1.3	Market-makers	89
13.1.4	Bulls and bears of the core market-makers	89
13.1.5	Summary	91
13.2	Intuition that is not a reflection of monetary forces	91
13.3	Forced selling	92
14	Forms of Analysis	93
14.1	Different languages	93
14.2	Macroeconomic models	93
14.2.1	An hydraulic model	93
14.2.2	Large electronic computer models	94
14.3	Disequilibrium	95
14.4	Intended and actual transactions	96

14.5 Accounting identities	96
Appendix: Direct Estimates of Supply and Demand for Credit in the US	97
PART IV EVIDENCE AND PRACTICAL EXAMPLES	101
15 The UK Markets Prior to 1972	103
15.1 UK money supply and a combined capital market price index, 1950–72	104
15.2 UK money supply and the equity market, 1927–72	104
16 The US Equity Market 1960–2002	109
17 Two Forecasts	113
17.1 Health warning	113
17.2 Prediction of the October 1987 crash	113
17.3 Prediction of the top of the US equity market in April/May 2000	114
17.4 Postscript	116
18 Debt Deflation, Practical Experience	119
18.1 The US in the 1930s	119
18.2 Japan in the 1990s and early 2000s	119
PART V MONITORING DATA	121
19 Monitoring Current Data for the Monetary Aggregates	123
19.1 Erratic data	123
19.2 Which aggregate?	123
19.3 A target aggregate	125
19.4 An expert approach	125
19.5 Timing of the availability of data	127
19.5.1 Timing of publication	128
19.5.2 Whiplashes	128
19.6 Understanding the current behaviour of the market	128
Appendix 19A: Monetary targets in the UK	129
Appendix 19B: Distortions to monetary data in the UK	130
Appendix 19C: Velocity of circulation	131
20 Monitoring Data for the Supply of Money	139
20.1 Printing-press money	139
20.2 Fountain-pen money	140

20.3 The counterparts of broad money	140
20.4 Forecasts	141
20.5 Management information	141
20.6 Discernible trends	142
20.7 The public sector's borrowing in foreign currency and from abroad	142
21 The Different Sectors of the Economy	145
Conclusions	147
Conclusion for industrialists	147
Conclusion for policymakers	147
Conclusions for investors	147
Glossary	149
References	157
Index	159

Foreword

For at least the last decade, there has been a growing sense of frustration among market professionals with the attempts by academics to account for the behaviour of financial markets. Practitioners do not dispute the value of academic analysis, but assert that academic theories do not adequately explain the behaviour of financial markets. The result is that many very experienced practical people have become highly critical of traditional teaching in universities. This book, which represents the culmination of a lifetime's experience, is written by a practitioner who, over his long and distinguished career, has often worked with academics. This is no indigestible academic tome, however, it has been written for practical men and women; indeed it is a cornerstone of a new course in financial education established by The Stewart Ivory Foundation.

The Stewart Ivory Foundation is a charity founded in 2001 to further the development of financial education in Scotland. To cover omissions from conventional teaching, the Trustees, who represent the major investment management companies in Edinburgh, decided to sponsor the new course, which is entitled, 'A Practical History of Financial Markets', as one of the elective units within the Edinburgh Business School's (EBS) MBA programme. EBS currently operates the second largest distance learning MBA programme in the world, and in 1994 and 1999 was awarded a Queen's Award for Export for its MBA product. As well as the endorsement of a UK chartered university, the course is also offered as part of the 'Approved Provider Program' of the CFA Institute.

What is missing from the traditional approach to financial education? When asked about key omissions, investment managers normally reply: 'psychology and liquidity'. In recent years, the former has been partially codified in the field of Behavioural Finance and has been endorsed by

the granting of the Nobel Prize for Economics to Daniel Kahneman in 2002. As this field of study is now well developed, it is not too difficult to find authors and teachers for a new course. However, finding authors and teachers with experience of the world of practical investment, rather than the halls of academe, proved a more difficult hurdle. Fortunately though, the problem was not insurmountable, and Behavioural Finance now forms a core unit of the course.

Matters were significantly more complicated in developing a unit of the course that deals with the issue of 'liquidity'. Liquidity can mean all things to all men. At its core is a belief that sometimes there is a force which exerts individuals to effect a financial transaction when they would not otherwise do so. Such a compelled action can be at odds with the voluntary actions taken by the rational man and normally assumed to result in efficiency. Most investment managers believe that understanding this force of compulsion is a key to understanding a financial market when it appears to be behaving irrationally. The bad news is that the only way in which fund managers have, in the past, come to understand the Liquidity Theory of Asset Prices is through experience. While experience may be the best teacher, the lessons, especially for an investment practitioner, can prove to be very costly. It seems truly remarkable that, despite investment managers proclaiming that liquidity has a crucial role in financial markets, no formal educational course on the Liquidity Theory of Asset Prices exists. It is difficult to explain this lacuna in investor education. One excuse often given is that the subject is so complex that it has proven too difficult to be explained and taught in an understandable format to practical men of finance. There might well be some truth in this, and thus, finding an author and teacher who not only was a master of the brief, but could also make his subject understandable to practitioners, could not be guaranteed. From the outset, the trustees of the Foundation considered that Gordon Pepper was the individual most likely to be able to provide this breakthrough.

Gordon's mastery of the 'liquidity' brief has been recognised for decades, not only by his peers in the industry, but in academia and by politicians in search of policy advice. Crucially, Gordon's understanding of this subject owes everything to his practical experience in the financial markets, rather than to any textbook or university lecturer. In Gordon's 1994 publication, *Money, Credit and Asset Prices*, there was clear evidence that, almost for the first time, here was an author who could make the subject largely understandable to all (that of course

is not the same as saying that it made the subject easy to understand). *The Liquidity Theory of Asset Prices* is a significant advance on *Money, Credit and Asset Prices*. First, the analysis has become tighter since the earlier work was published. Second, it has gone through a series of filters to enhance further the intelligibility of the subject matter.

A major refinement to Gordon's approach came when he was faced with the difficult task of updating and turning his 1994 publication into distance learning materials for students of the 'Practical History of Financial Markets' course. Creating materials which can form the basis of a distance learning course is difficult enough in even the simplest of disciplines. Significant modifications for this particularly difficult subject were required. Even more distillation of the materials was needed to convert these distance learning materials into a series of lectures lasting not more than ten hours. It was at this stage that Gordon sought the assistance of Michael Oliver. Not only is Michael a professional lecturer, but he is also a leading economic historian, whose expertise on monetary policy is well recognised. Michael's input thus further increased the intelligibility of the subject matter, adding the voice of a professional economic historian in those sections of the book which seek to show liquidity in action by examining historical precedent. This was not the end of the distillation process, however. It is a military truism that 'no plan survives contact with the enemy', and a similar comment can be made with regard to educational courses and students. Thus, the final improvement in the materials has been made following the feedback from the students, primarily professional investors, who have taken the course. Student feedback, which has been very favourable – 'inspirational', 'cutting edge work', 'excellent', 'stimulating', 'steeped in the real world', 'insightful' – has also led to further fine-tuning.

The combined impact of these numerous processes has been to produce a book which is the best practical explanation of the Liquidity Theory of Asset Prices currently available for investment managers. For those more interested in theoretical issues, it also explains how the Liquidity Theory of Asset Prices interacts with, and complements, the Efficient Markets Hypothesis. Professional investors are bombarded on a day-to-day basis with assertions about the role liquidity is playing, and will play, in determining prices in the financial markets. Few, if any, of the providers or recipients of such advice can truly claim to understand the well-springs of such liquidity and the transmission mechanisms through which it impacts asset prices. This is a book guaranteed to go

a long way to remedying that embarrassing lack of understanding of an economic force which will increasingly move to the centre stage of financial market understanding.

Russell Napier
Course Director
A Practical History of Financial Markets

**FOR MORE INFORMATION VISIT THE
FOLLOWING WEBSITES**

for the Stewart Ivory Foundation: www.sifeco.org

or

www.thestewartivoryfoundation.com

for Edinburgh Business School:

<http://www.ebsglobal.net/information/pages/prospectivestudents/coursesitz/practicalhistoryoffinancialmarkets.html>

or

www.ebsmba.com

click on 'Courses I to Z'

scroll down and click on 'Practical History of Financial Markets'

for the CFA Institute (Chartered Financial Analysts):

<http://www.cfainstitute.org/pdprogram/providershowcase.html>

or

www.cfainstitute.org

click on 'Professional Development'

click on 'Approved-provider Directory'

click on 'The Practical History of Financial Markets'

Acknowledgements

The authors would like to thank The Stewart Ivory Foundation for financial support and Mr Russell Napier, Managing Director, The Stewart Ivory Foundation Education Company. Our thanks also go to Professor Geoffrey Wood, for reading drafts and for many helpful comments; Mr Tony Plummer, for help with Chapter 12; Mr Paul Smallwood, for help with Chapter 13; Mr Martin Gibson, for help with cash-flow accounting; and Lombard Street Research, for graphs and statistics. Any errors are, of course, the responsibility of the authors.

The following must also be thanked for permission to reproduce extracts from one paper and two books, of which the authors were either the author(s) or joint author(s): The Institute of Actuaries for 'Cyclical Changes in the Level of the Equity and Gilt-edged Markets' (Pepper and Thomas, 1973); Palgrave Macmillan for *Money, Credit and Asset Prices* (Pepper, 1994); Edward Elgar Publishing Ltd. and the Institute of Economic Affairs for *Monetarism under Thatcher: Lessons for the Future* (Pepper and Oliver, 2001). Finally, Gordon Pepper would like to thank Robert Thomas for not only being the joint author of the actuarial paper, but also for his immense contributions to the *Monetary Bulletins* whilst they were partners of W. Greenwell & Co.