

AN INTRODUCTION TO REPO MARKETS

Third Edition

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Moorad Choudhry

with a contribution from Daniel Franks



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AN INTRODUCTION TO REPO MARKETS

Third Edition

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*To Nick Procter
I think we all want to be you ...*

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FOREWORD

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Repo has the widest application of almost any instrument within the financial markets. The market provides financing efficiencies, yield enhancement, liquidity, price discovery and transparency to a broad array of asset classes, from the highly commoditised to the esoteric. The liquidity and flexibility of repo attracts a wide cross section of participants, including commercial and investment banks, asset managers and corporate treasurers.

Financial institutions lending their assets via repo achieve enhanced portfolio returns through lower financing rates and volatility than the unsecured cash market. Investors needing to place cash holdings can precisely tailor their requirements through repo, taking advantage of its security, flexibility and most importantly its simplicity. As a money market instrument, repo enables market participants to express views on short-term interest rates, collateral types, specific issuers and bond issues. Repo is a major component in the Fixed Income market, as the key determinant in pricing underlying assets, particularly in hedging and in correctly trading the basis between on- and off-balance sheet instruments in the government, corporate and asset-backed bond and derivatives markets.

Exponential growth in volumes, evolving scope and its huge importance in the efficient functioning of debt capital markets necessitate a wider understanding of the product. Repo differentiates itself from other financial products in that practitioners need to have a robust understanding of the linkages between the underlying asset and the corresponding credit, regulatory, accounting, and legal and settlement risks.

In this highly readable text Moorad Choudhry provides the essential account of the repo market that will appeal to student, academic and market practitioner alike. The book assumes no prior knowledge;

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with the early stages providing a comprehensive primer, using practical examples drawn from his extensive trading experience across repo, bond and structured products. The book considers further applications of repo, underlining its importance across the dealing room of financial institutions.

The reader's attention is focused on the benefits of repo throughout, combining annotated technical analysis with real world application. The accessible style provides an indispensable guide for anyone with an interest in repo and the money markets. The book is set apart by giving the reader a broad awareness of the connectivity between repo and the wider range of capital markets businesses.

Adam Sutton

Head of European Repo
Global Funding Desk (Europe)
Bank of America

PREFACE

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The world of fixed income is dynamic and ever-changing, with new instruments, applications and processes being developed all the time. Although it is a commoditised and standardised product of long standing, repo, short for 'sale and *repurchase* agreement', is no different and we have new variations on a theme to talk about in this updated third edition. The devil is in the detail, as countless unimaginative journalists like to say, and the new developments in repo since the first edition of this book was published in 1999 are mainly of a detailed nature. As we said, repo is in essence a standardised product, as well as a very simple and basic one; this means it is easily adapted to new applications in new markets.

Another thing one would hope has been adapted and improved is my writing. It would be a poor author, in any field, whose quality of writing style and delivery had not improved over a period of seven years, so this third edition incorporates some additional bells and whistles to convince you that its purchase was worthwhile! What do we have that is new? Worked examples are now illustrated with Bloomberg screens, which most readers can expect to come across whether they are at a bank or indeed in the finance or economics department of their university. Other new content for this third edition includes:

- basket repo funding of portfolios of assets;
- illustrations of repo for structured finance securities such as asset-backed securities;
- synthetic repo or total return swaps, both single-name and basket deals;
- use of repo in commercial paper conduit structures;
- an updated look at the standard repo agreement, the GMRA, written by Daniel Franks;
- new illustrations from different markets.

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For students and those taking training courses we also have some introductory-level exercises and a case study that illustrates the basic concepts.

We have removed the separate chapter on emerging market repo; the instrument itself is not a different one simply because one is dealing in an emerging market, even though local customs and practices may differ. Higher risk associated with emerging market collateral is also managed using the same practices adopted in developed markets. Hence, we don't feel the need to address these markets separately. Practitioners who need to get to grips with a specific country market will need to research this themselves! Also, we don't pretend to be able to cover the nuances of legal and accounting issues associated with repo so this is introduced in overview manner only.

As before, this book is intended for beginners or newcomers to the subject so we keep the level accessible at all times.

Enjoy!



Moorad Choudhry
Surrey, England
March 2006

PREFACE TO THE FIRST EDITION

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The repo market is an important component of the global capital and money markets. The first repo transactions were initiated by the US Federal Reserve over eighty years ago, since which time repo has become the main instrument of open market operations for many major central banks around the world. The market has grown substantially in the last ten years and is now estimated to account for up to 50% of daily settlement activity in non-US government bonds world-wide; this is a phenomenal figure. Daily outstanding volume in international repo transactions is approximately £420 billion.

The rapid growth in the use of repo world-wide has been attributed to several factors including the rise in non-bank funding and disintermediation, the expansion of public debt, the liquidity of the instrument itself and the generally high quality of collateral used. Its flexibility has resulted in repo being taken up by a wide variety of market players, from securities houses and investment banks to fund managers, corporate treasurers and local authorities. Virtually all major currency markets in the world now have an established repo market; the facility is also increasingly used in developing currency markets as well. Trading so-called 'emerging markets' repo brings with it specific risks and requirements and these are examined in a separate section.

This book is aimed at those with little or no previous understanding of or exposure to the repo markets; however it also investigates the markets to sufficient depth to be of use to a more experienced practitioner. It is primarily aimed at front office, middle office and back office banking and fund management staff who are involved to some extent in the repo markets. Others including corporate and

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local authority treasurers, risk management and legal department
staffs may also find the contents useful. Comments on the text
should be sent to the author care of the Securities and Investment
Institute.

ABOUT THE AUTHOR

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Moorad Choudhry is Head of Treasury at KBC Financial Products in London. He joined there from JPMorgan Chase Bank, where he was a vice-president in Structured Finance Services sales and marketing. Prior to that he was a sterling proprietary trader in the Treasury division at Hambros Bank Limited, and at ABN Amro Hoare Govett Sterling Bonds Limited where he ran the short-dated gilts and money markets desk. He began his City career at the London Stock Exchange in 1989.

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