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Book 'Clearing Services for Global Markets' – the first comprehensive study of derivatives clearing market structure and costs – published today

Clearing links best suited to enhance the efficiency of the European clearing industry / Clearing links could reduce total costs of European derivatives clearing by ~31% / Findings support European Commission's decision to call upon industry to establish a Code of Conduct / Book delivers first detailed framework for structuring future development of the clearing industry

Cambridge University Press has today launched the book 'Clearing Services for Global Markets' authored by Tina Hasenpusch. The publication is sponsored by the International Capital Market Association. Along with clear-cut definitions and a concise characterisation and descriptive analysis of the clearing industry, the book determines the efficiency impact of various cross-border integration and harmonisation initiatives between central counterparties (CCPs). This serves to identify the most preferable future structure for the clearing industry.

Integration and harmonisation initiatives analysed in the book include cross-margining agreements, clearing links, mergers and acquisitions, and the creation of a single CCP. This book represents the first comprehensive study of the efficiency of clearing and industry structures. Whilst the focus is on analysing the European exchange-traded derivatives clearing industry, research results are applied to European cash equities clearing and to the European clearing landscape in its global context.

Main findings:

- Total costs of European exchange-traded derivatives clearing borne by clearing members amounted to a minimum of ~€2.2bn in 2005. This includes direct and indirect costs, such as cost of capital, risk management, IT and back-office costs.
- A benchmarking of the European costs of derivatives clearing to other market infrastructure costs (i.e. derivatives trading costs and cash equities trading, clearing and settlement costs) suggests that European derivatives clearing constitutes the most efficient part of the European financial market infrastructure. Any integration and harmonisation initiative designed to further increase the efficiency of European derivatives clearing must therefore be carefully tailored to not disrupt current efficiency levels.
- Clearing links are best suited to further enhance the efficiency of the European clearing industry; they are the sole model that enables all market participants to benefit from efficiency gains. Clearing links could reduce the total costs of European derivatives clearing by ~31%
- Implementation of a single European CCP would also reduce total costs; but only by ~10% and it would at the same time lead to an unequal distribution of costs and benefits amongst market participants.
- The conclusion that the industry-wide cost reduction potential of a clearing link initiative is approximately three times greater than that of a single CCP is rooted in findings of an analysis that differentiates between low, medium and high volume clearing members.
- Low volume clearing members suffer from efficiency decreases when a single CCP is implemented but can benefit from efficiency gains through clearing links. Medium and high volume clearing members, on the other hand, benefit from a single CCP, but efficiency gains are not as great as those produced by a European clearing link set-up.
- Clearing links are found to potentially reduce the unit costs of clearing a derivatives contract for high, medium and low volume clearers by roughly 20%, 46% and 24%, respectively.

- A single CCP, on the other hand, is found to reduce the unit costs of clearing for high and medium volume clearing members by about 12% and 35%, respectively, but can be expected to actually increase the unit costs for low volume clearing members by roughly 25%.
- Nonetheless, the mere implementation of 'random' links between virtually all European CCPs would not automatically increase the efficiency of the clearing industry. The book identifies a number of pre-requisites that the partnering clearing houses must fulfil to ensure that a link initiative is designed to have a noteworthy positive impact on the efficiency of the clearing industry.

The findings of the book are in line with the industry's self-commitment (Code of Conduct) to the European Commission in 2006. The Code was explicitly designed to increase the efficiency of cash equities clearing arrangements in Europe. It should be noted, however, that there were no studies on the industry structure and efficiency of European CCP arrangements to consult for the Code's establishment. The European Commission acknowledged the research gap: "In fact, we are not aware of any empirical studies of European CCP activities." The Code does not codify a particular industry structure and European clearing houses must still find a way to implement the Code. This book provides the missing analysis in the form of comprehensive empirical studies of European CCP activities as well as a detailed framework for structuring the future development of the clearing industry.

The basis for the analysis is constituted by a comprehensive original empirical study, which was conducted by the author. An original study was necessary because relevant cost data is not publicly available and published evidence scarce at best. The book's original empirical component provides the basis for analysing the costs of derivatives clearing in general and the efficiency impact of integration and harmonisation initiatives between CCPs in particular.

The empirical study consists of more than 80 interviews conducted with stakeholders in clearing, including representatives of most major buy-side and sell-side firms, all major clearing houses and exchanges, regulators, central bankers, as well as other individual industry experts. The combined European cleared market share in exchange-traded derivatives of the interviewed banks/broker-dealers equals roughly 60%. Interviews were conducted throughout Continental Europe (Belgium, France, Germany and Switzerland), London and the US (Chicago, New York and Washington).

Three case studies are included in the book to challenge the findings of the empirical study: The clearing link study analyses the link established in 2003 between Eurex Clearing and The Clearing Corporation. The mergers and acquisitions study examines the merger between the London Clearing House and Clearnet in 2003. The single CCP study deals with a hypothetical scenario: the creation of a single clearing house for Europe.

¹ European Commission (Ed.) (2006): Competition in EU Securities Trading and Post-Trading: Issues Paper, Working Document, Brussels 2006, pp. 8-9. Page | 2

Reviews

"The book features three real-world case studies bringing clearing to life. It is a thorough and insightful exposition of clearing and a must-read for anyone interested in the subject matter." - Paul J. Brody, Chief Financial Officer of Interactive Brokers Group and Timber Hill LLC, and Board Member of the Options Clearing Corporation

"This book's unique character and contribution result from an unprecedented number of interviews and feedback sessions with academics and industry experts. The list of these people truly reads like the 'Who's Who' of the derivatives world. This book is essential for anyone with an interest in clearing issues." - Dennis Dutterer, interim Chief Executive Officer of New York Portfolio Clearing (NYPC), former President and Chief Executive Officer of the Clearing Corporation

"I don't know of anyone who has thought as deeply and written as thoroughly about the key issues related to clearing as Tina Hasenpusch. Anyone interested in the mysterious, but critically important process of clearing, especially in the issues that arise as markets and clearing become more global, should read this book." - Michael Gorham, Industry Professor and Director of the IIT Stuart Center for Financial Markets and co-author of Electronic Exchanges: The Global Transformation form Pits to Bits

"This is a great piece of work! It becomes the textbook for anybody interested in the process of clearing trades. It is extremely well researched and written." - Christopher K. Hehmeyer, President and Chief Executive Officer of PensonGHCO, founding partner of Goldenberg, Hehmeyer & Co., former Chairman of the Board of Trade Clearing Corporation and Director of the Chicago Board of Trade

"If anyone ever had doubts about how exciting clearing could be - this book will change your thinking. You will find that it turns out to be a surprisingly fun read." - David Krell, Co-founder of the International Securities Exchange

"Tina Hasenpusch has taken a view of the complex world of securities and derivatives clearing and provided her readers with an analysis of uncommon transparency. The analysis is based on diligent fact gathering structured with a logical vision of the broadly defined market. Her message is delivered with both clarity and grace." - James J. McNulty, Director of NYSE Euronext, Director of ICAP plc and former President and Chief Executive Officer of the Chicago Mercantile Exchange

"Ms. Hasenpusch's book dares to go where others have not and provides an innovative insight into the economics of clearing, using real world examples. Executives of exchanges, clearing organizations and banks should be interested in this scholarly work, as should relevant national authorities and central banks." - John McPartland, Financial Markets Advisor to the Federal Reserve Bank (FED) of Chicago, and International Clearing and Settlement Consultant

"This book is a joy to read. Ms. Hasenpusch has a gift for explaining difficult concepts. She makes it remarkably easy to deep dive into the world of clearing." - Otto E. Nageli, Managing Partner of OEN Consulting, former Deputy Chief Executive Officer of Eurex and Member of the Executive Board of SWX Swiss Exchange

"This book is very timely and well worth reading, given the many changes afoot in the areas of exchange regulation and clearing." - Harvey L. Pitt, Chief Executive Officer of Kalorama Partners and former Chairman of the Securities and Exchange Commission (SEC)

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Notes for editors

About the Author

Tina Hasenpusch has recently joined Chicago Mercantile Exchange (CME) Group, where she is responsible for business development at CME Clearing Europe, which is, subject to approval of CME Group's application to the Financial Services Authority, to become a UK Recognised Clearing House. CME Clearing Europe will be based in London and is designed to serve as a central counterparty clearer for over-the-counter derivatives.

Before joining CME, Dr Hasenpusch was part of Barclays Capital's Strategy & Planning team in London. She also worked in New York as part of the COO's team during the integration of Lehman Brothers Inc. business.

Prior to her career at Barcap, Dr Hasenpusch worked in the Trading and Clearing Market Development department of Eurex and completed her PhD in Banking and Finance at the European Business School in Germany with a *summa cum laude*. Her research focus and expertise are in the fields of securities and derivatives trading, clearing and settlement systems.

Dr Hasenpusch has published articles on network economics with application to clearing services and M&A between exchanges in publications of the Centre for European Policy Studies and Euromoney. She has lived, worked and studied in Asia, Europe, the United States and South America.

About the International Capital Market Association

The International Capital Market Association (ICMA) is the self-regulatory organisation representing the financial institutions active in the international capital market worldwide. ICMA's members are located in 46 countries across the globe, including all the world's main financial centres.

ICMA's market conventions and standards have been the pillars of the international debt market for over 40 years, providing the self regulatory framework of rules governing market practice which have facilitated the orderly functioning and growth of the market. ICMA actively promotes the efficiency and cost effectiveness of the capital markets by bringing together market participants including regulatory authorities and governments.

ICMA's sponsorship of this publication aims to promote research and the continuing development of the market. ICMA did not exercise any editorial control over this publication and as such the findings do not necessarily reflect the official stance of the Association.

For further information about ICMA, go to www.icmagroup.org

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