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# The Trade Lifecycle

*Behind the Scenes of  
the Trading Process*

Second Edition

ROBERT BAKER



WILEY



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the Trading Process*

**Second Edition**

**ROBERT P. BAKER**

**WILEY**

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*To the memory of my dear mother*





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# Foreword from the First Edition

**T**rading has evolved from a humble apple grower wanting a stable price for his produce come harvest time, to a complex and exciting industry comprising a significant share of the global economy.

Trading is the fundamental activity of investment banks, hedge funds, pension funds and many other financial companies. There is no better way to understand the workings of a financial entity than to follow the progress of a trade through its lifecycle and all the activities performed upon it.

This book will dissect a trade into its components, track it from conception to maturity and describe the *raison d'être* of the business functions of a financial entity all arising from the processing of a trade. Having seen the full path of a trade, the reader will gain a more complete view of the world of finance which will answer some fundamental questions such as why, what and how people trade.

Derivatives are complex variations of standard trades. By contrast and comparison with the lifecycle of standard trades the reader will glean a better understanding of these often misunderstood financial instruments.

Together with the trade itself, the book will explore essential activities such as booking, confirmation, settlement, risk management, legal obligations, finance and control functions such as credit, market risk and auditing. Almost every person working in an investment bank or hedge fund has a large part of their work connected to the lifecycle of a trade. It is the glue by which all the departments are bound and the aggregated success or failure of each trade determines the survival and growth of the entire organisation.

The book also draws on real life experience of the trading floor. The sights and sounds of the action are brought to life to allow the reader to see how abstract concepts are actually practised. Detailed case studies illustrate how financial business problems were solved with varying degrees of success. There is also a unique description of the world of the quantitative analyst – a function that few people understand.

## **WHY THIS BOOK?**

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Many volumes have been written on the business side of trading and related activities such as market risk management. Although particular areas of the processes behind

trading have been explained, I have not found the complete lifecycle of a trade fully described in one book. I feel a thorough end-to-end guide would be of interest to:

- anyone seeking work in the financial services industry
- people already in the industry who want to see how their work fits into the organisation as a whole
- those with an interest in the activities of a financial entity. They could include clients, academics, pension holders and people making investments of all sizes
- people selling products and services to the financial sector such as software vendors.

The importance of the financial sector to the world economy has been brought into focus by many recent events: the credit crunch, the collapse of companies such as Lehman Brothers and a recession affecting most countries across the world. The result has been a demand for better inspection and regulation of trading activities. No longer is it sufficient for firms to return profits, they have to convince investors, shareholders and regulators that they are employing due diligence and managing risks.

In writing about the trading process, my aim is to reveal all areas subject to potential risk. Once a risk is known, it can be monitored and managed even if the eventual decision is not to take action – forewarned is forearmed.

Although any financial entity engaged in trading activities will have already arrived at a set of processes spanning the trade lifecycle, these are not always performed in an optimal fashion; they may have evolved more by historical accident than by design. A careful reappraisal of the *entire* trading processes can lead to:

- a reduction in risks
- exposure of weaknesses
- lower operating costs
- elimination of wastage
- better overall awareness leading to more confidence in the trading process.

I hope that this book might encourage all participants in the trade lifecycle to look again at their activities and those of their colleagues and see where improvements can be made to reduce risk and enhance the reputation of a battered industry.

Gaining employment in the financial sector is becoming increasingly competitive. It is no longer sufficient to have the skills and experience in one business function. Applicants must demonstrate an understanding of where they fit into the organisation and have the ability to communicate with other business functions – every activity in the trade lifecycle being connected to others. This book is written with a view to helping this understanding.

I have tried to make the book a readable progression through all the important activities and components of the trade lifecycle. Detailed explanations are given where necessary, but the book is intended as a comprehensive overview and therefore I have avoided too much detail where it might hinder the reader's ability to see the full picture.

Any mistakes are mine. All views expressed are entirely my own.

## Foreword to the Second Edition

**S**ince the book was first published in 2010, many changes have been occurring to trading. The most significant is in the field of regulation. Investment banks and other financial institutions are now subject to more regulations which cut deep into the way they are allowed to operate. This is both on a macro level affecting the way they are structured and on a micro level in how individual trades are executed and processed. Thus a section of the second edition is devoted to regulation.

Feedback from the first edition included a desire of the readership to know more about asset classes – this chapter has been expanded.

A common confusion is the difference between asset classes and financial products. A chapter of the book seeks to remove this confusion and further the understanding of how products behave by ‘following the money’, that is examining the cashflows of several commonly traded products.

Quantitative analysts play a vital role in finance but are little known and understood. A chapter is therefore devoted to shedding some light on this business function.

In training courses based on the book, I have frequently been asked what working in capital markets and on trading floors is really like. This edition tries to give the reader a flavour of these experiences including real life case studies.

Finally, I have in the course of my career come to the realisation that one of the greatest impediments to delivering successful IT projects is a phenomenon I refer to as ‘The IT divide’. This second edition describes the problem and some possible solutions.



# Preface

This book is divided into five parts.

Part I is entitled '**Products and the background to trading**'. It starts with a chapter on trading giving an overview of trading in general as well as that related to the financial services industry. The next chapter is a background to risk which is another important theme of the book. We then look into specific trades by examining the cashflows associated with each. Chapters follow on asset classes and derivative products. Part I concludes with a look at three important aspects of trading – liquidity, price and leverage.

Part II is '**The trade lifecycle**'. It starts with an anatomy of the trade which is the core element of the lifecycle. Then the lifecycle is analysed in detail followed by a chapter on cashflows and asset holdings which are directly influenced by the lifecycle. We then move on to four methods of direct monitoring of trades throughout their lifetime: risk management, market risk control, counterparty risk control and accounting. There is a discussion of P&L attribution followed by a full description of the business functions in the lifecycle (i.e. the people). Then there is a chapter on regulation including Credit Value Adjustment (CVA) – a subject growing in importance.

Part III '**What really happens**' lifts the lid on the trading floor with chapters on insights into the real world of capital markets – here be dragons, case studies of real projects, the 'IT divide' and quants in capital markets.

Part IV '**Behind the scenes**' looks into processes, new products, testing, data, reports and calculations.

Finally, in Part V, the **Appendix** summarises the risks arising from the trade lifecycle.





# Acknowledgements

I would like to thank my colleague Geoff Chaplin (of Reoch Credit Partners LLP) for his inspiration and guidance that allowed this book to come into existence.

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This book would not have been possible without the help of Thomas Hyrkiel, Jenny Kitchin and many more at the publishers John Wiley & Sons.

Finally I thank my wife Nechama for her constant love and support, my children and grandchildren for reminding me what is important in life and my father for all his advice and guidance.



## About the Author

**R**obert Baker (London, UK) works as a consultant in the development of financial software and in training. Robert has over 20 years of commercial programming experience of which the last 13 have been in the financial sector, primarily as a quantitative developer sitting between traders, quants and programmers. He has been involved in credit derivatives for 10 years, and has held positions at ABN Amro, Barclays Capital, UBS Warburg, Rabobank, Royal Bank of Scotland and at the hedge fund Solent Capital. Robert also has experience of project management across a wide range of asset classes and financial instruments from plain vanilla to complex exotics. He holds a degree in mathematics from the University of Oxford.

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PART

# One

## Products and the Background to Trading

