

Recent Research and Quantitative Analysis

Edited by

Greg N. Gregoriou & Luc Renneboog



# International Mergers and Acquisitions Activity Since 1990

Recent Research and Quantitative Analysis

Edited by

Greg N. Gregoriou and Luc Renneboog





Academic Press is an imprint of Elsevier 30 Corporate Drive, Suite 400, Burlington, MA 01803, USA 525 B Street, Suite 1900, San Diego, California 92101-4495, USA 84 Theobald's Road, London WC1X 8RR, UK

This book is printed on acid-free paper. ⊚

Copyright © 2007, Elsevier Inc. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

Permissions may be sought directly from Elsevier's Science & Technology Rights Department in Oxford, UK: phone: (+44) 1865 843830, fax: (+44) 1865 853333, E-mail: permissions@elsevier.com. You may also complete your request on-line via the Elsevier homepage (http://elsevier.com), by selecting "Support & Contact" then "Copyright and Permission" and then "Obtaining Permissions."

#### Library of Congress Cataloging-in-Publication Data Application submitted

British Library Cataloguing-in-Publication Data A catalogue record for this book is available from the British Library.

ISBN 978-0-7506-8289-3

For information on all Academic Press publications visit our Web site at www.books.elsevier.com

Typeset by Charon Tec Ltd (A Macmillan Company), Chennai, India www.charontec.com Printed in the United States of America

07 08 09 10 11 9 8 7 6 5 4 3 2 1



Sabre Foundation

# Acknowledgments

We thank Karen Maloney, Dennis McGonagle, and Anne McGee at Elsevier for guidance throughout the publishing process, as well as Emily Thompson, copyeditor, and Charon Tec (A Macmillan Company) and its team. We are also grateful to all the anonymous referees for carefully reviewing and selecting the final papers during this process.

#### About the editors

Greg N. Gregoriou is Professor of Finance in the School of Business and Economics at State University of New York at Plattsburgh. He obtained his Ph.D. (finance) from the University of Quebec at Montreal and is hedge-fund editor for the peer-reviewed scientific journal Derivatives Use, Trading and Regulation and editorial board member for the Journal of Wealth Management, and the Journal of Risk and Financial Institutions. He has written more than 50 articles on hedge funds and managed futures in various U.S. and U.K. peer-reviewed publications, including (among others) the Journal of Portfolio Management, Journal of Derivatives Accounting, Journal of Futures Markets, European Journal of Operational Research, Annals of Operations Research, European Journal of Finance, and Journal of Asset Management. He has edited 18 books for Elsevier, Wiley, Palgrave-MacMillan, and Risk and has co-authored one book for Wiley.

Luc Renneboog is Professor of Corporate Finance at Tilburg University and a research fellow at the CentER for Economic Research and the European Corporate Governance Institute (ECGI, Brussels). He graduated from the Catholic University of Leuven with degrees in management engineering (MSc) and in philosophy (BA), from the University of Chicago with an MBA, and from the London Business School with a Ph.D. in financial economics. He held appointments at the University of Leuven and Oxford University and visiting appointments at London Business School, European University Institute (Florence), HEC (Paris), Venice University, and CUNEF (Madrid). He has published in the Journal of Finance, Journal of Financial Intermediation, Journal of Law and Economics, Journal of Corporate Finance, Journal of Banking and Finance, Journal of Law, Economics & Organization, Cambridge Journal of Economics, European Financial Management, and others. He has co-authored and edited several books on corporate governance, dividend policy, and venture capital with Oxford University Press. His research interests are corporate finance, corporate governance, dividend policy, insider trading, law and economics, and the economics of art.

#### List of contributors

David B. Audretsch is the Ameritech Chair of Economic Development; Director of the Institute for Development Strategies at Indiana University; Director of the Entrepreneurship, Growth and Public Policy Group at the Max Planck Institute in Jena, Germany; and a Research Fellow of the Centre for Economic Policy Research (London). Audretsch's research has focused on the links between entrepreneurship, government policy, innovation, economic development, and global competitiveness. He has consulted with the World Bank, National Academy of Sciences, U.S. State Department, the United Nations, European Commission, the European Parliament, and the OECD, as well as numerous private corporations and governments. He is a member of the Advisory Board to the Zentrum fuer Europaeisch Wirtschaftsforschung (ZEW) in Mannheim, the Hamburgisches Welt-Wirtschafts-Archiv (HWWA), and the Swedish Foundation for Research on Entrepreneurship and Small Business. His research has been published in more than one hundred scholarly articles in the leading academic journals. He has published thirty books, including, Innovation and Industry Evolution, with MIT Press. He is co-founder of Small Business Economics: An International Journal. He was awarded the 2001 International Award for Entrepreneurship and Small Business Research by the Swedish Foundation for Small Business Research.

Steven Brakman is Professor of International Economics at the University of Groningen, The Netherlands, and also holds an appointment at the Radboud University of Nijmegen, The Netherlands. He studied economics at the University of Groningen where he graduated with an MA in 1981. He subsequently worked for the Research Department of the Central Bank of The Netherlands, focusing mainly on monetary issues. He returned to the University of Groningen in 1984 to work on his Ph.D., which was completed in 1991. He has a wide range of research interests, encompassing international economics, economic growth, geographic economics, development economics, and macroeconomics.

Douglas Cumming—B.Com. (Hons.) (McGill), M.A. (Queen's), J.D. (University of Toronto Faculty of Law), Ph.D. (Toronto), CFA, is an Associate Professor of Finance at the Schulich School of Business at York University in Toronto, Canada. He previously taught at the University of Alberta School of Business, the University of New South Wales School of Banking and Finance, and Rensselaer Polytechnic Institute. He has also held the following Visiting Professorships: ABN AMRO Bank Professor of Finance at the University of Amsterdam Graduate School of Business, Center for Financial Studies of the University of Frankfurt Scholar,

xii List of contributors

University of Cambridge ESRC Centre for Business Research Judge Institute of Management Scholar, and Fellow of Clare Hall at Cambridge. His research is interests span areas in law and finance, venture capital, private equity, IPOs, hedge funds, and market surveillance. His recent publications have appeared in the International Review of Law and Economics, Journal of Banking and Finance, Journal of Corporate Finance, Financial Management, Oxford Economic Papers, and Journal of Business and others. He was the recipient of the 2004 Ido Sarnat Award for the best paper published in the Journal of Banking and Finance. He is a research associate and consultant for a variety of governmental and private organizations around the world.

Iane Frecknall-Hughes holds two first degrees in Literae Humaniores and English Language and Literature, respectively from the University of Oxford, and a Ph.D. in revenue law and taxation practice from the University of Leeds. She is a chartered accountant and member of the Institute of Chartered Accountants in England and Wales (ICAEW) and is also a member of the ICAEW's Tax Faculty. She is a chartered tax adviser and member of the Chartered Institute of Taxation (CIOT). Iane moved from professional practice with KPMG to an appointment at the University of Leeds, and from there, in 2005, to her current post as Senior Lecturer in Accounting and Taxation at the University of Sheffield Management School. Her research interests center on taxation, with particular reference to the development of the taxation profession in the United Kingdom the ethics and morality of taxation, tax planning, transfer pricing, taxation and the multinational enterprise, decision-making and taxation, and taxation/financial history. She has published in Applied Economics, Applied Economics Letters, and the European Management Journal, and has contributed chapters to a number of edited books.

Harry Garretsen is Professor of International Economics at Utrecht University in The Netherlands. His primary research area is the new economic geography or geographic economics. Other research areas include monetary issues, macroeconomic theory, and policy making. He is the co-author of a leading textbook on geographic economics (Cambridge UP, 2001) and has published widely in this field in journals such as Regional Studies, Kyklos, Regional Science and Urban Economics, Journal of Economic Geography, Journal of Regional Science, and Journal of Urban Economics. At present, he is co-editor of Spatial Economic Analysis, editorial board member of Papers in Regional Science, and has acted (2006) as guest-editor for Regional Science and Urban Economics. He has edited books as well as contributed to books for Cambridge UP, MIT Press, and Routledge. He is also research fellow of CESifo Munich.

Marc Goergen has a degree in economics from the Free University of Brussels, an MBA from Solvay Business School, and a DPhil from the University of Oxford. He has held appointments at the University of Manchester Institute of Science & Technology (UMIST), Manchester Business School, and the ISMA

Centre (University of Reading). He currently holds a chair in finance at the University of Sheffield Management School. Marc Goergen's research interests are in corporate ownership and control, corporate governance, mergers and acquisitions, dividend policy, corporate investment models, insider trading, and initial public offerings. Marc has widely published in academic journals such as the European Financial Management, the Journal of Business Finance & Accounting, the Journal of Corporate Finance, the Journal of Finance, and the Journal of Law & Economics. He has also contributed chapters to several edited books and written two books on corporate governance (published by Edward Elgar and Oxford University Press). Marc is a Research Associate of the European Corporate Governance Institute and a fellow of the International Institute for Corporate Governance & Accountability.

Jian Huang is a doctoral researcher at Cranfield School of Management, U.K. He has obtained an MSc in Finance with Distinction from Lancaster University Management School, U.K. His research interests are executive compensation, risk taking, and mergers and acquisitions.

Sofia Johan is a Ph.D. candidate within the Center for Business Law and a member of the Tilburg Law and Economics Center at the University of Tilburg, The Netherlands. She has been a visiting fellow at the Judge Institute, University of Cambridge. Sofia has an LLB degree from the University of Liverpool and an LLM in International Economic Law from the University of Warwick. Prior to joining Tilburg University, Sofia was Head Legal Counsel of the Malaysian Venture Capital Management Bhd, the largest government-owned private equity management fund in Malaysia. Sofia was also Legal Counsel for the derivatives clearing house in Malaysia. Sofia Johan has published in *European Financial Management* and is also a research associate with Capital Markets CRC (Sydney).

Roman Kräussl obtained a Masters in Economics with a specialization in Financial Econometrics at the University of Bielefeld, Germany. He completed his Ph.D. in Financial Economics on the Role of Credit Rating Agencies in International Financial Markets at Johann Wolfgang Goethe-University, Frankfurt/Main, Germany, in 2002. As the Head of Quantitative Research at Cognitrend GmbH, he was closely involved with the financial industry. Currently, he is an Assistant Professor of Finance at Free University of Amsterdam and a research fellow with the Centre for Financial Studies, Frankfurt/Main. He specializes in Venture Capital and Private Equity and has written numerous papers on these topics.

Erik E. Lehmann is Professor of Management, Organization, and Business Administration at the University of Augsburg. Previously, he was an assistant professor at the University of Konstanz and at the Max Planck Institute of Economics. His research focuses on corporate governance, small business economics, and technology management. He has published articles in *Research* 

Policy, Small Business Economics, Journal of Economic Behavior and Organization, European Finance Review, Journal of Technology Transfer, and other academic journals. Together with David Audretsch and Max Keilbach, he has recently published the book Entrepreneurship and Economic Growth with Oxford University Press.

Manolis Liodakis is a managing director and head of the European quantitative research group at Citigroup Investment Research. The group is responsible for producing quantitative research and strategy, as well as advising institutional clients on all aspects of the investment process, from stock selection/screening to portfolio construction and risk management. Since 1999, the team has been ranked among the top three in all major external surveys. It was ranked first in the 2005 Institutional Investor survey for quantitative analysis. Manolis joined the firm in 1999 and has also worked as an emerging-markets strategist for Morgan Stanley Dean Witter. He holds an MBA from the University of Birmingham and a Ph.D. in Finance from Cass Business School. His academic research has been published in various academic and professional journals, including the *Journal of Portfolio Management* and the *Financial Analysts Journal*.

Marina Martynova is Assistant Professor of Finance at the University of Sheffield. She graduated with a Ph.D. in Financial Economics from Tilburg University and was a research fellow of the European research program, "New Forms of Governance," coordinated by the European University Institute in Florence. She also graduated from the Center for Economic Research and Graduate Education of Charles University (CERGE-EI) with an MA degree in economics and from St. Petersburg State Engineering-Economic Academy with an MSc in economics and management. Marina is a member of Tilburg Law and Economics Center (TILEC). Her research interests are corporate governance regulation, mergers and acquisitions, corporate finance, dividend policy, and managerial remuneration. Marina's current research is dedicated to the empirical analysis of regulatory environments and other determinants of mergers and acquisitions patterns in Europe.

Sjoerd Oosting graduated with as a Master in Financial Management from Tilburg University and the Helsinki School of Economics. He has worked in the Corporate M&A division of Phillips and is currently employed by a corporate finance consultancy in Amsterdam.

Che Pang is an Equity Portfolio Manager at Barclays Global Investors. Prior to joining BGI in 2006, Che spent two years in Citigroup's European Quantitative Research team as a Quantitative Research Analyst. Che has also spent time as a project manager in the investment strategy group of Ziff Brothers Investments in New York and as a programmer/analyst on the Goldman Sachs Equity Arbitrage desk in London. He holds an MBA from Oxford University and an MEng degree in Computer Science from Imperial College London.

List of contributors xv

María J. Pastor-Llorca is Assistant Professor of Finance in the Financial Economics Department at University of Alicante, Spain. She obtained her Ph.D. from the University of Alicante on the topic long-run performance of equity issues. Her research is on different topics in corporate finance, mainly on equity offerings. Her current research interest is the study of the impact of accounting practices and analysts' behavior on the corporate market value.

Francisco Poveda-Fuente is Assistant Professor of Accounting in the Financial Economics Department at University of Alicante, Spain. He graduated with a Ph.D. from the University of Alicante, and his research is concentrated on accounting information in capital markets. He specializes in earnings-management practices in the Spanish market and estimates the abnormal component of accounting results.

Peter Roosenboom is Associate Professor of Corporate Finance at RSM Erasmus University and a member of ERIM. He holds a Ph.D. in finance from Tilburg University. His research interests include corporate governance, venture capital, and initial public offerings. His work has been published in the Journal of Corporate Finance, European Financial Management Journal, Applied Economics, International Review of Financial Analysis, Pacific-Basin Finance Journal, International Journal of Accounting, and the Journal of Management & Governance. He is the co-editor of the book The Rise and Fall of Europe's New Stock Markets (in the book series Advances in Financial Economics). He has also contributed chapters to books on initial public offerings, mergers and acquisitions, venture capital, and corporate governance. He is one of the members of a team that conducts a quarterly survey of European CFOs. This joint project with Duke University and CFO Europe Magazine has received media attention in the Wall Street Journal Europe and the survey findings have been discussed on CNN and CNBC Europe. The initiative won the ERIM Impact Award in 2005.

Willem Schramade is Assistant Professor of Corporate Finance at the Erasmus School of Economics and advisor in the PriceWatershouseCoopers Valuation & Strategy practice in Amsterdam. He holds a Ph.D. in Finance from RSM Erasmus University and obtained his MSc from Tilburg University. His work is mainly in the area of security issuance and has been published in the Journal of Corporate Finance and the Pacific-Basin Finance Journal.

Sudi Sudarsanam is Professor of Finance and Corporate Control at Cranfield School of Management. Previously, he was Professor of Finance and Accounting at Cass Business School in London. His primary interests are corporate restructuring, mergers and acquisitions, valuation of intellectual assets, and corporate strategy. He is one of the leading authorities on mergers and acquisitions in Europe and author of *The Essence of Mergers and Acquisitions* (Prentice Hall), translated into five European and Asian languages. His recent

book, Creating Value from Mergers and Acquisitions: The Challenges, an International and Integrated Perspective (FT Prentice Hall, 2003), has received both practitioner and academic acclaim. He is a co-author of Mergers, Acquisitions and Divestitures: Control and Audit Best Practices (The Institute of Internal Auditors Research Foundation, Florida, 2002). He has been a visiting professor at U.S. and European business schools. Sudi has published articles in top U.S. and European journals on mergers and acquisitions, corporate turnaround, corporate governance, and valuation of intellectual assets. Sudi Sudarsanam is also a member of the U.K. Competition Commission and of its Expert Committee on cost of capital.

Peter G. Szilagyi joined Tilburg University in The Netherlands in 2003, where he is undertaking doctoral studies in finance. He is a Marie Curie fellow and member of the European Corporate Governance Training Network. Previously, Peter worked as a freelance correspondent with the BBC World Service and as a financial markets consultant for the Asian Development Bank. He has published in the International Journal of the Economics of Business and the Journal of Corporate Citizenship. Peter has also co-authored and edited volumes on European and Japanese fixed-income markets and their derivatives, published by John Wiley & Sons and Elsevier Science, respectively. His current research interests range from shareholder activism, mergers and acquisitions, and payout policy to bond market and financial market development.

Michel Topper studied International Financial Economics and Business Administration at the *Vrije Universiteit* in Amsterdam and the *Wirtschafts Universität* in Vienna. After graduation, he joined a U.S. investment bank in London.

Charles van Marrewijk is Professor of Economics at Erasmus University Rotterdam, The Netherlands, specializing in International Economics and Economic Growth and Agglomeration. He studied horticulture and worked as a grower before studying economics in Holland at Erasmus University Rotterdam (BA and MA) and in the United States at Purdue University (MSc and Ph.D.). He regularly visits foreign universities (Cornell, Yale, Cambridge, Princeton, Adelaide) and has a wide range of research interests, including international economics, economic growth, geographic economics, development economics, multinationals, and macroeconomics. He has published, for example, in the Review of World Economics, Oxford Economic Papers, Journal of Regional Science, International Journal of Industrial Organization, Journal of International Economics, Regional Science and Urban Economics, and the International Economic Review. He has also (co-)authored several books, published by Cambridge University Press and Oxford University Press.

### **Contents**

	nowledgments ut the editors	vi ix
	of contributors	x
1	Understanding mergers and acquisitions: activity since 1990 Greg N. Gregoriou and Luc Renneboog	1
	t One International M&A Activity and Takeover formance	21
2	Cross-border mergers and acquisitions: the facts as a guide for international economics Steven Brakman, Harry Garretsen and Charles van Marrewijk	<b>2</b> 3
3	Searching for value-enhancing acquirers Manolis Liodakis and Che Pang	51
4	The Long-term operating performance in European mergers and acquisitions  Marina Martynova, Sjoerd Oosting and Luc Renneboog	79
5	How do bondholders fare in mergers and acquisitions? Luc Renneboog and Peter G. Szilagyi	117
6	Mix-and-match facilities and loan notes in acquisitions Marc Goergen and Jane Frecknall-Hughes	135
Par	t Two Special Types of Mergers and Acquisitions	167
7	Mergers and acquisitions in IPO markets: evidence from Germany David B. Audretsch and Erik E. Lehmann	169
8	Reverse mergers in the United Kingdom: listed targets and private acquirers  Peter Roosenboom and Willem Schramade	181

Index

/i		Content
)	The profile of venture capital exits in Canada Douglas Cumming and Sofia Johan	195
	rt Three Valuation and Irrationality in Takeover cision Making	221
10	Executive compensation and managerial overconfidence: impact on risk taking and shareholder value in corporate acquisitions Sudi Sudarsanam and Jian Huang	<b>22</b> 3
11	Opportunistic accounting practices around stock-financed mergers in Spain  María J. Pastor-Llorca and Francisco Poveda-Fuente	<b>26</b> 1
12	Size does matter—firm size and the gains from acquisitions on the Dutch market Roman Kräussl and Michel Topper	279

295

# **1** Understanding mergers and acquisitions: activity since 1990

Greg N. Gregoriou and Luc Renneboog

#### Abstract

This chapter discusses the trends in international market for corporate control. Each mergers and acquisitions (M&A) wave has been characterized by a different set of underlying triggers. However, we consistently find that takeovers early in the wave are triggered by industry shocks. Takeovers are more likely to occur during periods of economic recovery, and the takeover market may be driven by regulatory changes as well as by industrial and technological shocks. Managers' personal goals may have further impact on takeover activity: We find that managerial hubris and herding behavior tend to increase during takeover waves, often leading to inefficient acquisitions. Finally, takeover activity usually collapses alongside a market decline and an economic recession. The chapter also positions the papers of this book in the international literature.

#### 1.1 Introduction

Understanding the drivers of mergers and acquisitions means understanding their cyclical nature (see Golbe and White, 1993, for one of the earliest documentations of this phenomenon). It is commonly accepted that there have been five waves of major merger activity: the 1890s, the 1920s, the 1960s, the 1980s, and the 1990s. The scale of the final wave is remarkable for its breadth and geographic distribution. This wave saw tremendous U.S. M&A growth, but it was also witness to soaring levels of European M&A activity, as firms started to partner actively with U.S. and U.K. firms.

M&A activity has been on the rise again since June 2003, perhaps suggesting a new wave. This recent increase in takeover activity could have wide-ranging ramifications and raises many interesting questions. We briefly review the historical and recent literature on M&A activity by wave for the U.S., U.K. and Continental Europe. We find that takeover activity is often triggered by excessive heterogeneity, generally ending with some type of economic shock such as a recession. Economic recovery seems to drive takeover waves, which often coincide with periods of rapid credit expansion. Regulatory changes are also important drivers of takeover waves. The earlier waves of the 1890s and 1920s are believed to have been driven by antitrust legislation, while that of the 1980s appears to have been brought on by widespread market deregulation (Martynova and Renneboog, 2005).

#### 1.2 Historical background

## 1.2.1 The 1890s and the 1910s to the 1920s: the first and second waves

The first wave of mergers in the 1890s was generated by an economic depression, legislation governing incorporation, and the rise of industrial stocks (see, e.g., O'Brien, 1988). The main goal of this first wave was to consolidate industrial production and reduce competition (Lamoreaux, 1985). This wave led to the creation of companies that became virtual monopolies in their respective industries. The equity market crash caused this first wave to come to an end around 1905. M&A activity stayed at moderate levels from then until the late 1910s, largely owing to World War I. Around 1910, antitrust legislation began to take hold both in the U.S. and Europe, probably as a result of the previous monopolization attempts. The only option for firms desiring to expand was vertical expansion; thus this second wave can be seen as creating oligopolistic structures (see Stigler, 1950). The resulting conglomerates of the 1920s focused on economies of scale (for detailed studies of the first and second merger waves, see, e.g., Eis, 1969, Markham, 1955, and Thorp, 1941).

#### 1.2.2 The 1950s to the 1970s: the third wave

Several decades passed before the advent of a new takeover wave, largely owing to the economic depression of the 1930s and World War II. The third M&A wave is widely accepted to have taken off during the 1950s and to have come to an end in 1973 as a result of the oil crisis and subsequent recession. As Sudarsanam (2003) notes, here we see a difference between U.S. and U.K. takeover activity: Whereas U.S. takeovers focused on creating large conglomerates, the hallmark of U.K. takeovers at this time was horizontal integration (see Fairburn, 1989, for a more detailed discussion). It is notable, however, that the beginning of this third M&A wave in the U.S. coincided with tighter antitrust regulations-regulations that not only made horizontal expansion more difficult, but caused more firms to combine with those outside their industries. As Matsusaka (1996) notes, though, some countries that did not have such tough antitrust policies, such as Canada, Germany, and France, also saw a wave of diversification during the 1960s. It is likely that, during this time, companies were beginning to search more actively for opportunities to boost value and reduce earnings volatility.

There is more than one plausible explanation for the rise of the third M&A wave. Diversifications during the 1960s can be attributed to such assorted causes as stricter antitrust regulations, less well developed external capital markets, and labor inefficiencies, as well as a host of economic, social, and technological changes (for additional explanations of the motives behind this third takeover wave, see, e.g., Lintner, 1971, Markham, 1973, and Reid, 1968).

#### 1.2.3 The 1980s: the fourth wave

The fourth takeover wave is widely accepted to have ranged from 1980, at which time the stock market had regained its footing after the economic recession, through 1989. It was a time of antitrust policy changes, financial services deregulation, new financial instruments and markets, and increased technological progress. There were also a record number of divestitures, hostile takeovers, and transactions such as leveraged buyouts (LBOs), suggesting increased investor focus on corporate control (Renneboog and Simons, 2006; Renneboog, Simons and Wright, 2007).

This fourth takeover wave appears to have emerged as a result of the inefficiencies created by the previous wave's diversifications (Bhagat, Shleifer, and Vishny, 1990; and Shleifer and Vishny, 1991). The hallmarks of this wave included loosened antitrust regulations, more competitive capital markets, and improved shareholder control. Companies began to see the benefits of "de-diversifying" and refocusing on core business ideals (Blair, 1993). This decade also saw the rise of hostile raiders, who were always ready to swoop in and pick off slower, less efficient companies.

Some authors believe that the outside capital markets had also become more efficient, owing to the host of economic, technological, and regulatory changes seen during the 1980s (Martynova and Renneboog, 2006a). This may have begun to render internal capital markets less necessary (Bhide, 1990). But the structure of the conglomerate was also starting to be seen as inefficient. Its size meant it was slow to react to shocks caused by deregulation, political events, or economic factors (Mitchell and Mulherin, 1996; see also Jensen, 1986 and 1993; Morck, Shleifer, and Vishny, 1988; and Andrade and Stafford, 2004).

For example, in the medical and pharmaceuticals sectors, the introduction of a new reimbursement policy in 1983 triggered a wave of takeover activity aiming to take advantage of potential cost reductions. In the oil sector, political events such as the 1973 OPEC embargo set off a wave of corporate restructuring. And in food processing, low population growth during the 1980s drove a wave of restructuring.

To conclude, the drivers of the takeover wave of the 1980s include industrial shocks, the reining in of managerial power, and the trend toward smaller, more nimble companies. Activity at this time was driven further by more and stricter disclosure of corporate information and the subsequent focus on maximizing shareholder value.

#### 1.3 Recent M&A activity

#### 1.3.1 The 1990s: the fifth wave

It is commonly accepted that the fifth takeover wave, unprecedented in both deal value and deal volume, began in 1993. It also took off alongside an economic bull

market, then collapsed in 2000, a victim of the equity market downturn that year. The United States had approximately 119,000 M&A deals during this wave, and Europe had 117,000 (these data come from the Thomson Financial Securities Database). In comparison, the fourth wave had only 34,000 and 13,000, respectively, in the United States and Europe. But the fifth wave dwarfs the fourth wave in other ways: Total (global) value reached USD 20 trillion, more than five times the total of the fourth wave (Martynova and Renneboog, 2006 a,b).

The fifth takeover wave saw dramatically more activity abroad as well. In fact, during this period, the European wave was almost as large as the U.S. wave, and a substantial takeover market emerged in Asia. Many M&As conducted during this fifth wave were cross-border transactions, reflecting the increase in capital market globalization. Stronger competition from abroad meant that U.S. companies needed to consider takeovers in other countries just to survive.

The increase in deregulation and privatization during this period tended to trigger cross-border acquisitions in sectors such as finance and telecoms. According to the Thomson Database, M&A activity during the fifth wave, whether cross-border or domestic, occurred primarily intra-industry. The proportion of M&A divestitures, although still relatively high, was decreasing. This indicates that the main takeover motive during the 1990s wave was growth, which was necessary to participate in global markets.

But to expand, companies need financing, and they may choose to issue equity or debt to get it. Thus we see a relationship between the bull market of the 1990s and the widespread use of equity in M&A deals (see Shleifer and Vishny, 2003). Bidders used equity to buy assets of undervalued companies. We suggest that the mispricing premium was an important source of M&A value during this period. The corporate bond market also grew tremendously during this period. The higher amount of activity during this wave may also have been driven by lower interest rates and easier credit terms (Renneboog and Szilagyi, 2007).

Note that the number of hostile bids in the United Kingdom and the United States fell dramatically during the 1990s compared to the 1980s, according to the Thomson Database. This decline may be attributable to the bull market: Target shareholders have been shown to be more receptive to takeover bids when their shares are overvalued (Martynova and Renneboog, 2006b).

Regulatory changes during the 1980s are also responsible for the decrease in hostile takeovers. Strict anti-takeover laws were enacted at this time in some states. And Holmström and Kaplan (2001) put forth another reason: the rise of alternative governance mechanisms, such as stock options and shareholder activism, which may mean that hostile takeovers are no longer the preferred means of policing management behavior. Note that, interestingly, hostile takeover activity in continental Europe increased during the 1990s. In fact, it began to be seen even in countries with no history of hostile takeovers.

In sum, the fifth wave of M&A activity was driven by a wide range of factors, with globalization playing perhaps the largest part, followed by technological innovation, the financial bull market, deregulation, and privatization. Many articles posit that takeovers at that time were mainly concerned with