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To my parents, my brothers, and my sister

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All errors remain my sole responsibility.

San Diego, May 11, 2011

Aline Darbellay

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Abbreviations

ABS	Asset-Backed Security
ADBI	Asian Development Bank Institute
A.I.G.	American International Group
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CDO	Collateral Debt Obligation
CESR	Committee of European Securities Regulators
C.F.R.	Code of Federal Regulations
CGFS	Committee on the Global Financial System
Circ.	Circular
CMBS	Commercial Mortgage-Backed Security
CRA	Credit Rating Agency
CRMPG	Counterparty Risk Management Policy Group
DNB	De Nederlandsche Bank
EC	European Community
ECAI	External Credit Assessment Institution
ECB	European Central Bank
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FCIC	Financial Crisis Inquiry Commission
Fed. Reg.	Federal Register
Fed	US Federal Reserve
FICO Score	Fair Isaac Corporation Score
FINMA	Swiss Financial Market Supervisory Authority
FSB	Financial Stability Board
FSF	Financial Stability Forum
HEL	Home Equity Loan
IMF	International Monetary Fund

IOSCO	International Organization of Securities Commissions
IRB	Internal Ratings-Based
LTCM	Long-Term Capital Management
MBS	Mortgage-Backed Security
NBER	National Bureau of Economic Research
NRSRO	Nationally Recognized Statistical Rating Organization
NYU	New York University
NZZ	Neue Zürcher Zeitung
Regulation FD	Regulation Fair Disclosure
RMBS	Residential Mortgage-Backed Security
SEC	Securities and Exchange Commission
SIV	Structured Investment Vehicle
SNB	Swiss National Bank
SPE	Special Purpose Entity
SPV	Special Purpose Vehicle
TALF	Term Auction Lending Facility
TARP	Troubled Asset Relief Program
TBTF	Too Big Too Fail
UK FSA	United Kingdom Financial Services Authority
UNU-WIDER	United Nations University World Institute for Development Economics Reserach
US	United States

Bibliography

Books and Periodical Materials

ABDELAL RAWI, *Capital Rules, The Construction of Global Finance* (Harvard University Press 2007).

ACKERMANN ULRICH & JÄCKLE JOACHIM, *Ratingverfahren aus Emittentensicht*, 61 BETRIEBS-BERATER 878 (2006).

AKERLOF GEORGE A., *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 THE QUARTLERLY JOURNAL OF ECONOMICS 488 (1970).

ALEXANDER KERN ET AL., *Financial Supervision and Crisis Management in the EU*, POLICY DEPARTMENT, ECONOMIC AND SCIENTIFIC POLICY (European Parliament 2007).

ALEXANDER KERN ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU*, POLICY DEPARTMENT, ECONOMIC AND SCIENTIFIC POLICY (European Parliament 2010).

ALLEN FRANKLIN, *The Market for Information and the Origin of Financial Intermediation,* 1 JOURNAL OF FINANCIAL INTERMEDIATION 3 (1990).

ALTMAN EDWARD I., ONCU SABRI, SCHMEITS ANJOLEIN & WHITE LAWRENCE J., *What Should Be Done about the Credit Rating Agencies?,* NEW YORK UNIVERSITY (NYU) STERN REGULATING WALL STREET BLOG (Apr. 6, 2010).

ALTMAN EDWARD I. & RIJKEN HERBERT A., *How Rating Agencies Achieve Rating Stability,* 28 JOURNAL OF BANKING & FINANCE 2679 (2004).

ALTMAN EDWARD I. & RIJKEN HERBERT A., *The Effects of Rating Through the Cycle on Rating Stability, Rating Timeliness and Default Prediction Performance,* NYU WORKING PAPER NO. FIN-05-004 (2005).

ALTMAN EDWARD I. & SAUNDERS ANTHONY, *An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings,* 25 JOURNAL OF BANKING & FINANCE 25 (2001).

ANDERSON JOHN WILLIAM, *Regulatory and Supervisory Independence: Is There a Case for Independent Monetary Authorities in Brazil?*, 10 LAW & BUSINESS REVIEW OF THE AMERICAS 253 (2004).

ANDRIEU PATRICK, *Ratingagenturen in der Krise, Über die Einführung von Qualitätsstandards für Ratings durch die Europäische Union* (Peter Lang 2010).

ARNER DOUGLAS W., *The Global Credit Crisis of 2008: Causes and Consequences*, ASIAN INSTITUTE OF INTERNATIONAL FINANCIAL LAW, WORKING PAPER NO. 3 (2009).

ASHCRAFT ADAM B. & SCHUERMANN TIL, *Understanding the Securitization of Subprime Mortgage Credit,* FEDERAL RESERVE BANK OF NEW YORK STAFF REPORTS, NO. 318 (2008).

BAKER H. KENT & MANSI SATTAR A., *Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors,* 29 JOURNAL OF BUSINESS FINANCE & ACCOUNTING 1367 (2002).

BALZLI BEAT & HORNIG FRANK, *Exacerbating the Crisis, The Power of Rating Agencies,* SPIEGEL ONLINE, May 6, 2009 (translated from the German by Christopher Sultan).

BARNETT-HART ANNA KATHERINE, *The Story of the CDO Market Meltdown: An Empirical Analysis* (Mar. 19, 2009) (B.A. thesis, Harvard College) (on file with Harvard College).

BEAVER WILLIAM H., SHAKESPEARE CATHERINE & SOLIMAN MARK T., *Differential properties in the ratings of certified versus non-certified bond-rating agencies*, 42 JOURNAL OF ACCOUNTING AND ECONOMICS 303 (2006).

BECKMAN THEODORE N., *Credits and Collections in Theory and Practice* (McGraw-Hill Company 1930).

BIRCHLER URS & BÜTLER MONIKA, *Information Economics* (Routledge 2007).

BLAUROCK UWE, *Control and Responsibility of Credit Rating Agencies,* 11 ELECTRONIC JOURNAL OF COMPARATIVE LAW 1 (2007).

BLAUROCK UWE, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, 36 ZEITSCHRIFT FÜR UNTERNEHMENS- UND GESELLSCHAFTSRECHT 603 (2007).

BLUHM CHRISTIAN, *CDO Modeling: Techniques, Examples and Applications* (HypoVereinsbank 2003).

BLUNDELL-WIGNALL ADRIAN & ATKINSON PAUL, *Thinking Beyond Basel III: Necessary Solutions for Capital and Liquidity,* OECD JOURNAL: FINANCIAL MARKET TRENDS (pre-publication version 2010).

BORIO CLAUDIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* BIS WORKING PAPERS, NO. 251 (2008).

BRENNAN MICHAEL J., HEIN JULIA & POON SER-HUANG, *Tranching and Rating,* SSRN ELIBRARY (2008), available at http:ssrn.com/abstract=1108556.

BUCHANAN MARK, *Crazy Money: How Can we Stop the Financial Markets Creating so Much Misery? Forget Textbook Economics, the Answer Lies Elsewhere*, NEW SCIENTIST, Jul. 19, 2008.

BUFFET WARREN E., *Berkshire Hathaway Inc. Annual Report 2002.*

BURRY MICHAEL J., *A Primer on Scion Capital's Subprime Mortgage Short* (Nov. 7, 2006).

BURRY MICHAEL J., *I Saw the Crisis Coming. Why Didn't the Fed?,* THE NEW YORK TIMES, Apr. 4, 2010.

CAMANHO NELSON, DEB PRAGYAN & LIU ZIJUN, *Credit Rating and Competition,* SSRN ELIBRARY (2010), available at http:ssrn.com/abstract=1573035.

CANTOR RICHARD & PACKER FRANK, *The Credit Rating Industry*, FRBNY QUARTERLY REVIEW 1 (Summer-Fall 1994).

CARRIGAN JUSTIN, *Greece May Have Rating Lowered to Junk, Moody's Says,* BLOOMBERG BUSINESSWEEK, May 10, 2010.

CASEY KATHLEEN & PARTNOY FRANK, *Downgrade the Ratings Agencies*, THE NEW YORK TIMES, Jun. 4, 2010.

CASSAD BETTINA J., *Confirmation Bias,* in: Roy F. Baumeister & Kathleen D. Vohs (eds.), *Encyclopedia of Social Psychology* (2007).

CHANDLER ALFRED D., JR., *Henry Varnum Poor: Business Editor, Analyst and Reformer* (Harvard University Press 1956).

CHAN SEWELL, *Documents Show Internal Qualms at Rating Agencies*, THE NEW YORK TIMES, Apr. 22, 2010.

CHORAFAS DIMITRIS N., *Economic Capital Allocation with Basel II, Cost, Benefit and Implementation Procedures* (Elsevier Butterworth-Heinemann 2004).

CIFUENTES RODRIGO, FERRUCCI GIANLUIGI & SHIN HYUN SONG, *Liquidity risk and contagion,* BANK OF ENGLAND WORKING PAPER SERIES, NO. 264 (2005).

CINQUEGRANA PIERO, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* ECMI POLICY BRIEF, NO. 12 (Feb. 2009).

CLARK ANDREW, *Euro falls as Spain suffers rating downgrade,* THE GUARDIAN, May 28, 2010.

CLERC LAURENT, *A Primer on the Subprime Crisis,* BANQUE DE FRANCE, OCCASIONAL PAPER, NO. 4 (2008).

COFFEE JR. JOHN C., *Gatekeepers: The Professions and Corporate Governance* (Oxford University Press 2006).

COHAN PETER, *Credit ratings agencies might end up paying for role in financial crisis,* DAILYFINANCE, Sep. 16, 2009.

CORKERY MICHAEL, *Joe Cassano's Testimony: AIG CDS Worked Just Fine,* WSJ BLOGS, Jun. 30, 2010.

COVAL JOSHUA D., JUREK JAKOB & STAFFORD ERIK, *The Economics of Structured Finance*, HARVARD BUSINESS SCHOOL FINANCE WORKING PAPER, NO. 09-060 (2008).

CROUHY MICHEL G., JARROW ROBERT A. & TURNBULL STUART M., *The Subprime Crisis of 07,* SSRN ELIBRARY (2008), available at http:ssrn.com/abstract=1112467.

DABBAH MAHER M., *International and Comparative Competition Law* (Cambridge University Press 2010).

DALLAS LYNNE, *Short-Termism, the Financial Crisis and Corporate Governance,* UNIVERSITY OF SAN DIEGO LEGAL STUDIES RESEARCH PAPER SERIES, NO. 11-052 (2011).

DARBELLAY ALINE & PARTNOY FRANK, *Credit Rating Agencies and Regulatory Reform,* in: Claire A. Hill & Brett McDonnell (eds.), *Research Handbook on the Economics of Corporate Law* (forthcoming Edward Elgar 2011–2012).

DE HAAN JAKOB & AMTENBRINK FABIAN, *Credit Rating Agencies,* De Nederlandsche Bank (DNB) WORKING PAPER NO. 278 (2011).

EARLING PETER R., *Whom to Trust: A Practical Treatise on Mercantile Credits* (Rand, McNally & Co 1890).

ELLIS DAVID M., *Different Sides of the Same Story: Investors' and Issuers' views of Rating Agencies*, 7 THE JOURNAL OF FIXED INCOME 35, Issue 4 (1998).

EMMENEGGER SUSAN, *Die Regulierung von Rating-Agenturen,* SWISS REVIEW OF BUSINESS AND FINANCIAL MARKET LAW 32, Issue 1 (2006).

EMMENEGGER SUSAN, *Rating und Haftung,* in: Wolfgang Wiegand (ed.), *Basel II – die rechtlichen Konsequenzen,* at 43 (Stämpfli Verlag 2006).

ESTRELLA ARTURO ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information,* BCBS WORKING PAPERS, NO. 3 (2000).

FERRAN EILÍS & ALEXANDER KERN, *Can Soft Law Bodies Be Effective? Soft Systemic Risk Oversight Bodies and the Special Case of the European Systemic Risk Board,* SSRN ELIBRARY (2010), available at http:ssrn.com/abstract=1676140.

FIGHT ANDREW, *The Ratings Game* (John Wiley & Sons Ltd 2001).

FIRLA-CUCHRA MACIJ T., *Explaining Launch Spreads on Structured Bonds,* DEPARTMENT OF ECONOMICS DISCUSSION PAPER SERIES, NO. 230 (2005).

FLANNERY MARK J., HOUSTON JOEL F. & PARTNOY FRANK, *Credit Default Swap Spreads As Viable Substitutes for Credit Ratings,* 158 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 2085 (2010).

FLOOD JOHN, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies,* in: Michael B. Likosky (ed.), *Privatising Development: Transnational Law, Infrastructure and Human Rights,* at 147 (Martinus Nijhoff Publishers 2005).

FOLEY JOHN, *New tools can help tame an ocean of data*, INFORMATIONWEEK, Oct. 30, 1995.

FROST CAROL ANN, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, 22 JOURNAL OF ACCOUNTING, AUDITING & FINANCE 469 (2007).

GEIGER RAINER, *The Development of the World Economy and Competition Law,* in: Roger Zäch, Andreas Heinemann & Andreas Kellerhals (eds.), *The Development of Competition Law, Global Perspectives*, at 235 (Edward Elgar 2010).

GERARDIN DAMIEN & KERF MICHEL, *Controlling Market Power in Telecommunications, Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003).

GERBER DAVID J., *Competition Law and the Institutional Embeddedness of Economics,* in: Josef Drexl, Laurence Idot & Joël Monéger (eds.), *Economic Theory and Competition Law*, at 20 (Edward Elgar 2009).

GILLEN DAVID, *In Ratings Agencies, Investors Still Trust,* THE NEW YORK TIMES, Jun. 5, 2009.

GRANIER THIERRY, *Éclairage. Le règlement communautaire sur les agences de notation: un début de régulation de l'activité?,* BULLETIN JOLY BOURSE 8, NO. 1 (Jan. 1, 2010).

GRIFFIN JOHN M. & TANG DRAGON YONGJUN, *Did Subjectivity Play a Role in CDO Credit Ratings?,* MCCOMBS RESEARCH PAPER SERIES NO. FIN-04-10 (2010).

HAROLD GILBERT, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness* (The Ronald Press Company 1938).

HENDRICKS DARRYLL, KAMBHU JOHN & MOSSER PATRICIA, *Systemic Risk and the Financial System, Background Paper*, NAS-FRBNY CONFERENCE ON NEW DIRECTIONS IN UNDERSTANDING SYSTEMIC RISK (Federal Reserve Bank of New York 2006).

HILL CLAIRE A., *Regulating the Rating Agencies*, 82 WASHINGTON UNIVERSITY LAW QUARTLERLY 43 (2004).

HILL CLAIRE A., *Why Did Anyone Listen to the Rating Agencies after Enron?,* 4 JOURNAL OF BUSINESS & TECHNOLOGY LAW 283 (2009).

HILL CLAIRE A., *Who Were the Villains in the Subprime Crisis, and Why it Matters,* 4 ENTREPRENEURIAL BUSINESS LAW JOURNAL 323 (2010).

HILL CLAIRE A., *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* 71 UNIVERSITY OF PITTSBURGH LAW REVIEW 1 (2010).

HIRSCH CHRISTIAN & BANNIER CHRISTINA, *The economic function of credit rating agencies – What Does the Watchlist Tell Us?,* SSRN ELIBRARY (2009), available at http:ssrn.com/abstract=1343421.

HUNT JOHN PATRICK, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement,* 2009 COLUMBIA BUSINESS LAW REVIEW 109 (2009).

JACKSON HOWELL E., *The Role of Credit Rating Agencies in the Establishment of Capital Standards for Financial Institutions in a Global Economy,* in: Eilís Ferran & Charles A. E. Goodhart (eds.), *Regulating Financial Services and Markets in the 21st Century,* at 311 (Hart Publishing 2001).

JENNY FREDERICK, *The "Coming Out" of Abuse of Superior Bargaining Power in the Antitrust World,* in: Barry E. Hawk (ed.), *Annual Proceedings of the Fordham Competition Law Institute, International Antitrust Law & Policy,* at 561 (Juris Publishing 2009).

JOHNSON RICHARD, *An Examination of Rating Agencies' Actions Around the Investment-Grade Boundary,* RESEARCH DIVISION FEDERAL RESERVE BANK OF KANSAS CITY, RWP 03-01 (Feb. 2003).

JOHNSON SIMON, *The Quiet Coup*, THE ATLANTIC (May 2009).

JONES SAM, *When Junk was Gold,* THE FINANCIAL TIMES, Oct. 17, 2008.

JORION PHILIPPE, LIU ZHU & SHI CHARLES, *Informational Effects of Regulation FD: Evidence from Rating Agencies*, 76 JOURNAL OF FINANCIAL ECONOMICS 309 (2005).

KAMBHU JOHN, SCHUERMANN TIL & STIROH KEVIN J., *Hedge Funds, Financial Intermediation, and Systemic Risk,* 13 FRBNY ECONOMIC POLICY REVIEW 1, Issue 3 (2007).

KAUFMANN CHRISTINE & GÖTZE PATRICK, *Geld- und Währungsordnung*, in: Andreas Lienhard (ed.), *Finanzrecht, Schweizerisches Bundesverwaltungsrecht (SBVR), Band 10*, at 79 (Helbing & Lichtenhahn 2011).

KAUFMANN CHRISTINE & WEBER ROLF H., *The Role of Transparency in Financial Regulation,* 13 JOURNAL OF INTERNATIONAL ECONOMIC LAW 779 (2010).

KAUPER THOMAS E., *Oligopoly: Falicitating Practices and Plus Factors,* in: Barry E. Hawk (ed.), *Annual Proceedings of the Fordham Competition Law Institute, International Antitrust Law & Policy*, at 751 (Juris Publishing, Inc. 2008).

KENNEDY SIMON & TOTARO LORENZO, *ECB Comes to Greece's Aid by Waving Collateral Rules,* BLOOMBERG BUSINESSWEEK, May 3, 2010.

KETEYIAN ARMEN, *Ratings Agencies to Face Grilling on Goldman,* CBS NEWS, Apr. 22, 2010.

KNIEPS GÜNTER, *Sector-Specific Market Power Regulation versus General Competition Law: Criteria for Judging Competitive versus Regulated Markets,* in: Fereidoon P. Sioshansi & Wolfgang Pfaffenberger (eds.), *Electricity Market Reform: An International Perspective,* at 49 (Elsevier Ltd. 2006).

KORTH PETER, *Dritthaftung von Ratingagenturen,* in: Gunther Teubner et al. (eds.), *Internationale Studien zur Privatrechtstheorie, Band 10* (Nomos 2009).

KRÖGER MICHAEL, *Rampant Skepticism, Aid for Greece Hasn't Stopped Euro's Slide,* SPIEGEL ONLINE, Jun. 5, 2010.

KRUGMAN PAUL, *A Catastrophe Foretold*, THE NEW YORK TIMES, Oct. 26, 2007.

KUHNER CHRISTOPH, *Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Systemic Risk*, 53 SCHMALENBACH BUSINESS REVIEW 2, Issue 1 (2001).

LAMY MARIE-FLORENCE, *The Treatment of Credit Risk in the Basel Accord and Financial Stability,* 11 INTERNATIONAL JOURNAL OF BUSINESS 159 (2006).

LEWIS MICHAEL, *The Big Short, Inside the Doomsday Machine* (W.W. Norton & Company 2010).

LOMBARDINI CARLO, *Droit bancaire suisse* (Schulthess, 2nd ed. 2008).

LOWENSTEIN ROGER, *Triple-A Failure, The Ratings Game,* THE NEW YORK TIMES, Apr. 27, 2008.

LUCAS DOUGLAS J., GOODMAN LAURIE S. & FABOZI FRANK J., *Collateralized Debt Obligations, Structures & Analysis* (John Wiley & Sons, Inc., 2nd ed. 2006).

LUCAS DOUGLAS J., GOODMAN LAURIE S. & FABOZI FRANK J., *Collateralized Debt Obligations and Credit Risk Transfer,* YALE ICF WORKING PAPER NO. 07-06 (Yale International Center for Finance 2007).

LUGARD PAUL, *Chilling Effects of Antitrust Law, Better Safe than Sorry?,* in: Barry E. Hawk ed., *Annual Proceedings of the Fordham Competition Law Institute, International Antitrust Law & Policy,* at 437 (Juris Publishing, Inc. 2009).

LUMPKIN STEPHEN, *Resolutions of Weak Institutions: Lessons Learned from Previous Crises,* OECD JOURNAL: FINANCIAL MARKET TRENDS (2008).

LYMAN PETER & VARIAN HAL R., *How Big is the Information Explosion?* IMP MAGAZINE, Nov. 22, 2000.

LYNCH TIMOTHY E., *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, 59 CASE WESTERN RESERVE LAW REVIEW 227 (2009).

MACEY JONATHAN R., *Efficient Capital Markets, Corporate Disclosure, and Enron,* 89 CORNELL LAW REVIEW 394 (2004).

MACEY JONATHAN R., *Corporate Governance: Promises kept, Promises Broken* (Princeton University Press 2008).

MADISON JAMES H., *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, 48 THE BUSINESS HISTORY REVIEW 164 (1974).

MAINGUY DANIEL, RESPAUD JEAN-LOUIS & DEPINCÉ MALO, *Droit de la concurrence* (Litec 2010).

MANNS JEFFREY, *Rating Risk After the Subprime Mortgage Crisis: A User Fee Approach for Rating Agency Accountability,* 87 NORTH CAROLINA LAW REVIEW 1012 (2009).

MATHIS JÉRÔME, *Réformons les agences de notation,* L'EXPANSION.COM, Feb. 1, 2010.

MATHIS JÉRÔME, MCANDREWS JAMES & ROCHET JEAN-CHARLES, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?,* 56 JOURNAL OF MONETARY ECONOMICS 657 (2009).

MCVEA HARRY, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* 59 INTERNATIONAL AND COMPARATIVE LAW QUARTERLY 701 (2010).

MEIER HEINZ, *Regulierung von Ratingagenturen, Auswirkungen auf die Schweiz,* DER SCHWEIZER TREUHÄNDER 945 (2009).

MOLONEY NIAMH, *EC Securities Regulation* (Oxford University Press, 2nd ed. 2008).

MONTI GIORGIO, *EC Competition Law* (Cambridge University Press 2007).

MONTI GIORGIO, *EC Competition Law: The Dominance of Economic Analysis?,* in: Roger Zäch, Andreas Heinemann & Andreas Kellerhals (eds.), *The Development of Competition Law, Global Perspectives*, at 3 (Edward Elgar 2010).

MORGENSON GRETCHEN, *Debt Watchdogs: Tamed or Caught Napping?*, THE NEW YORK TIMES, Dec. 7, 2008.

MORGENSON GRETCHEN & STORY LOUISE, *Rating Agency Data Aided Wall Street in Deals*, THE NEW YORK TIMES, Apr. 23, 2010.

MORRISSEY JANET, *Disillusioned Advisers Eye Smaller Rating Firms; Interest in Subscriber-Based Raters Grows at the Expense of the Big Three Agencies*, INVESTMENT NEWS, Feb. 15, 2009.

MUNDSTOCK GEORGE, *The Trouble with FASB,* 28 NORTH CAROLINA JOURNAL OF INTERNATIONAL LAW & COMMERCIAL REGULATION 813 (2003).

MUNDSTOCK GEORGE, *GAAP Did Their Job During the Economic Meltdown,* 4 FLORIDA INTERNATIONAL UNIVERSITY LAW REVIEW 463 (2009).

MURPHY AUSTIN, *An Analysis of the Financial Crisis of 2008: Causes and Solutions,* SSRN ELIBRARY (2008), available at http:ssrn.com/abstract=1295344.

NOBEL PETER, *Schweizerisches Finanzmarktrecht und internationale Standards* (Stämpfli, 3rd ed. 2010).

NOCERA JOE, *Propping up a House of Cards*, THE NEW YORK TIMES, Feb. 28, 2009.

NZZ, *Währungshüter halten Geld weiterhin billig, Aufwertungsdruck auf den Franken erhöht,* Feb. 21, 2010.

NZZ, *Oberwasser für "Rating-Rebellen", Unternehmen profitieren von der derzeitigen Beliebtheit der "Corporate Bonds"*, Aug. 30, 2010, at 21.

NZZ, *Debatte um "Schuld" der Rating-Agenturen, Schweizer Zurückhaltung bei anstehender Regulierung*, Sep. 4, 2010, at 35.

OPP CHRISTIAN C., OPP MARCUS M. & HARRIS MILTON, *Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage,* SSRN ELIBRARY (2010), available at http:ssrn.com/abstract=1540099.

PARTNOY FRANK, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, 77 WASHINGTON UNIVERSITY LAW QUARTERLY 619 (1999).

PARTNOY FRANK, *The Paradox of Credit Ratings,* in: Richard M. Levich, Giovanni Majnoni & Carmen M. Reinhart (eds.), *Ratings, Rating Agencies and the Global Financial System*, at 65 (Kluwer Academic Publishers 2002).

PARTNOY FRANK, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, UNIVERSITY OF SAN DIEGO LEGAL STUDIES RESEARCH PAPER SERIES 59, NO. 07-46 (2006).

PARTNOY FRANK, *Do away with rating-based rules*, THE FINANCIAL TIMES, Jul. 8, 2008.

PARTNOY FRANK, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* UNIVERSITY OF SAN DIEGO LEGAL STUDIES RESEARCH PAPER SERIES, NO. 09-015 (2009).

PARTNOY FRANK, *Wall Street Beware: The Lawyers are Coming,* THE FINANCIAL TIMES, Apr. 18, 2010.

PARTNOY FRANK & TURNER LYNN E., *Bring Transparency to Off-Balance Sheet Accounting* (2010) (on file with the Roosevelt Institute).

PERSAUD AVINASH, *Liquidity Black Holes, And Why Modern Financial Regulation in Developed Countries is making Short-Term Capital Flows to Developing Countries Even More Volatile,* UNITED NATIONS UNIVERSITY WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH (UNU-WIDER), DISCUSSION PAPER NO. 2002/31 (2002).

PINCHES GEORGE E. & SINGLETON J. CLAY, *The Adjustment of Stock Prices to Bond Rating Changes*, 33 THE JOURNAL OF FINANCE 29 (1978).

PINTO ARTHUR R., *Control and Responsibility of Credit Rating Agencies in the United States*, BROOKLYN LAW SCHOOL LEGAL STUDIES RESEARCH PAPERS, NO. 119 (2008).

PULLIAM SUSAN & PEREZ EVAN, *Criminal Probe Looks Into Goldman Trading*, THE WALL STREET JOURNAL, Apr. 30, 2010.

QUINN BRIAN J.M., *The Failure of Private Ordering and the Financial Crisis of 2008,* 5 NYU JOURNAL OF LAW & BUSINESS 549 (2009).

REASON TIM, *Not Trigger Happy, Credit-rating firms are taking a closer look at how corporate credit agreements employ rating triggers,* CFO MAGAZINE, Feb. 21, 2002.

ROSNER JOSHUA, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* 14 JOURNAL OF STRUCTURED FINANCE 7, Issue 4 (2009).

ROUSSEAU STÉPHANE, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* SSRN ELIBRARY (2009), available at http:ssrn.com/abstract=1456708.

ROUTIER RICHARD, *De nouvelles pistes pour la gouvernance?,* BULLETIN JOLY SOCIÉTÉS 611, NO. 6 (Jun. 1, 2003).

SCHWARCZ STEVEN L., *The Role of Rating Agencies in Global Market Regulation,* in: Eilís Ferran & Charles A. E. Goodhart (eds.), *Regulating Financial Services and Markets in the 21st Century*, at 297 (Hart Publishing 2001).

SCHWARCZ STEVEN L., *Private Ordering of Public Markets: The Rating Agency Paradox*, 2002 UNIVERSITY OF ILLINOIS LAW REVIEW 1 (2002).

SCHWARCZ STEVEN L., *Enron and the Use and Abuse of Special Purpose Entities in Corporate Structures,* 70 UNIVERSITY OF CINCINNATI LAW REVIEW 1309 (2002).

SCHWARCZ STEVEN L., *Systemic Risk,* 97 GEORGETOWN LAW JOURNAL 193 (2008).

SCHWARCZ STEVEN L., *Disclosure's Failure in the Subprime Mortgage Crisis,* UTAH LAW REVIEW 1109, NO. 3 (2008).

SCHWARCZ STEVEN L., *Keynote Address: Understanding the Subprime Financial Crisis,* 60 SOUTH CAROLINA LAW REVIEW 549 (2009).

SCOTT KATHLEEN A., *Addressing the Conditions Leading to "Systemic Risk" on a Global Basis*, NEW YORK LAW JOURNAL, Mar. 18, 2009.

SEGAL DAVID, *Debt Raters Avoid Overhaul After Crisis*, NEW YORK TIMES, Dec. 8, 2009.

SHORTER GARY & SEITZINGER MICHAEL V., *Credit Rating Agencies and Their Regulation,* CONGRESSIONAL RESEARCH SERVICE, Sep. 3, 2009.

SINCLAIR TIMOTHY J., *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness* (Cornell University Press 2005).

SORKIN ANDREW R., *Citi Chief on Buyouts: "We're Still Dancing",* THE NEW YORK TIMES, Jul. 10, 2007.

SORKIN ANDREW R., *What the Financial Crisis Commission Should Ask,* THE NEW YORK TIMES DEALBOOK, Jan. 11, 2010.

SORKIN ANDREW R., *A Hand in a House of Cards*, THE NEW YORK TIMES DEALBOOK, Feb. 16, 2010.

SORKIN ANDREW R., *Congress Drops Changes for Credit-Rating Agencies,* THE NEW YORK TIMES DEALBOOK, Jun. 16, 2010.

SOROS GEORGE, *Do Not Ignore the Need for Financial Reform*, THE FINANCIAL TIMES, Oct 25, 2009.

STANTON RICHARD & WALLACE NANCY, *CMBS Subordination, Ratings Inflation, and the Crisis of 2007-2009,* NATIONAL BUREAU OF ECONOMIC RESEARCH (NBER) WORKING PAPER NO. 16206 (2010).

SY AMADOU N. R., *Rating the Rating Agencies: Anticipating Currency Crises or Debt Crises?*, IMF WORKING PAPER, NO. 03/122 (2003).

SY AMADOU N. R., *The Systemic Regulation of Credit Rating Agencies and Rated Markets,* IMF WORKING PAPER, NO. 09/129 (2009).

SYLLA RICHARD, *An Historical Primer on the Business of Credit Rating,* in: Richard M. Levich, Giovanni Majnoni & Carmen Reinhart (eds.), *Ratings, Rating Agencies and the Global Financial System*, at 19 (Kluwer Academic Publishers 2002).

TCHOTOURIAN IVAN, *Agences de notation: encadrement et responsabilité,* BULLETIN JOLY BOURSE 119, NO. 2 (Feb. 1, 2011).

THE ECONOMIST, *Exclusion zone, Regulators Promise a Belated Review of the Ratings Oligopoly*, Feb. 8, 2003, at 65-66.

THE ECONOMIST, *Three is No Crowd, Regulators need a new approach to an entrenched industry*, Mar. 26, 2005, at 15.

THE ECONOMIST, *Taming the Beast*, How far should finance be re-regulated?, Oct. 11, 2008, at 6-16.

THE ECONOMIST, *Negative outlook, Europe Misfires in its Attack on the Rating Agencies*, Nov. 15, 2008, at 91.

THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly,* May 15, 2010, at 83-84.

THÉPOT CÉCILE, *L'encadrement légal de l'activité des agences de notation par la loi de régulation bancaire et financière,* 399 PETITES AFFICHES 26, NO. 250 (Dec. 16, 2010).

THÉPOT CÉCILE, *L'encadrement des agences de notation: "trop de loi tue la loi"* (2011) (on file with author).

THE WALL STREET JOURNAL, REVIEW & OUTLOOK, *The Big Barofsky, Someone in Washington is Standing up for Taxpayers*, Apr. 29, 2009.

TRINDADE RITA TRIGO & SENN MYRIAM, *Control and Responsibility of Rating Agencies in Switzerland,* in: *Swiss Reports Presented at the XVIIth International Congress of Comparative Law,* at 137 (2006).

UTZIG SIEGFRIED, *The Financial Crisis and the Regulation of Credit Rating Agencies: A European Banking Perspective,* ASIAN DEVELOPMENT BANK INSTITUTE (ADBI) WORKING PAPER SERIES, NO. 188 (2010).

VAN DUYN ALINE, *Reform of Rating Agencies Poses Dilemma,* THE FINANCIAL TIMES, Jun. 10, 2010.

VASELLA DAVID, *Die Haftung von Ratingagenturen, Ein Beitrag zur Expertenhaftung* (2011) (on file with author).

WAKEMAN L. MACDONALD, *The Real Function of Bond Rating Agencies*, in: Michael C. Jensen & Clifford W. Smith, Jr. (eds.), *The Modern Theory of Corporate Finance*, at 391 (McGraw-Hill Book Company 1984).

WEBER ROLF H, *Kassandra oder Wissensbroker – Dilemma im "Global Village",* in: Jürgen Becker, Reto M. Hilty, Jean-Fritz Stöckli & Thomas Würtenberger (eds.), *Recht im Wandel seines sozialen und technologischen Umfeldes, Festschrift für Manfred Rehbinder*, at 405 (Verlag C.H. Beck München 2002)

WEBER ROLF H, *Mapping and Structuring International Financial Regulation – A Theoretical Approach*, 20 EUROPEAN BUSINESS LAW REVIEW 651 (2009).

WEBER ROLF H. & ARNER DOUGLAS W., *Toward a New Design for International Financial Regulation,* 29 UNIVERSITY OF PENNSYLVANIA JOURNAL OF INTERNATIONAL LAW 391 (2007).

WEBER ROLF H. & DARBELLAY ALINE, *The regulatory use of credit ratings in bank capital requirement regulations*, 10 JOURNAL OF BANKING REGULATION 1 (2008).

WEHINGER GERT, *Lessons from the Financial Market Turmoil: Challenges ahead for the Financial Industry and Policy Makers,* OECD JOURNAL: FINANCIAL MARKET TRENDS (2008).

WELLINK NOUT, *The New Framework for Banking Supervision, Remarks at the FSI High Level Meeting on "The Emerging Framework to Strengthen Banking Regulation and Financial Stability" for Africa* (Cape Town, Jan. 27, 2011).

WEST RICHARD R., *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, 16 JOURNAL OF LAW AND ECONOMICS 159 (1973).

WESTBROOK JESSE & GALLU JOSHUA, *SEC's Demand That Goldman Admit "Mistake" Could Spur Lawsuits,* BLOOMBERG, Jul. 21, 2010.

WHALEN CHRISTOPHER R., *The Subprime Crisis, Cause, Effect and Consequences,* NETWORKS FINANCIAL INSTITUTE POLICY BRIEF, NO. 2008-PB-04 (2008).

WHALEN CHRISTOPHER R., *No True Sale: Interview with Joseph Mason*, THE INSTITUTIONAL RISK ANALYST, Mar. 3, 2008.

WHITE LAWRENCE J., *The Credit Rating Industry: An Industrial Organization Analysis*, NYU CENTER FOR LAW AND BUSINESS, RESEARCH PAPER NO. 01-001 (2001).

WHITE LAWRENCE J., *A New Law for the Bond Rating Industry*, REGULATION 48 (2007).

WHITE LAWRENCE J., *The Growing Influence of Economics and Economists on Antitrust: An Extended Discussion,* NYU CENTER FOR LAW AND ECONOMICS, WORKING PAPER NO. 08-07 (2008).

WHITE LAWRENCE J., *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* SSRN ELIBRARY (2009), available at http:ssrn.com/abstract=1426188.

WUTKOWSKY KAREY & YOUNGLAI RACHELLE, *Lawmakers, Former Execs Blast Credit Raters*, REUTERS, Oct. 22, 2008.

ZÄCH ROGER & KÜNZLER ADRIAN, *Freedom to Compete or Consumer Welfare: the Goal of Competition Law According to Constitutional Law,* in: Roger Zäch, Andreas Heinemann & Andreas Kellerhals (eds.), *The Development of Competition Law, Global Perspectives*, at 235 (Edward Elgar 2010).

ZAKI MYRET, *UBS, Les dessous d'un scandale, Comment l'empire aux trois clés a perdu son pari* (Editions Favre SA 2008).

ZIMMERMANN HEINZ & HAFNER WOLFGANG, *Trotz Kritik kein Verzicht auf Rating-Agenturen, Ungebrochene Nachfrage nach Bonitätsbewertungen in unsicheren Zeiten*, NZZ, Aug. 19, 2010, at 26.

Institutional, Legal and Regulatory Materials

AMF Response to the European Commission Consultation on Future Measures to be taken on Credit Rating Agencies (Jan. 6, 2011).

Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs, 109th Congress, S. Hrg. 109-997 (2006).

BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)* (BIS, Jun. 2004).

BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector* (BIS, Dec. 2009).

BCBS, *Consultative Document, International Framework for Liquidity Risk Measurement, Standards and Monitoring* (BIS, Dec. 2009).

BCBS, *Consultative Document, Countercyclical Capital Buffer Proposal* (BIS, Jun. 2010).

BCBS, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (BIS, Dec. 2010).

Central Hudson Gas & Electric Corp. v. *Public Service Commission*, 447 U.S. 557 (1980).

CESR, *Report on Compliance of EU Based Credit Rating Agencies with the 2008 IOSCO Code of Conduct* (May 2009).

CGFS, *Credit Risk Transfer* (BIS, Jan. 2003).

CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings* (BIS, CGFS Paper No. 32, Jul. 2008).

CHARTIER JÉRÔME, *Rapport fait au nom de la commission des finances, de l'économie générale et du contrôle budgétaire sur le projet de loi de régulation bancaire et financière (n° 2165),* ASSEMBLÉE NATIONALE (Mai 25, 2010).

Compuware Corp. v. *Moody's Investors Services, Inc*., 324 F. Supp.2d 860 (E.D. Mich. 2004).

Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis, Hearings & Testimony Before the FCIC (Jun. 2, 2010).

Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform, 110th Congress 2nd Session, H.R. Serial No. 110-155 (2008).

CRMPG III, *Containing Systemic Risk: The Road to Reform* (Aug. 6, 2008).

DE LAROSIÈRE REPORT, *The High-Level Group on Financial Supervision in the EU* (Feb. 25, 2009).

ESMA Guidelines on the Application of the Endorsement Regime under Article 4(3) of the Credit Rating Regulation 1060/2009, Consultation Paper (Mar. 18, 2011)

EU Capital Requirement Directive of 2006: Directive 2006/49/EC on the Capital Adequacy of Investment Firms and Credit Institutions, 2006 O.J. (L 177/201).

EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment, SEC (2008) 2745 (Nov. 12, 2008).

EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No. 1060/2009 on Credit Rating Agencies, SEC (2010) 678 (Jun. 2, 2010).

EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, COM (2008) 704 (Nov. 12, 2008).

EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No. 1060/2009 on Credit Rating Agencies, COM (2010) 289 (Jun. 2, 2010).

EU Public Consultation on Credit Rating Agencies (Nov. 5, 2010).

EU Regulation on Credit Rating Agencies: Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, 2009 O.J. (L 302/1).

FINMA, *Finanzmarktkrise und Finanzmarktaufsicht* (Sep. 14, 2009).

FSB, *Principles for Reducing Reliance on CRA Ratings* (Oct. 27, 2010).

FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience* (Apr. 2008).

HOUSE OF LORDS, SELECT COMMITTEE ON ECONOMIC AFFAIRS, *Banking Supervision and Regulation* (Jun. 2009).

IMF, *Global Financial Stability Report, Containing Systemic Risks and Restoring Financial Soundness* (Apr. 2008).

In re Fitch, 330 F.2d 104, 111 (2d Cir. 2003).

IOSCO, *Report on the Activities of Credit Rating Agencies* (Sep. 2003).

IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets* (Final Report, May 2008).

IOSCO, *Code of Conduct Fundamentals for Credit Rating Agencies* (Revised May 2008).

IOSCO, *Report of the Task Force on the Subprime Crisis* (Final Report, May 2008).

IOSCO, *Regulatory Implementation of the Statement of Principles Regarding the Activities of Credit Rating Agencies* (Consultation Report, May 2010).

Loi française n° 2010-1249 du 22 octobre 2010 de régulation bancaire et financière (to be codified in Code monétaire et financier).

MARINI PHILIPPE, *Rapport n° 703 (2009-2010) fait au nom de la commission des finances,* SÉNAT (Sep. 14, 2010).

Newby v. *Enron Corp*., 2005 U.S. Dist. LEXIS 4494, p. 03. (S.D. Tex., Feb. 16, 2005).

Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs, 107th Congress, S. Hrg. 107-471 (2002).

SEC, Regulation FD, Final Rule: Selective Disclosure and Insider Trading, 17 C.F.R. 240, 243, 249 (2000).

SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets, As Required by Section 702(b) of the Sarbanes-Oxley Act of 2002* (Jan. 2003).

SEC, Rating Agencies and the Use of Credit Ratings under the Federal Securities Laws, 68 Fed. Reg. 35258 (Jun. 12, 2003).

SEC, Oversight of Credit Rating Agencies Registered as Nationally Recognized Statistical Rating Organizations, 72 Fed. Reg. 33'564 (Jun. 18, 2007) (to be codified in 17 C.F.R. pts. 240 and 249b).

SEC, *Summary Report of Issues Identified in the Commission Staff's Examinations of Select Credit Rating Agencies* (Jul. 2008).

SEC, Amendments to Rules for Nationally Recognized Statistical Rating Organizations, 74 Fed. Reg. 6'456 (Feb. 9, 2009) (to be codified in 17 C.F.R. pts. 240 and 249b).

SEC, References to Ratings of Nationally Recognized Statistical Rating Organizations, 74 Fed. Reg. 52'358 (Oct. 9, 2009) (to be codified in 17 C.F.R. pts. 229, 230, 239 et al.).

SEC, Amendments to Rules for Nationally Recognized Statistical Rating Organizations, 74 Fed. Reg. 63'832 (Dec. 4, 2009) (to be codified in C.F.R. pts. 240, 243 and 249b).

SEC, Removal from Regulation FD of the Exemption for Credit Rating Agencies, Release Nos. 33-9146; 34-63003; IC-29448; File No. S7-23-10 (Oct. 4, 2010) (to be codified in C.F.R. pt. 243).

STAFF OF SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS, *Financial Oversight of Enron: The SEC and Private-Sector Watchdogs*, 107th Congress, 2nd Session, S. Prt. 107-75 (2002).

Swiss Amendments to FINMA Circular 2008/26 Rating Agencies, Explanatory Report (Mar. 25, 2011).

Swiss Capital Adequacy Ordinance of 2006: Swiss Federal Ordinance of Sep. 29, 2006 concerning Capital Adequacy and Risk Diversification for Banks and Securities Traders, SR 952.03 (2006).

Swiss Code of Obligations of Mar. 30, 1911, SR 220 (1911).

Swiss Final Report of the Commission of Experts for Limiting the Economic Risks Posed by Large Companies (Swiss TBTF Report) (Sep. 30, 2010).

Swiss FINMA Circular on Recognition of Rating Agencies for the Assessment of Capital Adequacy Requirements, FINMA-Circ. 08/26 (Nov. 20, 2008).

Testimony Concerning Oversight of Nationally Recognized Statistical Rating Organizations: Hearing Before the Senate Committee on Banking, Housing, and Urban Affairs, 110th Congress (2008).

THE JOINT FORUM, *Stocktaking on the use of credit ratings* (BIS, Jun. 2009).

The United Kingdom Authorities Response to the European Commission Internal Market and Services Consultation Document on Credit Rating Agencies (Jan. 31, 2011).

US Credit Rating Agency Reform Act of 2006, S. 3850, 109th Congress (2006).

US Dodd-Frank Act of 2010: Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, H.R. 4173, 111th Congress, 2nd Session (2010).

US Securities Act of 1933, 15 U.S.C. § 77a et seq. (as amended through P.L. 111-229, approved Aug. 11, 2010).

US Securities Exchange Act of 1934, 15 U.S.C. § 78a et seq. (as amended through P.L. 111-229, approved Aug. 11, 2010).

Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs (Apr. 23, 2010).

PART 1: Prelude to the Credit Rating Industry

§ 1. Introduction

I. Background

"These errors make us look either incompetent at credit analysis or like we sold our soul to the devil for revenue, or a little bit of both."[1]

The leading Credit Rating Agencies (CRAs) Moody's, Standard & Poor's and Fitch have recently gained prominence in the financial markets.[2] Since the global financial crisis hit the world economy in 2007, significant concern has been raised about the role of CRAs and the use of their credit ratings. Recent events have attracted the attention of regulators, lawmakers, market participants and academic researchers to the dubious rating practices of the leading CRAs. First and foremost, the leading CRAs bear a part of the responsibility for causing the subprime mortgage meltdown.[3] They gave their highest credit ratings to novel mortgage-related securities that turned out to perform very poorly.[4] In addition, the leading CRAs are accused of exacerbating the European debt crisis by downgrading Greek bonds just as European officials were about to unveil a support plan.[5] The strong effect of rating announcements on the financial markets highlights

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1 MORGENSON, *Debt Watchdogs: Tamed or Caught Napping*? (quoting a Managing Director, Moody's, responding anonymously to an internal management survey in September 2007).

2 For convenience, this academic work refers to Moody's, Standard & Poor's and Fitch collectively as the "leading CRAs".

3 *See, e.g.,* MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 657; *see also* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 29 (also mentioning that without inflated credit ratings on poor quality mortgage-related securities, the housing boom would have ended sooner, and the subprime mortgage debacle would have been less severe).

4 ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?*; MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* (discussing how the leading CRAs collaborated with Wall Street banks to structure the deals); CASEY & PARTNOY, *Downgrade the Ratings Agencies* (stating that CRAs helped create the financial crisis by giving inflated credit ratings); VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (arguing that the great number of triple-A ratings fuelled the demand for risky mortgage-related securities and generated substantial revenues for the leading CRAs).

5 THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 (emphasizing that European politicians were livid at Greece's downgrades by Standard & Poor's and Fitch); *but see* CARRIGAN, *Greece May Have Rating Lowered to Junk, Moody's Says* (reporting that – at the height of the Greek debt crisis – the number one in the credit rating industry, Moody's, had not downgraded Greek bonds yet, but was merely conducting a review).

the continuing reliance on leading CRAs, despite their obvious shortcomings in rating borrowers and debt instruments. Although the novel financial instruments that they were rating collapsed, the leading CRAs did not suffer much from the financial meltdown directly. Since their inception, CRAs have survived many financial crises regardless of their repeated rating inaccuracies. Surprisingly, they even become more powerful in the aftermath of financial debacles. From the perspective of the financial system, this gives rise to an unsustainable situation.

Given that CRAs emerge from financial crises ever stronger, financial regulatory reforms are the most important catalysts for change in the credit rating industry. CRA reforms have thus enjoyed a prominent place in regulatory efforts made in response to the 2007-2009 global financial crisis. Lawmakers and regulators around the world have concentrated on strengthening CRA oversight. In the United States (US), the US Dodd-Frank Act of 2010 has acknowledged that CRAs should be regulated in the same way as other gatekeepers such as securities analysts and auditors.[6] This US agency reform comprises the most sweeping regulatory intervention in the credit rating industry since its creation at the beginning of the twentieth century. In Europe, the absence of regulation of the CRAs, and the general outcry with respect to their role in the financial crisis, put immense pressure on the European Union (EU) to adopt mandatory and enforceable rules in this field immediately.[7] The EU proposal stems from November 2008; the EU Regulation on CRAs came into force in 2009.[8] In June 2010 an amendment was proposed in order to establish a more efficient and integrated European system of supervision, and in November 2010 the EU Public Consultation on CRAs was launched with a view to taking the second step toward regulating CRAs.[9] In this regard, the need to regulate the credit rating industry has increasingly been recognized worldwide.

The CRA reforms referred to above will partly address the problems in the credit rating industry. At any rate, a new era has begun in which lawmakers and regulators are aware of the importance of credit ratings in modern financial markets. They may aim to reduce the market dominance of the lead-

6 US Dodd-Frank Act of 2010, Sec. 931(2).

7 *EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 7.

8 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies; *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*.

9 *EU Public Consultation on Credit Rating Agencies; EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 6.

ing CRAs, yet have realized that they must take CRAs into account in their regulatory frameworks. CRAs are a part of the international financial architecture.[10] The road ahead will provide challenges in regulating the credit rating industry and simultaneously decrease market over-reliance on the leading CRAs.

The credit rating industry will remain a topic of regulatory interest for many years to come. Not all problems can be solved instantly through financial regulatory reforms. Above all, the recent agency reforms have not solved the causes of conflicts of interest in the credit rating industry.[11] Conflicts of interest are nevertheless at the core of distortions of competition among CRAs and need to be addressed explicitly in legislation.[12] Furthermore, as soon as the trend toward the decreasing use of credit ratings in regulations is successfully implemented in the financial markets, the role of CRAs will have to be newly defined.

As a consequence, the CRA topic presents an interesting agenda for research. Before the global 2007-2009 financial crisis, insufficient academic attention was paid to CRAs despite their crucial place in the financial markets. Little academic research has been carried out in assessing the CRA regulatory framework and its impact on competition among CRAs. Scholars have repeatedly pointed out the need to remove rating-based regulations, yet little research has demonstrated the repercussions of such measures on the credit rating industry. Scholars have already written about the lack of supervision of CRAs, yet little research has shown how the credit rating industry will evolve in the aftermath of regulatory intervention. The ongoing period represents without doubt a time of significant change in the credit rating industry. There is extreme uncertainty with respect to the future development of CRAs. This academic research focuses on the interaction between regulatory intervention and competitive incentives among leading CRAs. Although CRAs are required to abandon their quasi-regulatory function, no academic consensus exists with respect to the necessity of competitive incentives in the credit rating industry.

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10 ABDELAL, *Capital Rules, The Construction of Global Finance,* at 165.

11 *See* SORKIN, *Congress Drops Changes for Credit-Rating Agencies* (explaining how US legislators could not agree on the proposal to eliminate the conflicts of interest embedded in the issuer-pays business model); *see also* EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, preamble (22) (26) (27) and art. 6 (emphasizing the avoidance of conflicts of interest as an important regulatory topic in the EU, without taking measures to amend the issuer-pays business model as the main cause of conflicts of interest in the credit rating industry).

12 *See* US Dodd-Frank Act of 2010, Sec. 931(4).

II. Evolving Role of Credit Rating Agencies in Modern Financial Markets

"Rating agencies profoundly impact the ordering of global financial markets."[13]

CRAs assess the creditworthiness of borrowers and debt instruments by attributing different grades to them. The three leading CRAs in the world – Moody's, Standard & Poor's and Fitch – are essentially based in the US, yet they operate worldwide through subsidiaries established in many countries and their credit ratings are widely used around the globe.[14] European and Swiss lawmakers, regulators and market participants may wonder how it came about that this small number of US CRAs play such a significant role in their affairs.[15] Among other things this study strives to analyze this phenomenon of modern financial markets.

Credit ratings are of interest to investors and financial institutions as well as regulators. Financial markets need institutions that facilitate information intermediation; CRAs traditionally perform this function. Credit ratings are generally considered to be opinions or judgments about the creditworthiness of borrowers or debt instruments, but are not untestable assertions in the sense that CRAs' performance can be measured ex post.[16] Further, CRAs measure only credit risk and leave the other components of risk in the hands of investors' own due diligence.[17]

The functions performed by the leading CRAs are assessed in the light of the use of their credit ratings in modern financial markets. As information intermediaries, CRAs help link borrowers and investors. They provide investors with useful information for decision-making. Over the last few decades, investors and issuers have increasingly attached importance to the credit ratings of the leading CRAs. The globalization of finance, the increase of issuers and the complexity of new financial instruments imply an increasing role for CRAs given the lack of any alternative capital market

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13 SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox*, at 2.

14 *See EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment*, at 9-10 (stating that the three leading CRAs have their head office and main management, administrative and supervisory bodies in the US; nevertheless, they operate in the EU through subsidiaries).

15 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 166 (taking into account Moody's and Standard & Poor's as the dominant CRAs; the author considers the chances of Fitch displacing the two biggest ones as slim).

16 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 162-163.

17 *Id.* at 157.

overview.[18] In modern financial markets it is almost impossible to initiate public offerings without issues being rated by the leading CRAs.[19] The rating of novel financial instruments over the last four decades has resulted in the leading CRAs appearing to be more profitable than ever before.[20]

However, CRAs are considered to have been one of the culprits in recent financial debacles. It is surprising that CRAs became so powerful despite their shortcomings. The main argument against CRAs is their inaccurate credit ratings. For instance, the subprime mortgage crisis has shed light on troubles resulting from dealing inconsistently with asymmetric information in the financial markets. First, CRAs were hired by issuers to help enhance the liquidity and marketability of novel financial instruments such as residential Mortgage-Backed Securities (RMBS) and Collateral Debt Obligations (CDOs). The favorable credit ratings of the leading CRAs were crucial for investor acceptance of these complex financial instruments.[21] However, when the housing bubble burst in 2007, evidence showed that price discovery mechanisms failed to work and that the price of mortgage-related securities was not driven by the private market forces of supply and demand. Confidence shriveled up when investors realized that the credit ratings were inaccurate but that they were left with no other independent means of valuing the complex securities they were buying.[22] In a very short period of time the subprime mortgage market became illiquid and collapsed. In fact, buyers could not discern between good and bad assets.[23] As a consequence of confidence loss and uncertainty, no trade took place even at discount prices.[24]

Despite the massive dislocation associated with the recent financial crisis and the abysmal performance of CRAs, market participants have continued

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18 SECURITIES AND EXCHANGE COMMISSION (SEC), *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets*, at 5; BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 609.

19 HILL, *Regulating the Rating Agencies*, at 47.

20 *See, e.g.,* SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets*, at 19, 27-29 (discussing the importance of credit ratings in modern financial markets).

21 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 119.

22 *See* FINANCIAL STABILITY FORUM (FSF), *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience,* at 37-38; *see also* INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS (IOSCO), *Report of the Task Force on the Subprime Crisis*, at 23.

23 Even though mortgage-related securities still had residual economic value, the market completely disappeared as no buyers were interested in buying them even at a discount.

24 *See* AKERLOF, *The Market for „Lemons": Quality Uncertainty and the Market Mechanism*, at 490-491.

to rely on credit ratings.[25] This gives rise to concerns about the role of credit ratings and the reason for leading CRAs' success in the financial markets regardless of repeated rating scandals. Accordingly, scholars have written about the paradox of credit ratings.[26] Although CRAs were heavily criticized in the recent financial crises, hitherto little change has occurred with respect to their rating practices. CRAs have succeeded in imposing their presence and are considered to be indispensable entities to which many market participants refer when making decisions.

The best explanation of the paradox of credit ratings arises out of the significant use of credit ratings in financial market regulations.[27] CRAs became private-sector entities with a quasi-governmental function.[28] They could not have become as profitable solely by responding to the needs of the market for information. The rating market has gained in importance in modern financial markets for other reasons, especially regulatory concerns. Indeed, rating-based regulations have artificially increased the role of the leading CRAs in the financial markets. Issuers tend to hire CRAs because favorable credit ratings give them a regulatory privilege.[29] Although credit ratings do not serve investors' needs satisfactorily, the leading CRAs became very profitable by serving issuers' needs. Therefore, the core of the problem lies in the tension between the CRA business model and the use of credit ratings as a regulatory tool.[30]

This study proceeds on the assumption that a successful reform of the credit rating industry must be accompanied by the withdrawal of rating-based regulations. In a competitive environment, CRAs' revenues should directly relate to the substantive value of their credit ratings and not to any regulatory privilege.

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25 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis*, at 10; *see also* GILLEN, *In Ratings Agencies, Investors Still Trust*.

26 PARTNOY, *The Paradox of Credit Ratings,* at 65-84; SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox*; PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, at 81.

27 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 681-707 (already discussing the negative effects of rating-based regulations on the financial system in 1999; significantly, Professor PARTNOY suggested removing regulatory references to credit ratings from regulations almost a decade before lawmakers and regulators began to take the problem seriously).

28 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (opening statement of JOSEPH I. LIEBERMAN, Chairman, Committee on Governmental Affairs), at 1; *see also* EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 41.

29 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 623, 703; *see also* WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 7.

30 THE ECONOMIST, *Taming the Beast, How far should finance be re-regulated?,* at 6-16.

Accordingly, the US Dodd-Frank Act of 2010 marks a turning point by requiring the complete removal of regulatory references to credit ratings.[31] Financial regulatory reforms will undoubtedly have an impact on the role of credit ratings in modern financial markets. In the long term, the new regulatory structure is expected to resolve the paradox of credit ratings. Therefore, the question arises as to what extent the role of CRAs will evolve in the near future pursuant to the implementation of the financial regulatory reforms.

III. Research Scope and Perspectives

This study aims to analyze the competitive environment in the credit rating industry in the light of regulatory intervention. The objective is to associate competitive incentives with the regulatory structure of CRAs. Focus is put on assessing the functions performed by the leading CRAs in the light of the use of their credit ratings in modern financial markets.

The research is done from the perspective of a legal researcher. Given the fact that this is an academic work, particular attention is paid to financial market regulations and the structure of the regulatory system. Understanding the incentives of market participants – such as CRAs, investors and issuers – also plays an important role. Legal and economic aspects are therefore simultaneously taken into account in order to assess the adequacy of the regulatory framework for CRAs. Further, the credit rating industry is considered from a critical perspective since recent rating scandals have tarnished the reputation of the three leading CRAs.

From a structural perspective, the new regulatory trends are moving toward incentive-based regulations. Market participants not only concentrate their efforts on complying with the regulations, they also consider them a tool to gain an advantage over other market participants. It is thus important to analyze the interplay of market forces and regulatory incentives. Accordingly, regulatory failure follows when financial market regulations create wrong incentives, thereby distorting competition in the credit rating industry.

It is worth referring to the place of CRAs in the international financial architecture.[32] Hence this study only analyzes regulatory aspects that are relevant with respect to the global financial markets. CRAs and their regulations are considered as a piece of the financial puzzle. A variety of regulatory requirements may effect the credit rating industry; at the same

31 US Dodd-Frank Act of 2010, Sec. 939-939A.

32 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 165.

time, reforming CRAs may effect certain aspects of the financial system. The rationale is that CRAs deal with financial information. Access to credit ratings as financial information has an influence on regulators and market participants; CRAs' access to information also plays a role in explaining their business models.

With respect to CRAs, the significance of US financial regulations around the globe is a result of the widespread importance of US-based CRAs. Above all, the Basel II Accord contributed to the increasing use of credit ratings for regulatory purposes on the global scale.[33] Although this aspect of Basel II was heavily criticized in the 2007-2009 financial crisis, Basel III has not yet reformed the regulatory use of credit ratings. In addition, oversight of the US-based CRAs is associated to a large degree with US regulations. For instance, Swiss lawmakers and regulators have not followed the regulatory trend of establishing CRA oversight, preferring to leave the responsibility to the home regulators of the leading CRAs, i.e. mainly US regulators.[34] Moody's, Standard & Poor's and Fitch have no subsidiaries in Switzerland, but exert their Swiss business from their US headquarters or through their European subsidiaries in Frankfurt or London.[35] Nevertheless, the credit ratings of the three leading CRAs are crucial for Swiss regulators not least because of the incorporation of the Basel framework into bank capital requirement regulations.[36] The Swiss Financial Market Supervisory Authority (FINMA) depends to a great extent on the US regulations and US regulators with respect to CRA oversight. The only potential influence of the FINMA on the behavior of the leading CRAs relates to the regulatory recognition of CRAs, i.e. in assessing whether conditions are met while deciding whether to accept the use of a CRA for regulatory purposes in Switzerland.[37]

Broadly speaking, troubles in the credit rating industry arose out of the regulatory use of CRAs as private-sector entities. The US Dodd-Frank Act of 2010 has implicitly recognized that rating-based regulations are inconsistent with the proper functioning of market forces in the credit rating industry. Without mentioning competition as an objective, the US Dodd-Frank Act of 2010 has acknowledged that the credit rating industry should be sub-

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33 BASEL COMMITTEE ON BANKING SUPERVISION (BCBS), *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)*. *See, e.g.,* ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 12.

34 MEIER, *Regulierung von Ratingagenturen, Auswirkungen auf die Schweiz,* at 948-949; *see also* NEUE ZÜRCHER ZEITUNG (NZZ), *Debatte um "Schuld" der Rating-Agenturen, Schweizer Zurückhaltung bei anstehender Regulierung,* at 35.

35 EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 33.

36 Swiss Capital Adequacy Ordinance of 2006 (implementing Basel II in Switzerland).

37 MEIER, *Regulierung von Ratingagenturen, Auswirkungen auf die Schweiz,* at 947.

ject to private market forces; indeed, its agency reform removes references to credit ratings from financial market regulations.[38] Therefore, this study proceeds on the assumption that the market for credit ratings should become more competitive in the future.

IV. Outline

This academic work proceeds as follows:

Part 1 provides a description of the credit rating industry. An historical overview of CRAs illustrates how these entities became profitable and how their role has evolved since their inception. Further, CRAs are defined in terms of their core activities, the rating process and the main uses to which their credit ratings are put.

Part 2 discusses the competitive environment in the credit rating industry. Here the focus is on the structural aspects that have an impact on the level of competition among leading CRAs. First, the regulatory structure creates incentives and is responsible for the functioning of market forces. The three regulatory aspects relevant to the credit rating industry are rating-based regulations, the regulatory oversight of CRAs and the special treatment for CRAs. Second, this study analyzes the trend toward enhancing competition in the credit rating industry. Market forces are expected to play their disciplining role in the future since CRAs will have to abandon their quasi-governmental function, thereby contenting themselves with their position as private-sector entities.

Part 3 focuses on structured finance ratings. This topic has gained prominence due to the subprime mortgage crisis. The leading CRAs have played a crucial role in the growth and design of novel financial products. Criticism has been raised about the creation of wrong incentives in the credit rating industry, thereby distorting competition. In particular, the structured finance ratings segment is subject to severe conflicts of interest that jeopardize the independence of the leading CRAs.

Part 4 analyzes the systemic importance of credit ratings with respect to the effects of credit rating downgrades. System-relevance emerges from market over-reliance on a concentrated credit rating industry, giving the leading CRAs excessive market power. As a consequence, financial markets are to some extent characterized by a homogenization of financial information and of market behavior. Market over-reliance on the leading CRAs results

[38] US Dodd-Frank Act of 2010, Sec. 939-939A.

in a reluctance to downgrade credit ratings given the spillover effects of rating announcements. Accordingly, this situation jeopardizes the independence of the leading CRAs because they have to take the repercussions of their credit ratings into account prior to downgrading.

Part 5 concludes the study and sets forth proposals for change in the credit rating industry. First, a number of regulatory amendments concentrate on restoring competition in the credit rating industry. Second, this study proposes a new revenue model for CRAs. The objective is to address conflicts of interest in the credit rating industry by creating incentives to move away from an issuer-pays to an investor-pays business model. Moreover, the proposed model takes into account the need for CRA accountability without maintaining market over-reliance on credit ratings.

§ 2. History of Credit Rating Agencies

"Somebody, sooner or later, will bring out an industrial statistical manual and when it comes, it will be a gold mine."[39]

The historical context highlights the evolution of the credit rating industry and helps to explain the current position of CRAs in the financial markets. The credit rating industry is only about one century old. Originally, capital markets developed without CRAs. Over the last few decades CRAs have become key actors whose position has evolved along with the various uses of credit ratings by market participants and regulators.[40]

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39 WAKEMAN, *The Real Function of Bond Rating Agencies*, at 392 (quoting JOHN MOODY, Wall Street Analyst and founder of Moody's). *See further* PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 638 (explaining an anecdote concerning the comments of an "old Wall Street buccaneer" to JOHN MOODY when he was considering publishing his rating book: "You young pipe dreamer, why throw away your ten years' experience of learning the rules of the game? Why give the public all the facts regarding the corporations for the price of a book? You will be showing them how to play safe and get rich, while you will make nothing yourself. Anyway, if you begin to flaunt too many facts, there won't be much inside knowledge left to work on; you will be spoiling our game. Use your information yourself; don't be a philanthropist. There's no money in it!").

40 Further, since financial crises intervene as motors of change in the financial markets, the various periods related to the evolution of the credit rating industry are closely linked to the major financial crises of the last few decades.

I. Before 1907: From Informal Sources of Information to Mercantile Agencies

1. Dominance of Informal Channels and Increasing Need for Credit Information

For almost three centuries, capital markets developed without the benefit of external credit ratings.[41] In fact, in the early decades of US history, business was inherently local and therefore transactions were between people who knew each other.[42] Early nineteenth-century American merchants could rely for much of their credit information on personal ties.[43] This system worked well as long as trade was local or conducted by merchants who traveled and came into direct contact with suppliers and customers.

However, the nineteenth century heralded the era of industrialization. In this context, the expansion of capital markets was needed to foster the pooling of sufficient resources to modernize the industrial infrastructure. The scale and geographical scope of transactions increased. At the same time, credit information on suppliers about whom business merchants had no personal knowledge was needed as the US population and the volume of trade increased.[44] Informal channels were no longer sufficient to satisfy the rising need for information.

More particularly, the market area expanded as the construction of railroads required the allocation of significant resources. Railroad corporations were indeed America's first big businesses, in the sense of multi-divisional enterprises operating over large geographical distances and employing cadres of professional managers.[45] From a structural perspective, only large banking houses could afford to hire full-time credit agents or develop their own systems of reporting as it was too costly for other merchants.[46] Moreover, the need for knowledge about distant and unknown customers stimulated several larger business houses to develop more formal methods of acquiring

41 SYLLA, *An Historical Primer on the Business of Credit Rating*, at 21.

42 *Id.* at 23.

43 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 165 ("Country merchants from the West and South traveled to seacoast cities where year after year they purchased their goods from the same wholesalers. Even if the seller did not know a prospective buyer personally, he had available sources of information in the form of the experience and opinions of other merchants").

44 SYLLA, *An Historical Primer on the Business of Credit Rating*, at 22-23 ("The crying capital need of the United States during much of the nineteenth century was for funds to build railroads, to open up and knit together an economy of continental proportions").

45 *Id.* at 23.

46 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 166.

credit information.[47] Reports of higher quality could be obtained from an agent with specific responsibility for credit reporting only. Hence structural changes in the capital markets called for innovative solutions.

2. Creation of Mercantile Agencies

Mercantile agencies were the precursors of modern CRAs.[48] The most important immediate factor leading to their creation was the financial crisis of 1837.[49] The severity of the collapse of 1837 was due in part to the inadequacy of existing methods of gaining information. Information asymmetries were perceived as an obstacle to the reallocation of financial resources. Merchants began to realize that one cause of the crash was inherent in the conditions that governed the granting of credit.[50] Many merchants discovered that their trust in some of their customers had been ill-founded.[51] Therefore, mercantile agencies came into existence in the aftermath of that financial crisis as a response to a need for improved scrutiny of credit risks.

The financial crisis of 1837 hit New York businessmen especially. Lewis Tappan was a New York merchant who suffered heavily from the crisis. When the house of Tappan failed in the crisis, the credit records which Tappan had wisely gathered were in great demand; Tappan decided to extend and elaborate his well-known records and sell them to the business world.[52] In 1841 he founded the Mercantile Agency.[53] The Agency sold information about the business standing and creditworthiness of US entities all over the US.

Broadly speaking, credit reporting agencies attempted to provide in a formal and institutional manner a service that had so far been almost exclusively a function of personal ties within the mercantile community.[54] Moreover, the business of credit reporting agencies was centered in New York. At the time mercantile agencies expanded their coverage there were high

47 *Id*.

48 LYNCH, *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, at 236-237.

49 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 7.

50 BECKMAN, *Credits and Collections in Theory and Practice*, at 135.

51 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 166.

52 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 7.

53 SYLLA, *An Historical Primer on the Business of Credit Rating*, at 23.

54 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 167 (also explaining that Tappan recruited correspondents across the country who submitted reports to the firm's New York office twice a year; clerks copied them into large ledgers and read the reports aloud for subscribers who called at the Mercantile Agency's office).

expectations about their eventual merits based on the belief that reliable reports would reduce losses by bad debts to a minimum.[55]

Credit reporting agencies continuously faced criticism and had to improve their practices in order to satisfy subscribers' needs. The primary charge leveled against them was the inaccuracy of their ratings. The source of the problem can be traced back to the very beginning of the credit information process, i.e. with the correspondents who gathered the data.[56] During the first half-century of their existence mercantile agencies made gradual but significant improvements in two major areas of credit reporting. First, they modified their procedures for the acquisition of information.[57] Second, they also modified their procedures for the transformation of data to subscribers.[58] The major new service was the rating or reference book: the first reference book was published by Bradstreet in 1857.[59] Later, in 1868, Henry Varnum Poor started to publish his annual report on the creditworthiness of the railroads.[60]

Severe criticism tended to destabilize the credit reporting agencies. First, legal threats came from rated businessmen who were outraged by their commercial credit ratings.[61] However, the credit reporting agencies defended them well against these legal suits. The courts held that if the agencies exercised reasonable diligence they could not be held liable even if their reports were inaccurate.[62] Second, there were attempts to pass regulatory legislation. This failed partly due to strong resistance from the Dun Agency. Third, the entry of new competitors challenged the Bradstreet and Dun agencies. After attacking the established agencies, these new agencies promised better service at lower rates.[63] "In order to offer lower subscription rates, the cheap agencies cut the costs of gathering credit data, largely by reducing the number of middlemen."[64] However, such competition did not

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55 EARLING, *Whom to Trust: A Practical Treatise on Mercantile Credits*, at 31-32.

56 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 170.

57 *Id*.

58 *Id*. at 170-171 (adding that the major weakness in the mercantile agencies' system was their low-paid, part-time correspondents).

59 *Id*. at 173 (stating that the agencies first published annual volumes; by the early 1870s, they published quarterly editions).

60 CHANDLER, *Henry Varnum Poor: Business Editor, Analyst and Reformer*; ABDELAL, *Capital Rules, The Construction of Global Finance*, at 167.

61 MADISON, *The Evolution of Commercial Credit Reporting Agencies in Nineteenth-Century America*, at 177.

62 *Id*. at 179.

63 *Id*. at 182.

64 *Id*. at 183-184 (mentioning further that some new agencies even subscribed to an established credit reporting service and simply resold the credit information to their own subscribers).

last long due to the fact that investors preferred to pay well for reliable reports.[65] Unreliable reports were considered useless even at discount prices. Quality counted above everything else. Although mercantile agencies thrived in the late 1800s, their reports contained complex information and very detailed data that would eventually deserve to be distilled into more simple rankings.[66]

II. 1909-1930s: Origins of the Credit Rating Industry

1. Emergence of the First Credit Rating Agencies

Security ratings were inaugurated at the beginning of the twentieth century in the light of the experience of commercial credit ratings.[67] Security ratings were first published by Moody's in 1909.[68] Compared with mercantile agencies, Moody's idea was to synthesize the complex data in the reports into a single rating symbol for each security.[69] The credit ratings applied to both stocks and bonds. The second agency to go into the business was Poor's Publishing Company.[70] Further, in the 1920s and 1930s, Moody's and Poor's Publishing Company faced competition from a third CRA, the Standard Statistics Company.[71] This CRA began to interpret the collected data, condensing their language into a symbol or rating.[72] At the fourth place in the field of security ratings appeared the Fitch Publishing Company.[73]

2. Attitude of Investors to Credit Ratings

In general, the security ratings were warmly received, especially by commercial banks and many individual investors. However, some traders – especially those who were capable of intelligent analysis themselves –

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65 *Id*. at 184 (adding that one type of agency that was created in the 1870s which provided more legitimate competition to the older agencies: this was the local or specialty agency, which concentrated on a small geographical area or on one line of trade).

66 *See infra* Part 1, Chapter 2(II)(1).

67 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 9.

68 *Id*. at 12; see also ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 97.

69 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 638.

70 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 12.

71 WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, at 160; ABDELAL, *Capital Rules, The Construction of Global Finance*, at 167 (also mentioning that in 1941, Poor's Publishing Company merged with Standard Statistics Company to form Standard & Poor's).

72 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 13.

73 *Id*.

greeted their arrival coldly. They probably regarded the application of the ratings as a factor limiting the probable market fluctuation of the rated bonds. According to them, security ratings acted as a brake on their own speculative profits.[74]

Since their inauguration as concise judgments on investment quality, bond ratings had been used widely by commercial banks and individual investors. Financial institutions relied on credit ratings to varying degrees. The general rule seemed to be that the larger New York city institutions used the ratings merely as a check on their own findings, while the smaller and the outside banks depended on the credit ratings almost exclusively as authoritative guides.[75] Furthermore, with respect to investment houses, the manuals of one or more CRAs were freely displayed in the reading rooms of practically all brokerage offices or other places where customers used to congregate.[76] Insurance companies too, as well as other types of institutional investors, were daily consultants of the credit ratings.[77]

One important factor in the growing use of credit ratings appeared to be a saving in the costs of investigation. Large institutional investors, even though they employed investment staff, did not have to employ such large departments or so many analysts as would be required if ratings were not available.[78] Among the large institutional investors the process of individual analysis – though not eliminated – was reduced by the availability of credit ratings; among the smaller institutions, the tendency to rely on credit ratings was more pronounced.[79] The greater change brought by the CRAs was that even individual investors could take part in the capital markets. Direct access to the capital markets seemed to improve the position of the ordinary investor. However, during this period, the chief deterrent to individual investors to become subscribers to the credit ratings was apparently the cost because rating manuals were very expensive.[80]

The investing community as a whole however was willing to pay for the credit ratings given the valuable information that CRAs provided. The success of the credit ratings confirmed the belief that investors did not want detailed analyses but positive statements of the relative value of investment securities.[81] Even though large institutions relied on their own findings and

74 *Id*. at 14.
75 *Id*. at 20.
76 *Id*. at 21.
77 *Id*. at 22.
78 *Id*. at 38.
79 *Id*. at 39.
80 *Id*. at 25.
81 *Id*. at 35.

own analysts, they consulted credit ratings to compare their results.[82] Smaller institutions bought rating manuals because they were dependent on credit ratings as an exclusive source of information.[83] The books were too expensive for individual investors but they could consult them in investment houses.

3. Building Reputational Capital

During the first phase of their existence, CRAs had to provide the investing community with credit ratings of good quality in order to build reputational capital.

CRAs continued to accumulate reputational capital during the 1920s while being able to gather and synthesize valuable information.[84] In a competitive market for financial information, CRAs would issue inaccurate credit ratings at their peril given the low barriers to entry.[85] A CRA' name, integrity and credibility were subject to inspection and critique by the entire investment community.[86] Therefore, reputational considerations were the most important driver of CRA behavior in order to gain market share. The market for credit ratings was a competitive market.

By the end of the 1920s the credit ratings systems and scales were well established.[87] Credit ratings were divided into different categories based on the credit quality of the rated financial instrument.[88] Even though a diversity of rating symbols was used, by 1930 it was possible in practice to match CRAs' rating symbols with each other.[89]

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82 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 644.

83 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 20.

84 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 640.

85 *Id*.

86 *Id*.

87 *Id*. at 641.

88 *Id*.

89 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 75; PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 642.

III. 1930s-1970s: Decreasing Interest in the Credit Rating Agencies

"We obviously cannot ask payment for rating a bond. […] To do so would attach a price to the process, and we could not escape the charge, which would undoubtedly come, that our ratings are for sale."[90]

1. First Uses of Credit Ratings in Regulation

The first use of credit ratings as a regulatory tool dates back to the mid-1930s.[91] Initially, regulators used credit ratings to distinguish investment-grade from speculative-grade securities.[92] The direction toward tying financial regulation to bond ratings was mainly given following the adoption of the US Banking Act of 1936.[93] On the heels of a sharp decline in credit quality in 1931, the Office of the Comptroller of the Currency stated that bank holdings of publicly rated bonds had to be rated at least triple-B to be carried at book value; otherwise the bonds were to be written down to market value and 50 percent of the resulting book losses were to be charged against capital.[94] If a bond was not rated above a certain level, its short-term price action would have an impact on the adequacy of bank capital, regardless of whether a loss was realized.[95] Further, in 1936, the Office of the Comptroller and the Federal Reserve (Fed) took a crucial step by prohibiting banks altogether from holding bonds not rated at least triple-B by two CRAs. [96]

Since 1938, developments have tended to widen the use of credit ratings as tools of financial regulation.[97] Nevertheless, until the 1970s, rating-based regulations evolved at a slow pace only. They were not considered to be an inherent part of the financial system.

At any rate, the most important development of the 1930s was the threshold investment-grade. Since the 1930s, credit ratings have divided securities into investment-grade and speculative-grade securities as a result of legis-

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90 MORGENSON, *Debt Watchdogs: Tamed or Caught Napping?* (quoting EDMUND VOGELIUS, former vice-president, Moody's, explaining the company's business model in a 1957 article).

91 WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, at 161.

92 *See, e.g.,* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

93 WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, at 161.

94 CANTOR & PACKER, *The Credit Rating Industry*, at 6.

95 WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings,* at 162.

96 CANTOR & PACKER, *The Credit Rating Industry*, at 6.

97 WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings,* at 162.

lation permitting fiduciaries such as pension funds and insurance companies from only investing in bonds above a level deemed prudent.[98]

2. Doubts over Credit Rating Accuracy and Decline of Investor Confidence

"By the late 1960s the rating agencies were unexceptional firms with only modest revenues derived from selling their reports to subscribers, the same business model that John Moody had conceived in 1909. Few businesses were as uninteresting, uneventful, and unimportant."[99]

Particularly from the 1930s to the 1970s, the importance of CRAs ebbed and flowed.[100] The large number of rating changes and rating lags were interpreted as a decline in the accuracy of credit ratings. Doubt was increasingly raised over CRAs' ability to generate valuable information. In the aftermath of the 1929 stock market crash, investor confidence in the CRAs began to decline. Investors were no longer very interested in purchasing credit ratings given the CRAs' poor track record in anticipating the financial crisis.[101]

Nevertheless, the business depression of the early 1930s appeared to be a factor in increasing the reliance placed upon bond credit ratings by commercial bankers, who emerged as the largest single group of rating adherents.[102] This fact cannot be interpreted as evidence of the increasing confidence of commercial bankers in credit ratings. Rather, the situation may best be explained by the regulatory use of credit ratings in determining the adequacy of bank capital. While other investors were reducing their use of credit ratings, commercial bankers increasingly started to purchase credit ratings following the newly adopted rating-based regulations.

Overall, the period from the 1930s to the 1970s is characterized by a declining interest in credit ratings. Many studies raised doubts about the accuracy of ratings. Especially as far as rating changes were concerned, CRAs were alleged to have generated information of little or no value.[103] Studies found that the changes merely reflected information already incorporated into

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98 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 35.

99 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 167.

100 HILL, *Regulating the Rating Agencies*, at 47; FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 161.

101 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, at 63.

102 HAROLD, *Bond Ratings as an Investment Guide, An Appraisal of their Effectiveness*, at 20.

103 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, at 63.

stock market prices. Evidence showed that CRAs were slower than the markets in reacting to the changing financial and operating conditions of firms.[104] Credit ratings were considered as a lagging indicator of market fluctuations.

At the same time, CRAs were driven by reputational constraints. CRAs calculated most of their credit ratings only after bond issues had been distributed.[105] In this way, less reliance on credit rating accuracy had more impact on the credit rating business. Investors did not purchase credit ratings if they did not trust the CRAs. Hence any loss of reputational capital directly generated a waning use of credit ratings. While CRAs were losing their reputation, fewer investors were interested in purchasing credit ratings. The importance of credit ratings was logically decreasing. Even though the rating business was already dominated by few CRAs only, competition and market forces were playing a disciplinary role.

IV. Since the 1970s: Enhanced Profitability of the Credit Rating Business

"From the mid-1970s to today, credit rating agencies have exploded in size."[106]

1. Expanding Use of Credit Ratings in Regulation

Since the 1970s CRAs have been more influential and profitable than ever before in their history, even though they have not changed their rating system in any substantial way since the 1930s.[107] Relating to the context, private companies in the US and abroad began to tap international capital markets in the early 1970s.[108] CRAs benefited from greater capital mobility and from financial disintermediation.[109]

Financial turmoil in the early 1970s led the Securities and Exchange Commission (SEC) to implement the Nationally Recognized Statistical Rating

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104 PINCHES & SINGLETON, *The Adjustment of Stock Prices to Bond Rating Changes*, at 41.

105 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 643.

106 *Id*. at 648.

107 *Id*.

108 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 168.

109 *Id*. (stating that the collapse of the Bretton Woods system in the early 1970s was accompanied – at least in the US – by the loosening of US capital controls in 1974, thereby resulting in the enhanced mobility of capital. Moreover, financial disintermediation implied that capital could flow directly from investors to issuers of securities, as opposed to going through banks).

Organization (NRSRO) concept, thereby conferring a privileged status on a few select CRAs.[110] The introduction of the NRSRO designation in 1975 was about to influence the credit rating industry decisively.[111]

Over the last four decades, regulators have increasingly used credit ratings to assess the risk of investments held by regulatory entities and to provide an appropriate disclosure framework for securities of differing risks.[112] As additional regulations increasingly depended on NRSRO ratings, credit ratings of those certified CRAs became more important and more valuable.[113] In this regard, the phenomenal growth of CRAs began in the 1970s.

2. Shift from Subscribers' Fees to Issuers' Fees

During the 1970 recession, investors began to question the financial condition of many companies. The default of Penn central on 82 million US dollars of commercial paper – which had been rated as investment grade – in 1970 was a catalyst in the transition to charging issuers.[114] Facing a liquidity crisis, many companies defaulted and issuers began to actively seek credit ratings in order to reassure nervous investors.[115] Issuers turned to CRAs in order to calm the market.[116] Therefore, one reason explaining why issuers started to pay for the credit ratings was to restore investor confidence in the capital markets.

From a structural perspective, it is interesting to point out why CRAs shifted from an investor-pays to an issuer-pays business model. On the one hand, investors ceased paying for credit ratings due to the free-rider problem.[117] Before the 1970s, investors typically paid for the credit ratings but this system was subject to abuse as credit ratings were easy to transmit; investors could often rely on free ratings so that some issues were eventually never rated.[118] This phenomenon became acute in the 1970s due to the low-cost photocopying revolution.[119] On the other hand, the increasing regulatory

110 FIGHT, *The Ratings Game*, at 7.

111 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 168; *see also* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

112 SEC, Rating Agencies and the Use of Credit Ratings under the Federal Securities Laws, at 35'258.

113 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 64.

114 CANTOR & PACKER, *The Credit Rating Industry*, at 4.

115 *Id*.

116 PINTO, *Control and Responsibility of Credit Rating Agencies in the United States*, at 8.

117 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 653

118 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 40.

119 SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets*, at 41; WHITE, *A New Law for the Bond Rating Industry*, at 49.

use of credit ratings incentivized issuers to pay for credit ratings. Rating-based regulations indeed played a decisive role. Issuers started to pay for the credit ratings because of the regulatory privileges they could get. As a consequence, in modern financial markets, one reason for CRAs' profitability is the issuers' strong demand for credit ratings.[120]

3. Rating Novel Financial Instruments

As the US economy evolved and increasingly complex financial instruments were developed, the CRAs branched out into the rating of novel financial products.[121] Rating complex financial instruments became a profitable source of revenue for CRAs. CRAs were incentivized by promising business opportunities arising from a new market segment. Issuers took advantage of hiring CRAs to rate innovative financial products because they could enhance the marketability of their products. The favorable credit ratings of the leading CRAs were crucial for investor acceptance of the new financial instruments.[122]

Until the mid-nineties CRAs derived most of their revenues from corporate or sovereign ratings; however, with the growth of structured markets, they increasingly engaged in the highly lucrative activity of rating structured finance instruments.[123] Today the leading CRAs derive the major part of their revenues from the structured finance segment.[124]

Market reliance on credit ratings increased while investors often had no other independent means to assess credit risk. In fact, investors depended on CRAs' assessments of the risks of securitized products due to their complexity and because the contents of the underlying asset pools were frequently not revealed.[125] Therefore, the leading CRAs may have acted as gatekeepers in the development of the structured finance market.[126]

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120 BIRCHLER & BÜTLER, *Information Economics*, at 106-107 (also stating, however, that the credit rating industry's profits are less impressive when compared to the aggregate value of rated bonds).

121 FIGHT, *The Ratings Game*, at 6.

122 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 119.

123 *EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment*, at 10.

124 COVAL, JUREK & STAFFORD, *The Economics of Structured Finance*, at 4 (reporting that 44 percent of Moody's' revenues in 2006 came from rating structured finance products, surpassing the 32 percent of its revenues from rating corporate bonds).

125 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 40 (referring to the subprime mortgage crisis that hit the financial markets in 2007).

126 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 176.

V. Analyzing the Evolution of the Credit Rating Industry

"No policymakers planned to put the rating agencies at the center of the international financial architecture, and yet, both formally and informally, that is where they are."[127]

The first interesting observation is that the three leading CRAs – Moody's, Standard & Poor's and Fitch – have always dominated the credit rating industry.[128] Since its creation at the beginning of the twentieth century, the credit rating industry has evolved tremendously and eventually skyrocketed in profitability. Surprisingly, most of the financial crises of the twentieth century have contributed to increasing the importance of CRAs and their credit ratings. Moody's and Standard & Poor's have become so powerful in modern financial markets that it is almost impossible to do public offerings without getting credit ratings from one and often both; even private offerings are frequently rated by the leading CRAs.[129]

In a nutshell, this trend was initiated in the 1970s given, in particular, the following three factors: the growth of internationalized capital markets, the use of credit ratings in financial market regulations and the rating of complex financial products. The credit rating industry first emerged in the US from the market-based system, i.e. the phenomenon of bank disintermediation.[130] Although CRAs should be less relevant in a bank-based system, over the last few decades CRAs have also gained importance in Europe.

Only private market forces were present at the origins of the credit rating industry. At the beginning of their existence CRAs responded to investors' needs for additional information. Competition played a disciplinary role.

However, in modern financial markets the leading CRAs keep their high market shares regardless of the quality of their credit ratings. Above all, rating-based regulations had a substantial effect on the credit rating industry. The core function of CRAs shifted from informational intermediaries to

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127 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 165.

128 Indeed, the first CRAs were chronologically Moody's, Poor's Publishing Company, Standard Statistics Company and Fitch Publishing Company. *See* WEST, *Bond Ratings, Bond Yields and Financial Regulation: Some Findings*, at 161 (reporting that in 1941, Standard Statistics was merged with Poor's to form Standard & Poor's).

129 HILL, *Regulating the Rating Agencies*, at 47.

130 *See further* ZIMMERMANN & HAFNER, *Trotz Kritik kein Verzicht auf Rating-Agenturen, Ungebrochene Nachfrage nach Bonitätsbewertungen in unsicheren Zeiten*, at 26 (giving an additional reason for the importance of credit ratings in the US: under the American approach companies are considered to be a "nexus of contracts". It is therefore possible to split companies' debts into independent parts and rate them separately).

providers of "regulatory licenses".[131] The historical evolution of the credit rating industry indicates that genuine demand fueled by market forces was displaced by artificial demand fueled by regulatory requirements.[132]

Further, the shift from the investor-pays to the issuer-pays business model distorted competitive incentives in the credit rating industry. Since the 1970s, investors have increasingly had access to financial information for free, yet they ended up paying high prices while being misled by inaccurate credit ratings. The lesson is that financial information has a price. The history of the mercantile agencies – or reporting agencies – shows that, in a competitive market, information of bad quality is worthless, even at a discounted price. Therefore, financial information has a value and it may well be worth paying for additional information.

From another perspective, credit ratings have economic effects on individual investors and their private freedom of contracting and trading. Initially, access to financial markets was limited to businessmen and bankers. Individual investors were not able to directly intervene in the capital markets. CRAs were created to provide individual investors with relevant information on investing in capital markets. This service responded to an informational need so that investors were able to engage freely in market transactions.

In modern financial markets, individual and unsophisticated investors have direct access to capital markets. Credit ratings provide a source of easily treatable information, accessible to a wide range of investors.[133] However, the world of finance has become increasingly complex especially over the last four decades. Even though investors are able to buy structured products, they sometimes lack the necessary knowledge or information to understand complex financial instruments.[134] If they are left with credit ratings to assess the products, they have no other option but to rely on them. Yet credit ratings should not be the sole information at the disposal of investors to assess the quality of financial products. Therefore, although credit ratings helped investors in the first place, in modern financial markets they have misled investors while being wrongly considered as a sufficient source of information to assess complex financial instruments. Limits on the private

131 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 623.

132 MACEY, *Corporate Governance: Promises kept, Promises Broken*, at 114.

133 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 3.

134 Even if there are substantive disclosure requirements and information has become easily available to investors, financial innovation and investment instruments have become so complex that they have become arcane to the average investor.

freedom to access capital markets must focus on investor protection. Unsophisticated investors in particular need to be protected. This objective is sometimes achieved by investment restrictions, yet such regulations are tricky to implement.

From another perspective, CRAs' main task was – at the inception of the industry at the beginning of the twentieth century – to collect sufficient amounts of information. Gathering relevant information was the most important issue in the financial markets at the time as it was not easy to obtain. If CRAs were created to provide investors with information, nowadays access to information is no longer the most significant problem. Increasingly, since the 1930s much of the CRAs' assessments are from publicly available news.[135] Information is easily accessible.[136] Nevertheless, market participants face new challenges in modern financial markets due to the quantity of information at their disposal. CRAs are used to screen valuable information and distill the complexity of the financial world into simple rankings. Therefore, selecting, analyzing and summarizing information play the most crucial role in the modern world. Available information must be assessed with respect to relevance and reliability. Yet the question arises as to whether simple rankings still have any value when assessing complex structured products.

§ 3. Description of the Credit Rating Industry

I. Core Activities of the Credit Rating Agencies

CRAs are business institutions dealing with information relevant to the financial markets. They are involved in several activities that can directly satisfy the needs of investors as well as issuers. Broadly speaking, their business activities concentrate on two key aspects. First and foremost, CRAs typically provide investors with external credit ratings, i.e., they help them make investment decisions. Second, they may also engage in offering ancillary services to issuers.

135 *See* PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 644.

136 Technology makes information easily available on a large scale.

1. Providing Investors with External Credit Ratings

"Ratings are a fact of life in modern society where non-specialists want complex information distilled by experts into easy-to-use symbols and rankings."[137]

a. Definition of a Credit Rating

The traditional CRA activity consists of selling external credit ratings. Through their credit ratings CRAs assess the creditworthiness of borrowers and debt instruments.[138] This activity allows for the transfer of information from borrowers to investors. Credit ratings reflect a CRA's opinion of how likely it is that an issuer will repay a particular debt or financial obligation, or its debts generally.[139] Two elements are at the core of every credit rating decision. First, the credit information is based on the probability of default of a borrower or a debt instrument. Second, CRAs assess the expected recovery in the event of default. Third, for investments with multiple assets, CRAs also determine the correlation of defaults.[140] The resulting credit ratings give a single ranking that accounts for these relevant assumptions.

The rating scale developed by Standard & Poor's is the best-known and the most widely used by CRAs: AAA; AA; A; BBB; BB; B, and so on.[141] The triple-A credit rating is the highest rating. Rating scales make an important distinction between investment-grade and speculative-grade ratings.[142] On Standard & Poor's scale the investment-grade rating comprises BBB- or above.[143]

Further, there is a distinction between external and internal credit ratings. On the one hand, external credit ratings are the credit ratings provided by independent private entities such as CRAs. On the other hand, internal

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137 COFFEE JR., *Gatekeepers: The Professions and Corporate Governance*, at 283.

138 US Credit Rating Agency Reform Act of 2006, Sec. 3(a) (codified as amended in the US Securities Exchange Act of 1934) (describing a credit rating as an assessment of the creditworthiness of an obligor as an entity or with respect to specific securities or money market instruments).

139 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 1.

140 COMMITTEE ON THE GLOBAL FINANCIAL SYSTEM (CGFS), *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 13.

141 *See, e.g.,* BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)*, para. 50 and accompanying note (stating that the notations of the Basel II framework follow the methodology of Standard & Poor's as a reference); *see also* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 29.

142 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 35; BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 604.

143 *See, e.g.,* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

credit ratings are generated directly by debt issuers and investment entities of financial institutions such as banks.[144]

Finally, CRAs have always insisted that their credit ratings merely provide the markets with their own opinions without actually recommending any rated product.[145] However, although CRAs deliver mere opinions about the creditworthiness of borrowers or debt securities, credit ratings are not untestable assertions given that rating performance can be measured ex post.[146] Moreover, the trend toward the establishment of a liability regime for CRAs acknowledges the fact that credit ratings are more than opinions protected by the constitutional freedom of speech.[147] CRAs provide commercial speech and need to be accountable.[148] Therefore, CRAs are judged by the investing community in regard to credit rating accuracy and can be judged by the courts in regard to potential securities fraud.

b. Financial Information Embedded in Credit Ratings

Broadly speaking, CRAs assess the creditworthiness of borrowers and debt instruments. Credit ratings are traditionally assigned to the credit risk of long-term corporate bonds, and additionally to the credit risk of Asset-Backed Securities (ABS), bank certificates of deposit, commercial paper and medium-term note programs, sovereign bonds, municipal bonds, preferred stock, private placements, and shelf registrations.[149] Either the debt-issuing entity or the debt instrument is rated. Over the last four decades CRAs have entered the business of rating innovative financial instruments. New business opportunities have led them to rate increasingly complex products.

CRAs gather and select relevant information, eventually issuing credit ratings. Through this process, a vast amount of qualitative and quantitative information on credit quality is distilled into a simple ordinal ranking.[150] In

144 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 604.

145 *See, e.g., Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee. on Oversight and Government Reform,* at 117 (statement of RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

146 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 165-166.

147 *See infra* Part 2, Chapter 4(IV) (discussing the removal of the special treatment for CRAs with respect to liability).

148 *See infra* Part 2, Chapter 4(IV)(2)(a) (explaining that credit ratings should be regarded as commercial speech).

149 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 97.

150 *Id*. at 126.

fact, CRAs only assess credit risk.[151] Generally speaking they do not evaluate the other risk components which must be assessed by investors themselves.

Credit ratings can be classified into three main categories: corporate ratings, structured finance ratings and sovereign ratings.

(i) Corporate ratings

Corporate ratings are assigned to all kinds of companies in the private sector. For instance, rated entities can be financial institutions such as banks, securities firms, insurance, real estate and non-bank finance companies. With respect to corporate ratings, CRAs are active in both equity and debt markets.

(ii) Structured finance ratings

Structured finance ratings comprise the assessment of novel instruments by CRAs. Indeed, CRAs started to operate in the structured finance segment in the mid-1970s.[152] The central assumptions at the core of CRA models in structured finance are default rates, recovery rates and correlations.[153] Leading CRAs argued that their credit ratings were consistent between traditional and novel instruments, but this was seriously questioned in the aftermath of recent financial debacles.[154]

(iii) Sovereign ratings

CRAs rate government debts. In comparison to the assessment of private entities through corporate ratings, sovereign ratings are attributed to entities in the public sector. The art of forecasting the likelihood that a government will default on its debt is particularly challenging due to the fact that the central issue in sovereign borrowing is not the ability to pay but rather the

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151 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 157.

152 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 20 (stating that the leading CRAs first issued credit ratings for Mortgage-Backed Securities (MBS) in the mid-1970s).

153 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 13.

154 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 161. In structured finance ratings, the estimate of recovery rates plays a crucial role in contradistinction to its lesser importance in corporate ratings (in corporate ratings, default rates play the most significant role; in structured finance ratings, the highest tranche of a CDO – for instance – may have a relatively low default rate but a very low recovery rate so that investors lose almost everything in the event of default). Estimating the correlation of defaults plays a crucial role in structured finance ratings but is irrelevant in corporate ratings.

willingness to pay.[155] This requires interpretive work on the part of the CRAs. At any rate, sovereign ratings affect every other bond rating in the private sector because of sovereign ceilings. Sovereign ceilings mean that CRAs do not generally rate domestic firms' foreign-currency debt higher than that of their government.[156]

2. Counseling Issuers in Doing Ancillary Business

In addition to issuing credit ratings, some CRAs also offer ancillary business services. Although this activity is not regarded as the typical agency product, it has gained momentum over the past decades. Accordingly, ancillary business grew at an extraordinary pace until generating substantial profits for CRAs. The significance of these new activities eventually raised concerns about CRAs' corporate governance. Confusion has especially arisen during the 2007-2009 financial crisis.

For instance, ancillary services include ratings assessment services whereby issuers present hypothetical scenarios to the CRA to determine how their credit rating might be affected by a proposed business activity; other services may include risk management and consulting services to help financial institutions manage credit and operational risk.[157] CRAs provide this service in exchange for a fee.

The practical importance of CRAs' ancillary services is mainly linked to structured products. In fact, CRAs advise arrangers about the rating consequences of proposed structures. Before issuing the financial product, the arranger can change its structure according to the feedback of the CRA. Ancillary services give the issuers the opportunity to work with CRAs on the composition of structured products.[158] This process allows issuers to get higher credit ratings than they would have had had theynot implicated the CRA in the structuring process.

Concerns have especially been raised about ancillary business services with respect to the financial crisis triggered in 2007. In the subprime mortgage market in particular, issuers did not purchase these ancillary services to get professional advice but rather to know how to take advantage of the rating

155 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 162 (explaining that no third party can enforce a sovereign debt contract; moreover, sovereign governments never really run out of assets to cover their obligations although they may fall short of foreign exchange or choose to repay one debt instead of another).

156 *See* ABDELAL, *Capital Rules, The Construction of Global Finance*, at 162.

157 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 4.

158 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals.*

process.[159] Doing ancillary business may generate conflicts of interest.[160] The purchase of ancillary services remains therefore closely connected with the issuance of credit ratings. The question therefore arises as to whether the formulation of credit ratings should be completely separate from the ancillary services offered to issuers on the engineering of complex financial products.[161]

II. Rating Process

Credit ratings are attributed to borrowers or debt instruments after the completion of a rating process. CRAs deal with the information at their disposal in a systematic way. They strive to provide the financial actors with timely credit ratings. On the one hand, they issue initial credit ratings as soon as the rating process is performed. On the other hand, they keep monitoring their credit ratings and change them according to market fluctuations. CRAs generally receive separate revenue streams for initial credit ratings and ongoing monitoring.[162]

A rating committee lies at the core of the rating process used by the leading CRAs.[163] In general, rating decisions are made by a simple majority vote of the rating committee.[164] The rating committee is competent to provide initial credit ratings or rating updates. This central organ of a CRA is typically composed of a lead analyst, managing directors or supervisors, and junior analytical staff.[165]

1. Providing Initial Credit Ratings

In general, the rating process starts when a subscriber or an issuer requires a credit rating, giving rise to the issuance of a solicited rating.[166] The demand comes from subscribers in the investor-pays business model and from issuers in the issuer-pays business model. CRAs provide the rating service

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159 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 11 (also mentioning that issuers may hope to get higher credit ratings if they purchase ancillary services or may conversely fear that their failure to do so could negatively impact their credit rating).

160 *See, e.g.,* HILL, *Regulating the Rating Agencies,* at 51; *see also* PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 68.

161 DE LAROSIÈRE Report, at 19.

162 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 14.

163 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 5.

164 *Id*.

165 *Id*.

166 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 604.

in exchange for a fee. Initial rating fees are typically calculated as a percent of the total value of the deal.[167] CRAs sometimes get involved in assessing borrowers or debt instruments without request, thereby providing unsolicited ratings.[168] In any case, CRAs take several specific steps prior to issuing their credit ratings.

First, CRAs' analysts gather relevant information with a view to rating borrowers or debt instruments. Relevant information includes quantitative and qualitative data, and depends most notably on whether a financial entity or a debt instrument is rated.[169] CRAs' analysts also request information from borrowers or issuers and research other available sources for information.[170] Credit rating decisions are not only based on publicly available information but also on information acquired from private sources. For instance, issuers or borrowers provide to the CRAs qualitative information about their policy choices and strategic plans; the major CRAs gather qualitative information about borrowers' or issuers' business environment, for instance their economic and political environment.[171] Since existing information is voluminous, the primary task of the CRAs consists of selecting relevant data.

Second, CRAs analyze the collected data. CRAs assemble analytical teams that undertake research, if applicable meet with issuers, and prepare a report containing a rating recommendation and explaining the rationale.[172] CRAs mix quantitative and qualitative data in their rating decision, thereby suggesting that they produce a subjective judgment about the borrower or debt instrument. However, they are aware of the fact that public views tend to revolve around the numbers, referring to a technical rating process rather than judgmental.[173] With respect to structured finance ratings, CRAs typically use mathematical models, such as the Monte Carlo simulation. The Monte Carlo simulation is the mathematical benchmark most widely used by professionals for comparison purposes.[174]

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167 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 14 (adding that initial rating fees can often reach into the hundreds of thousands of US dollars).

168 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 605-606.

169 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 111 (explaining that three basic types of information are relevant to estimate the probability of default, namely the financial statements, the market prices of a firm's debt and equity, and subjective appraisals of the firm's prospects and risks).

170 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 5.

171 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 33.

172 *Id.* at 33.

173 *Id.* at 35.

174 GRIFFIN & TANG, *Did Subjectivity Play a Role in CDO Credit Ratings?*, at 23.

Third, the rating process requires a rating determination. After the teams of analysts present their view to a rating committee of senior CRA officials, the rating committee votes on the final determination.[175] Credit ratings are established according to rating scales. CRAs reduce the relevant information to a letter symbol.

Fourth, the last step is the disclosure of the credit rating. CRAs principally disseminate credit ratings as soon as practicable.[176] Credit ratings are typically disclosed to the public in the issuer-pays business model, yet only to subscribers in the investor-pays business model. In the issuer-pays business model, the disclosure decision is generally subject to appeal by the issuer.[177] Therefore, there is a possibility that the credit rating is never published if the issuer is not satisfied with the outcome. Such a rating practice is common in the structured finance segment. The issuer can accept the rating determination and have the trust issue the securities with the proposed capital structure.[178] The issuer may adjust the structure to provide the requisite credit enhancement in order to obtain the desired credit rating and then accept disclosure of the credit rating.[179] Alternatively, the issuer can choose to not hire the CRA and – depending on the engagement contract – pay the CRA a "break-up fee".[180] In this case, the issuer may hire another CRA to rate the structured product and may finally be able to obtain the desired credit rating.

2. Reviewing Credit Ratings

"Surveillance should be thought of as the continuation and extension of the links between issuers, raters, and investors."[181]

The rating business is a continual process. In addition to giving initial credit ratings, the CRAs monitor their credit ratings on an ongoing basis, upgrading and downgrading as they deem appropriate, or putting credit ratings on "credit watch" if a change may occur soon.[182] Surveillance fees are typi-

175 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness,* at 33.

176 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 9.

177 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 33.

178 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 21.

179 *Id*. (explaining, for instance with respect to CDOs, that the issuer may provide the requisite credit enhancement for the highest tranche to get the triple-A rating).

180 *Id*. at 21.

181 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 41.

182 HILL, *Regulating the Rating Agencies*, at 48-49.

cally assessed annually at a fixed price and often range from 2,000 US dollars to an atypically high 30,000 US dollars depending on the size and complexity of the deal.[183]

Reviewing credit ratings is a very important stage in the rating process since market participants will react to rating changes and to rating outlooks as well. CRAs place great emphasis on the ongoing monitoring of issuers since new events can have an effect on the quality of any credit rating.[184]

Leading CRAs have surveillance teams that monitor credit ratings.[185] The reason is that timeliness is an important objective of the rating business. As far as procedural aspects are concerned, prior to revising the attributed credit rating, CRAs typically have rating outlooks and rating reviews, such as watchlists.[186] Especially with respect to credit rating downgrades, CRAs typically warn issuers or borrowers before disclosing the lower credit rating. Issuers or borrowers are thus given a chance to improve their creditworthiness and avoid an undesired downgrade. This proceeding implies interactions between the rated entity and CRAs that may result in conflicts of interest.

III. Main Uses of Credit Ratings in Modern Financial Markets

Credit ratings are widely used around the globe. CRAs effectively have an immense impact on the availability and cost of credit. It is worth describing the main uses of credit ratings in order to understand their importance in modern financial markets. First, CRAs traditionally provide investors with financial information. Second, over the past decades regulators have increasingly incorporated credit ratings in all kinds of financial market regulations. Third, credit ratings are also widely used in contracting regardless of any regulatory mandates.

183 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 14.

184 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 41.

185 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 605.

186 HIRSCH & BANNIER, *The Economic Function of Credit Rating Agencies*, at 1.

1. Credit Ratings as Providing Financial Information

CRAs traditionally act as information intermediaries.[187] They are important producers and disseminators of financial market information.[188] Their role primarily consists of addressing information asymmetries in the financial markets.[189] First, CRAs provide investors with relevant information for decision-making. Prospective borrowers always know more than their potential lenders about their own creditworthiness.[190] The existence of independent sources of information such as credit ratings prevents borrowers and issuers from disclosing information selectively in order to bias outsiders' opinion. The presence of information intermediaries is deemed to increase transparency in the financial markets.[191] If no means existed for transmitting relevant information, worthy investment projects would fail to be financed, thereby implying a market failure. [192]

Second, borrowers and issuers also benefit from reducing information asymmetries since this fact has a positive impact on the availability and cost of credit.[193] Indeed, companies with a bad credit rating or no credit rating are forced to accept a risk premium to borrow capital.[194] High credit ratings give access to cheaper credits. Borrowers and issuers are therefore interested in being highly rated with a view to reducing their cost of borrowing.[195] Moreover, the effectiveness of credit ratings in communication leads to their use in marketing and advertising.[196] Borrowers and issuerssuers frequently refer to the credit ratings that they have obtained to convince investors of their creditworthiness.

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187 *See* SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox,* at 12; *see also* BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 306.

188 BIRCHLER & BÜTLER, *Information Economics*, at 105.

189 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 608; CAMANHO, DEB & LIU, *Credit Rating and Competition*, at 2 (referring to the pivotal impacts of credit ratings due to asymmetric information between issuers and investors).

190 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 11.

191 *See* SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox,* at 12; *see also* BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 306.

192 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 11.

193 *See, e.g.,* ACKERMANN & JÄCKLE, *Ratingverfahren aus Emittentensicht*, at 878-879.

194 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 609.

195 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 40.

196 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 40.

Third, investors save costly research and time.[197] In fact, CRAs can assess the creditworthiness of borrowers or debt securities on behalf of many individual investors, thereby achieving an economy of scale.[198] This service is especially valuable if the costs of a credit analysis are too high compared with the investment.[199] In particular, small and unsophisticated investors cannot always afford the cost of undertaking their own credit assessments.

In this way, CRAs gain in prominence in a market-based system. When financing is provided directly by a large number of small lenders, it is unlikely that any single lender has enough at stake to be sufficiently incentivized to make an adequate information-gathering effort.[200] In contrast, CRAs typically do not have a crucial place in a bank-based system. This is because substantial evaluation and monitoring costs might only be worth bearing for a bank fully exposed to potential borrower default.[201]

2. Credit Ratings as Regulatory Tools

The use of credit ratings in regulations stems from the 1930s and has increased tremendously since the 1970s. As a consequence, CRAs wield quasi-governmental power.[202] Their credit ratings are not only used by investors but also by regulators. In this respect, CRAs have ventured far beyond their traditional role as information intermediaries. Rating-based regulations have encouraged CRAs to sell "regulatory licenses" in modern financial markets.[203] Obtaining favorable regulatory treatment is another reason to purchase credit ratings. In some cases, credit ratings are not in demand for their informational value but only for their regulatory value.

Credit ratings are primarily used in regulations for the purpose of determining capital requirements and identifying eligible assets or permitted asset concentrations.[204] With respect to bank capital requirements, the Basel II framework has fostered the use of credit ratings in order to measure regula-

197 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 608.

198 SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox,* at 12.

199 *Id.*; BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 306-307.

200 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 11.

201 *Id.*

202 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (opening statement of JOSEPH I. LIEBERMAN, Chairman, Committee on Governmental Affairs), at 1.

203 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 623.

204 *See further* THE JOINT FORUM, *Stocktaking on the use of credit ratings*, at 3-4.

tory capital on the global scale.[205] The revised Basel III framework maintains reliance on credit ratings in capital requirement regulations.[206] With respect to investment restrictions, regulators have widely used credit ratings in the pension funds and insurance sectors in the US. Accordingly, financial market regulators effectively outsourced their safety judgments to third-party CRAs.[207]

However, concern has been raised about the negative effects of rating-based regulations in the financial markets.[208] Especially in the US, lawmakers and regulators have already initiated a trend toward the complete withdrawal of regulatory references to credit ratings.[209]

3. Credit Ratings as Contracting Tools

"Ratings are currently used more as benchmarks for market participants than as a source of information for investors."[210]

Credit ratings have also been widely used for contracting purposes. In modern financial markets, investors increasingly turn to credit ratings. Credit ratings can be used in agreements – such as merger or loan agreements – by sophisticated and unsophisticated investors.

In particular, "rating triggers" can cause payment obligations to accelerate or require the posting of collateral based upon credit rating downgrades. Concern has increasingly been raised about the fact that "rating triggers" enhance the effects of rating changes, thereby increasing market volatility and amplifying financial shocks.[211]

Further, credit rating downgrades below a certain level can result in companies violating their debt covenants, thereby possibly triggering a default

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205 *See, e.g.,* ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 12.

206 *See* BCBS, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, at 52-53; *see infra* Part 2, Chapter 4(II)(2)(a).

207 WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

208 *See, e.g.,* PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 681-707.

209 *See infra* Part 2, Chapter 4(II) (discussing the negative effects of rating-based regulations and the ongoing trend to remove regulatory references to credit ratings from financial market regulations).

210 STAFF OF SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS, *Financial Oversight of Enron: The SEC and Private-Sector Watchdogs*, at 78.

211 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 611.

on their debt obligations.[212] In the worst-case-scenario, credit rating downgrades may even throw companies into default.[213]

Finally, credit rating updates – upgrades and downgrades – are often used as contractual signals of borrowers' creditworthiness: above all, downgrades can lead to demands for more collateral, higher interest rates on loans or bonds, or even immediate debt repayments.[214] The consequence of credit rating downgrades depends on contractual clauses; for instance, downgrades below a certain level may be enough to trigger the foreseen effects.[215] By being used to determine contractually acceptable collateral, CRAs play a significant role in the financial markets. For instance, investors can require investment-grade securities as collateral. CRAs effectively decide what assets can be used as guarantees.

4. Credit Ratings as Monitoring Tools

"Their role has moved from being purveyor of information to being monitor of financial probity."[216]

CRAs screen possible investments and monitor borrowers or debt instruments. As a consequence of market reliance on credit ratings, CRAs eventually select which loans are viable or not. Traditionally, banks fulfill this function and scrutinize borrowers. In a market-based system, investors tend to rely on CRAs to a great extent. CRAs play a role in monitoring borrowers as private-sector watchdogs.[217] In fact, by monitoring borrowers and directly influencing investor investment decisions, CRAs literally take a function that banks generally perform.

Under some circumstances, CRAs even exercise an active monitoring function.[218] In particular, watchlists have developed into active monitoring de-

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212 BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 307.

213 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (testimony of JONATHAN R. MACEY, J. DuPratt White Professor of Law, Cornell Law School), at 44.

214 THE ECONOMIST, *Exclusion zone, Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

215 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 8.

216 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 167.

217 STAFF OF SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS, *Financial Oversight of Enron: The SEC and Private-Sector Watchdogs,* at 1-2, 5.

218 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 167 ("Their role has moved from being purveyor of information to being monitor of financial probity").

vices allowing CRAs to exert real pressure on the reviewed companies.[219] The threaten to downgrade puts rated entities under pressure. CRAs will monitor borrowers and update their credit ratings whenever circumstances change. Discipline may take the form of a credit rating update or a listing on Moody's "Watchlist" or Standard & Poor's "CreditWatch", thereby signaling positive rating trends or, more usually, negative rating concerns prior to a credit rating downgrade.[220]

However, the subprime mortgage crisis highlighted the weaknesses of the model. CRAs performed poorly and a great number of their credit ratings of mortgage-related securities went wrong. Excessive outsourcing of credit risk assessment to CRAs was rapidly recognized as an extremely risky practice. Accordingly, one main lesson from the subprime mortgage meltdown is that CRAs cannot successfully act as monitors of borrowers and debt instruments.

219 HIRSCH & BANNIER, *The Economic Function of Credit Rating Agencies*, at 23.

220 SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 41.

PART 2: Competitive Environment in the Credit Rating Industry

§ 4. Regulatory Structure and Effects on Competition

I. Background

1. Three Regulatory Aspects Influencing the Competitive Environment in the Credit Rating Industry

This academic work highlights the effects of the regulatory context on the competitive environment in the credit rating industry. The level of competition in a specific industry significantly depends on the structure of the regulatory frameworks. Appropriate regulation may enhance competition, in contrast inappropriate regulation may distort it.[221] If regulatory intervention prevents private-sector entities from competitive incentives, market forces will no longer be able to discipline private entities. This study aims at assessing whether regulatory intervention can be associated with a competitive credit rating industry. The regulatory context best explains why CRAs have become so central to the capital markets even though credit ratings are not the only source of financial information.[222] Favorable regulatory treatment has given a significant privilege to CRAs – especially to leading and certified CRAs such as Moody's, Standard & Poor's and Fitch.[223]

With respect to the regulatory structure, three aspects play a decisive role in determining the level of competition among the leading CRAs. First, rating-based regulations enhance the importance of credit ratings in the financial system. CRAs are less subject to private market forces if market participants are – for regulatory purposes – forced to rely on their credit ratings regardless of their performance. Rating-based regulations also give a regulatory privilege to certified CRAs as opposed to non-certified CRAs. Second, the regulatory oversight of CRAs effects competition in the market for credit ratings. Highly regulated industries generally tend to become less

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221 *See* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 28-29 (stating that an anticompetitive regulatory structure has surrounded CRAs for over thirty years).

222 *Id.* at 28-31.

223 CRAs enjoy a regulatory advantage as opposed to other gatekeepers, and certified CRAs enjoy a regulatory advantage as opposed to non-certified CRAs.

subject to competitive pressure. The trend toward an increasing regulation of CRAs gives rise to concern about its impact on competition in the credit rating industry. Regulatory compliance with the new rules is costly and may raise new barriers to entry. Nevertheless, incentive-based regulations could be designed so as to enhance the level of competition in the targeted industry. Third, special treatment for CRAs gives them a privileged position as compared with other gatekeepers such as securities analysts and auditors. On the one hand, CRAs have a long history of being immune to civil liability, Hence, until recently CRAs have taken advantage of the absence of litigation costs. On the other hand, exemption from the SEC Regulation on Selective Disclosure and Insider Trading (SEC Regulation FD) gave CRAs access to inside information that other market participants could not have.[224] CRAs were privileged in comparison to other gatekeepers and investors, hence benefiting from a special treatment in the market for financial information.

2. US Dodd-Frank Act of 2010

In the US, the US Dodd-Frank Act of 2010 recently reformed the credit rating industry. This Act comprisesthe most sweeping changes to financial regulation since the reforms that followed the Great Depression. The financial regulatory reform bill is depicted as putting consumers first at the expense of the financial industry. It seeks to fix the "too big to fail" problem and to avoid further bailouts in the financial system.[225] With respect to CRAs, the US Congress acknowledged that the "gatekeeper" role of CRAs justifies the same level of public oversight and accountability as other gatekeepers such as securities analysts and auditors.[226] Concern had been raised about addressing the contradiction with respect to the competitive environment in the credit rating industry: CRAs became private-sector entities with quasi-governmental power, yet there was weak oversight of their rating practices.[227]

If ambitious proposals were made to completely overhaul the credit rating industry, legislatory efforts have resulted in a compromise. Nevertheless, there are very interesting amendments to the credit rating industry. Some will significantly effect the rating business and the financial markets.

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224 SEC Regulation FD, Final Rule: Selective Disclosure and Insider Trading (adopted in October 2000 to combat market abuse).

225 US Dodd-Frank Act of 2010, preamble.

226 *Id.* Sec. 931.

227 *See, e.g.,* EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 41.

The agency reform set out in the US Dodd-Frank Act of 2010 contains three key aspects influencing the competitive environment in the credit rating industry. First, the agency reform seeks to remove rating-based regulations from any kind of regulatory frameworks.[228] Second, the reform bill establishes a regulatory and supervisory regime for CRAs.[229] Third, it removes the special treatment for CRAs. On the one hand, it introduces a new liability regime aimed at making CRAs more accountable for their credit ratings.[230] On the other hand, it eliminates the exemption from SEC Regulation FD that privileged CRAs compared with other gatekeepers and investors.[231] As a result, the level of competition among the leading CRAs is expected to significantly evolve in the future in response to the new legislation. The question arises as to what extent the effect on competition will be positive.

II. Rating-Based Regulations

1. Use of Credit Ratings for Regulatory Purposes and Negative Effects on Competition

Increasing the level of competition in the credit rating industry is generally considered an impossible target as long as credit ratings are used in financial market regulations. The first use of credit ratings in financial market regulations stems from the 1930s in the US. Especially since the 1970s credit ratings have been increasingly used in all kinds of regulations. As additional regulations came to depend more on credit ratings, those credit ratings became more important and more valuable; however, the value of the information embedded in the credit ratings did not increase.[232] In fact, the regulatory use of credit ratings has had a detrimental impact on competition in the credit rating industry and has been heavily criticized by many scholars.[233] Rating-based regulations are purported to create wrong incentives in the credit rating industry, thereby jeopardizing the quality of the credit ratings. Major problems arise insofar as CRAs are private-sector entities with quasi-regulatory power.[234] Concern has been raised among schol-

228 US Dodd-Frank Act of 2010, Sec. 939-939A.

229 *Id.* Sec. 932(a).

230 *Id.* Sec. 933 and Sec. 939G.

231 *Id.* Sec. 939B; SEC, Removal from Regulation FD of the Exemption for Credit Rating Agencies (implementing the US Dodd-Frank Act of 2010).

232 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 64.

233 *See, e.g.,* PARTNOY, *Do away with rating-based rules*; *see also* ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?*.

234 *See, e.g.,* EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 41.

ars about the fact that regulators should completely withdraw rating-based regulations and find an alternative to credit ratings. For instance, many researchers plead for the use of market-based information as a substitute for credit ratings.[235]

Rating-based regulations and competition seem to be incompatible since rating-based regulations distort competition and, at the same time, competition cannot be restored as long as credit ratings are used in financial market regulations. The negative effects of rating-based regulations on competition are twofold: First, the regulatory use of credit ratings creates artificial demand for credit ratings and maintains the demand for credit ratings at an artificial level.[236] Second, the regulatory use of credit ratings leads to an excessive reliance on credit ratings. Once legal rules recommend dependence on credit ratings, it is only natural that market participants rely heavily on such credit ratings.[237] As a consequence, the certified CRAs are not disciplined by private market forces and can keep their market power even if they do not provide investors with valuable information.

Accordingly, as long as credit ratings are used in regulations, competition has counterproductive effects. This situation is best explained by the fact that rating-based regulations create incentives for CRAs to compete to lower rating standards in order to issue higher ratings instead of maximizing rating quality. CRAs sell "regulatory licenses".[238] Therefore, it is not surprising that the US Credit Rating Agency Reform Act of 2006 created wrong incentives in the credit rating industry even though its primary objective was to enhance competition among CRAs.[239] Recognizing too many certified CRAs can only lead to a "race to the bottom" in the sense that certified CRAs compete amongst themselves to lower rating standards instead of focusing on credit rating quality. Rating-based regulations can come with

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235 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 705 (proposing the use of market-based information as an alternative to external credit ratings; in this early paper, Professor PARTNOY promotes the use of credit spreads instead of credit ratings for regulatory purposes); PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis* (suggesting that regulators could alternatively use credit spreads or credit default swap prices in their financial market regulations); FLANNERY, HOUSTON & PARTNOY, *Credit Default Swap Spreads As Viable Substitutes for Credit Ratings*.

236 *See* CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9; *see also* DE LAROSIÈRE Report, at 9.

237 *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 83.

238 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 623; *see further* FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 39 (describing certified credit ratings as "official seals of approval").

239 US Credit Rating Agency Reform Act of 2006, preamble and Sec. 2(5).

market concentration only. As a consequence, rating-based regulations and competition are not compatible.

2. Regulations Depending on Certified Credit Ratings

Credit ratings are used for regulatory purposes both at the international and national level.[240] The use of credit ratings in financial market regulations depends on the authorities that establish the regulatory and supervisory frameworks. The most significant uses of credit ratings in regulations stem from US financial market regulations and, on the global scale, from the Basel II Accord. They persist in the Basel III framework.

CRAs that issue the credit ratings relevant for financial market regulations are commonly called certified CRAs. Their credit ratings are labeled certified credit ratings. The specific terminology attributed to this concept depends on the regulators using credit ratings in their regulations. US regulators use the NRSRO concept.[241] The US knows the most elaborate use of credit ratings for regulatory purposes. Certified CRAs are called NRSROs. Their credit ratings are labeled NRSRO ratings. On the global scale, the Basel Committee on Banking Supervision (BCBS) defines certified CRAs as External Credit Assessment Institutions (ECAIs) in the Basel II and III frameworks.[242] National regulators are free to decide whether to implement the Basel II Accord or the newly revised Basel III framework, and use the ECAI terminology in their own financial laws.[243] For instance, the Swiss FINMA is in charge of recognizing CRAs used in Switzerland for regulatory purspose s.[244] This supervisory authority publishes a list of certified CRAs and monitors the agencies on its list regularly.[245]

As long as the application of financial market regulations turns on credit ratings, there is no doubt that a regulatory approval of CRAs is needed.[246] A

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240 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38.

241 ABDELAL, *Capital Rules, The Construction of Global Finance,* at 168; *see also* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

242 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II),* para. 90; BCBS, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, at 52-53.

243 *See* IOSCO, *Report of the Task Force on the Subprime Crisis*, at 23; *see* EU Regulation (EC) No. 060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 2, para. 3 (referring to the ECAI terminology).

244 *See, e.g.,* LOMBARDINI, *Droit bancaire suisse,* at 146.

245 Swiss FINMA Circular on Recognition of Rating Agencies for the Assessment of Capital Adequacy Requirements, para. 39; *see* MEIER, *Regulierung von Ratingagenturen, Auswirkungen auf die Schweiz,* at 946.

246 SCHWARCZ, *The Role of Rating Agencies in Global Market Regulation*, at 307.

variety of recognition criteria determine the regulatory decisions as to which CRAs deserve to be labeled certified CRAs.[247] The most significant criterion relates to CRAs' credibility with international or domestic market participants.[248]

Credit ratings are generally used by regulators for two main purposes: determining risk-sensitive capital requirements and defining investment restrictions.[249]

a. Bank Capital Requirement Regulations

Bank capital requirement regulations are especially used in the banking and securities sectors.[250]

First, capital requirement regulations consist of the most elaborate incorporation of credit ratings in financial market regulations. On the global scale, the BCBS enacted the Basel II framework in 2004, providing a solution to determine the riskiness of assets based on CRAs' assessments.[251] The BCBS proposed to use credit ratings in risk-sensitive bank capital requirements because credit ratings provide a relatively standardized, harmonized and easy-to-understand measure of credit risk.[252] The Basel II framework was heavily criticized in the financial crisis that hit the financial markets in 2007 because of its failure to establish adequate measures to supervise the banking system. Post-crisis reforms were needed. Basel III is considered to be the core regulatory response to problems revealed by the recent financial crisis.[253] Basel III consists of a compilation of reform measures to strengthen the regulation, supervision and risk management of the banking sector. Although reducing reliance on credit ratings is portrayed as an area of focus, at this stage Basel III reforms still rely extensively on credit ratings to assess bank capital requirements.[254] The BCBS has not yet been able to propose any suitable alternative to external credit ratings, i.e. credit ratings continue to play an important role in bank capital requirement regulations.

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247 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 8.

248 *Id.*

249 THE JOINT FORUM, *Stocktaking on the use of credit ratings*, at 3-4.

250 *See further id.* at 4-8.

251 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)*, para. 50. The BCBS is an international body that establishes international standards relevant for national regulators and financial institutions such as banks. *See, e.g.,* WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations*, at 4; *see also* ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 12.

252 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55.

253 WELLINK, *The New Framework for Banking Supervision,* at 4.

254 *Id.*

National regulators implement the Basel II Accord, and subsequently the Basel III framework, on a voluntary basis. In the EU, the EU Capital Requirement Directive of 2006 outlined necessary measures with respect to the establishment of capital adequacy requirements applying to investment firms and credit institutions; the Directive implemented Basel II at the EU level.[255] In Switzerland, the Federal Council enacted the Swiss Capital Adequacy Ordinance of 2006 with a view to partly incorporating the Basel II Accord into Swiss legislation.[256] Based on the Ordinance, the Swiss FINMA published a circular to define the criteria used in Switzerland to recognize CRAs for regulatory purposes.[257] The EU and Switzerland are currently assessing proposals to implement Basel III reforms in their financial laws.[258] Overall, focus is put on addressing the "too big to fail" problem.[259] Neither the EU nor Switzerland have come forward with alternatives to the regulatory use of credit ratings. Nevertheless, the EU is considering reducing over-reliance on credit ratings by removing regulatory references to credit ratings.[260] Switzerland, however, has not yet initiated any steps to move away from credit ratings as highlighted by the recent draft amending the circular on CRAs' recognition.[261]

b. Regulatory Investment Restrictions

Investment limitations are especially used to supervise institutional investors.

The use of credit ratings for regulatory purposes is generally less extensive in the insurance and pension funds sectors.[262] Above all, investment restrictions are used in the US for institutional investors.[263] In the US, many State

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255 EU Capital Requirement Directive of 2006, preamble (5); *see* CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 5-6.

256 MEIER, *Regulierung von Ratingagenturen, Auswirkungen auf die Schweiz,* at 946; NOBEL, *Schweizerisches Finanzmarktrecht und internationale Standards*, at 205.

257 Swiss FINMA Circular on Recognition of Rating Agencies for the Assessment of Capital Adequacy Requirements.

258 *See, e.g., Swiss "Too Big Too Fail" Report (Swiss TBTF Report),* at 4 (adding that the proposed requirements are more rigorous than the minimum standards of Basel III).

259 KAUFMANN & WEBER, *The Role of Transparency in Financial Regulation,* at 785.

260 *EU Public Consultation on Credit Rating Agencies,* at 5.

261 *Swiss Amendments to FINMA Circular 2008/26 Rating Agencies,* at 8-9.

262 Nevertheless, pension funds and insurance companies may also use credit ratings in their investment guidelines even in jurisdictions in which they are not required by law to do so. For instance, in Switzerland institutional investors tend to turn to credit ratings regardless of any regulatory mandates.

263 *See further* THE JOINT FORUM, *Stocktaking on the use of credit ratings*, at 7 (explaining that – with respect to the designation of permitted investments – many jurisdictions reported that credit ratings were used both in the banking and securities sector; the United Kingdom Financial

insurance laws describe permitted investments or concentration limits in terms of credit ratings.[264] In the EU, insurance and reinsurance directives do not currently contain any provisions that place reliance on CRAs.[265]

Broadly speaking, credit ratings used for investment restrictions serve to identify or classify eligible assets, or to define permitted asset concentrations.

In this regard, the rule that has the most significant effect on the financial system relates to threshold investment-grade rating. Investment-grade rating is the opposite of speculative-grade rating. Constrained investors may be forced to hold assets rated above a certain level deemed prudent. As a consequence, they may have to sell assets if their assets are downgraded below the investment-grade level. Therefore, it is not surprising that there is a large yield discontinuity between investment-grade and below-investment-grade ratings.[266] Rating-based regulations in effect influence the availability and cost of capital.

In the banking and securities sectors, investment limitations may be imposed on specific entities. Investment limitations refer to asset identification, including – for instance – the designation of permitted investments for mutual funds as well as the establishment of investment concentration limits for particular types of assets.[267] Moreover, a significant number of jurisdictions use credit ratings for regulatory purposes in the fields of securitizations and covered bond offerings.[268] Some regulations require that issuance has to be rated by one or more CRAs prior to being offered to investors. The breadth of the regulatory use of credit ratings varies, some regulations covering all securitizations and some other covering only certain identified types of securitizations.[269]

Services Authority (UK FSA), however, noted that credit ratings were not used for asset identification in any of its three financial sectors).

264 *Id*.

265 *Id.* at 5.

266 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 4.

267 THE JOINT FORUM, *Stocktaking on the use of credit ratings*, at 7.

268 *Id.* at 8 (also describing securitizations as the process of pooling assets and issuing securities representing interests in that pool of assets, and describing covered bond offerings as debt securities issued by banks and other credit institutions, repayment being secured by a pool of assets backing the bond).

269 *Id.* (explaining that, for instance in Italy, credit ratings are required by regulation only when securities are sold to non-professional investors).

3. Distortions of Competition with respect to Rating-Based Regulations

Rating-based regulations provide the most insightful example of regulatory failure. Broadly speaking, the regulatory use of credit ratings distorts CRAs' incentives to provide valuable information, thereby jeopardizing competition in the credit rating industry.[270] It creates artificial demand for the services of certified CRAs regardless of their usefulness to investors.[271] Indeed, regulations guarantee a fixed stable demand for CRAs' services.[272]

Rating-based regulations create incentives for market participants to pay for regulatory entitlements stemming from the CRAs' credit ratings instead of paying for the content of the credit ratings.[273] In short, regulatory reliance on credit ratings has encouraged CRAs to shift from the business of providing valuable credit information to the far more lucrative business of selling "regulatory licenses".[274]

a. Regulatory Barrier to Entering the Credit Rating Industry

"Whatever the cause of the entry barriers, standard economic theory would suggest that their existence, especially in an industry with very few players, would lead to less vigorous competition than would be the case if there were fewer entry barriers and more players."[275]

Barriers to entry can undermine competition.[276] An essential feature of a competitive market structure is to keep barriers to entry as low as possible.[277] Certain types of barriers to entry are inherent to the industry due to distinctive market components in the targeted market. Other types of bar-

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270 OPP, OPP & HARRIS, *Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage*, at 4.

271 MACEY, *Corporate Governance: Promises kept, Promises Broken*, at 115.

272 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (testimony of JONATHAN R. MACEY, J. DuPratt White Professor of Law, Cornell Law School), at 44.

273 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 624.

274 *Id.* at 623; *see further* OPP, OPP & HARRIS, *Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage*, at 4 (referring to rating labels as opposed to the underlying informativeness of credit ratings).

275 HILL, *Regulating the Rating Agencies*, at 63.

276 Reducing barriers to entry is an objective of general competition law, for instance with respect to preventing abuse of dominant position; it can also be part of sector-specific regulation, in particular when general competition law is not able to solve the problems caused by regulatory barriers to entry. *See further infra* Part 2, Chapter 5(I)(3) (addressing the relationship between general competition law and sector-specific regulation).

277 MANNS, *Rating Risk After the Subprime Mortgage Crisis: A User Fee Approach for Rating Agency Accountability*, at 1017-1018.

riers to entry are artificially created and may at least be partially addressed in view of enhancing competition. The credit rating industry is characterized by relatively high barriers to entry as follows.

CRAs face historical, natural, institutional and regulatory barriers to entry.[278] On the one hand, historical and natural barriers to entry are inherent in the credit rating industry and cannot be avoided. The historical barrier to entry results from trust based on the reputational capital that the leading CRAs have built up over many years.[279] Issuers tend to hire CRAs that are widely recognized among investors; yet new entrants – i.e. potential competitors – cannot present historic track records.[280] The natural barrier to entry is derived from the fact that the rating market may not be able to accommodate many general-purpose CRAs.[281]

On the other hand, the regulatory barrier to entry is created by regulators and does not exist "per se". Rating-based regulations raise a regulatory barrier to entry.[282] In particular, the regulatory recognition of CRAs can potentially act as a barrier to entry for potential competitors.[283] Therefore, the certification process reduces competition in the credit rating industry by limiting new entrants.[284]

The question arises as to what barriers to entry best explain the high concentration of leading CRAs in the credit rating industry. The combination of historical with regulatory barriers to entry ensured that the dominance of the leading CRAs would become widespread.[285] Above all, regulatory bar-

278 HILL, *Regulating the Rating Agencies*, at 84, 91.

279 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 160.

280 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 607.

281 HILL, *Regulating the Rating Agencies*, at 62 (adding that pre-NRSRO history provides some support for this argument).

282 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9; FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38; WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations*, at 6.

283 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38; *but see* IOSCO, *Report on the Activities of Credit Rating Agencies*, at 9 *and* IOSCO, *Report of the Task Force on the Subprime Crisis*, at 27 (noting that the nature of the credit rating market makes it difficult for new entrants to succeed regardless of any regulatory barriers to entry; moreover, regulatory recognition criteria are based on how extensively credit ratings are used by market participants, i.e. the reputation of CRAs in the market; nevertheless, market participants prefer to use credit ratings that regulators also use, implying that the cycle of discrimination is perpetual).

284 PINTO, *Control and Responsibility of Credit Rating Agencies in the United States*, at 9 (referring to the NRSRO status in the US).

285 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 173.

riers to entry have been created through regulatory intervention.[286] It is worth mentioning that highly regulated markets typically have high regulatory barriers to entry.[287] Regulations automatically have an effect on competition. With respect to the credit rating industry, the regulatory barrier to entry contributes to privileging certified CRAs as opposed to non-certified CRAs. As long as credit ratings are used in financial market regulations, CRA certification and qualification processes are needed.[288] Therefore, the regulatory barrier to entry is inevitable if credit ratings are used for regulatory purposes.

As a consequence, it is recommended to keep the regulatory barrier to entry as low as possible in order to enhance competition among CRAs. As soon as rating-based regulations are removed from legal frameworks, a certification process for CRAs will no longer be needed. Such an amendment would reduce the regulatory barriers to entering the rating market. Instead of a certification process, a mere registration process could still exist so that regulators are able to maintain an oversight of the credit rating industry.

b. Market Over-Reliance on Credit Ratings

"[Rating-based regulations have] created an oligopoly that lulls users of their ratings into a false sense of security and spreads moral hazard: investors tend to rely on the ratings rather than making credit judgments of their own."[289]

Regulatory mandates that require market participants to obtain or use credit ratings artificially increase market reliance on leading CRAs.[290] The two main types of rating-based regulations have an impact on the position of CRAs in the financial system.[291]

First, risk-sensitive measures of regulatory capital increase the importance of certified CRAs in the sense that their credit ratings are widely used to attribute the various risk weights to assets in the financial markets. The Ba-

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286 *See, e.g.,* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

287 Highly regulated entities can take advantage of regulatory barriers to entry if these barriers enable established companies to charge higher prices such as quasi-monopoly prices. It is not surprising that regulated entities tend to be very prosperous. Typical examples are the banking sector, the insurance sector, the pharmaceutical industry, the audit industry and telecommunications services.

288 SCHWARCZ, *The Role of Rating Agencies in Global Market Regulation*, at 307.

289 THE ECONOMIST, *Negative Outlook, Europe Misfires in its Attack on the Rating Agencies*, at 91.

290 *See, e.g.,* FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38 (stating that the regulatory use of credit ratings encourages market over-reliance on certified CRAs).

291 *See supra* Part 2, Chapter 4(II)(2).

sel II Accord encouraged the global implementation of risk-sensitive bank capital requirements.[292] Its wide acceptance increased the importance of credit ratings.[293] The result of the Standardized Approach of the Basel II framework was that CRAs received a substantial regulatory enhancement of the usage of their products and increased market confidence therein.[294] Before the subprime mortgage crisis, banks were able to report relatively high risk-weighted capital ratios.[295] Basically, banks were taking advantage of risk-sensitive capital requirements. They were holding triple-A assets on their balance sheets. As long as these assets were highly rated, banks could extend their balance sheets and enjoy high leverage ratios with the consent of regulators. However, cracks became visible along with massive credit rating downgrades in July 2007. As soon as certified CRAs revised their credit ratings for CDOs downwards, banks were required to adjust their risk-weighted capital requirements upwards.[296] The wide repercussion of these sudden credit rating downgrades on bank capital ratios highlights the excessive reliance on credit ratings due to bank capital requirement regulations. The source of the problem was primarily the rating-based approach described in the Basel II Accord.[297] As a consequence, the BCBS acknowledges the necessity of reducing reliance on CRAs in capital requirement regulations, but the Basel III framework has not yet overhauled its regulatory use of external credit ratings.[298]

Second, regulations create and maintain dependence on certified CRAs insofar as investment limitations imposed on charter-constrained investors depend on credit ratings. Financial market regulations designing permitted investments were developed primarily in the US for the pension funds and insurance sectors. The fact that regulated market participants are subject to portfolio restrictions contributes to increasing the importance attributed to the credit ratings of certified CRAs. With respect to the subprime crisis, these constrained investors had to sell their mortgage-related assets as soon

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292 The use of external credit ratings in order determine the appropriate risk weights is described under Basel II's Standardized Approach: BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)*, para. 50.

293 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 20.

294 ARNER, *The Global Credit Crisis of 2008: Causes and Consequences*, at 26.

295 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 20 (arguing that at the end of 2006, the ratio of regulatory capital to risk-weighted assets was 13 percent in the US, 12.9 percent in the UK, 12.2 percent in Germany, 10.7 percent in Italy, significantly above the 8 percent minimum).

296 DE LAROSIÈRE Report, at 12.

297 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55 (discussing how the rating-based approach of Basel II incentivized banks to rely heavily on credit ratings, thereby neglecting their own independent internal assessment).

298 WELLINK, *The New Framework for Banking Supervision,* at 4.

as certified CRAs downgraded them to junk status, i.e. below investment grade.[299] They had to sell at the worst moment since the repricing of credit risk implied a repricing of asset price at lower levels. Therefore, regulations forcing market participants to rely on credit ratings imply an over-reliance on certified CRAs.

Accordingly, market over-reliance on certified credit ratings is at least partly a consequence of the regulatory use of credit ratings. Official recognition of credit ratings in regulatory and supervisory policies may have encouraged investors' over-reliance on credit ratings by discouraging some investors from paying close attention to what the ratings actually meant.[300] To some extent, investors relied on credit ratings instead of performing their own due diligence.[301] Moreover, if higher-rated assets attract lower capital requirements, market participants who are subject to capital regulation would even welcome rating inflation.[302] They would rely on credit ratings despite the rating's lack of informational value. Issuers became interested in credit ratings as well. In a competitive market, if investors were to suspect credit rating inflation, they would cease to trust their assessments, and issuers would no longer be prepared to pay for the credit ratings.[303] Yet the regulatory use of credit ratings implies another kind of issuers' interest in obtaining high credit ratings. Issuers get regulatory privileges if they obtain high credit ratings. Therefore, they are incentivized to hire the certified CRA that attribute the higher grade to their financial instruments.

Nevertheless, rating-based regulations alone do not cause over-reliance on credit ratings, investors and issuers prefer also CRAs that have accumulated a certain reputational capital. Investors respect CRAs with a reputation for rating accuracy and timeliness; in addition, issuers desire to obtain credit ratings from CRAs respected by investors.[304]

To make matters worse, regulatory and market-based over-reliance are interconnected. On the one hand, regulatory recognition criteria for CRAs are based on how extensively credit ratings are used by issuers and investors.[305] Regulators tried to come up with objective criteria in order to decide which

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299 *See, e.g.,* CASEY & PARTNOY, *Downgrade the Ratings Agencies*.

300 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38.

301 *See, e.g., id.* at 39; BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55.

302 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 42.

303 *Id.* at 40.

304 IOSCO, *Report on the Activities of Credit Rating Agencies,* at 9; IOSCO, *Report of the Task Force on the Subprime Crisis*, at 27.

305 IOSCO, *Report on the Activities of Credit Rating Agencies,* at 9; IOSCO, *Report of the Task Force on the Subprime Crisis*, at 27.

CRAs could be used for regulatory purposes. The most important criterion refers to national recognition, i.e., only well-established CRAs can meet such a requirement.[306] On the other hand, market-based reliance on credit ratings is influenced by regulatory recognition in the sense that investors and issuers prefer to obtain and use CRAs that government regulators also use.[307] Therefore, both regulatory recognition of CRAs and market-based recognition of credit ratings influence each other significantly. This results in excessive market over-reliance on leading CRAs.

c. Rating-Driven Market Behavior

Rating-based regulations create incentives for market participants to behave in a way that merely responds to rating-driven concerns. Various types of rating-driven market behavior include rating-driven transactions, regulatory arbitrage and "rating shopping".

First, issuers are so interested in obtaining the highest credit ratings that they may engage in transactions that make no economic sense but ensure a better grade. Especially from 2002 to 2007 in the subprime mortgage market, some securities were developed precisely to have high credit ratings.[308] Rating-based regulations create incentives for issuers to seek high credit ratings regardless of product quality.[309] The presence of rating-driven transactions may be a consequence of market over-reliance on credit ratings. It is worth recalling that market over-reliance on credit ratings is not only derived from regulatory reliance but also from behavioral reliance. In addition, rating-driven transactions do not only impair the proper functioning of the credit rating industry but can affect the financial markets as a whole. Market forces cannot work adequately if market participants structure deals in order to get high credit ratings instead of improving the quality of their financial products.

Second, high credit ratings may help financial institutions such as banks to get involved in regulatory arbitrage. Rating-based regulations allow for banks to reduce their capital requirements with the consent of the regulators. Above all, the risk-based approach under Basel II allowed banks to build up

306 *See, e.g.,* BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II)*, para. 91 (referring to validation based on historical experience owing to the objectivity criterion).

307 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 9; IOSCO, *Report of the Task Force on the Subprime Crisis,* at 27.

308 HILL, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* at 4.

309 *See, e.g.,* CANTOR & PACKER, *The Credit Rating Industry*, at 7 (stating that the regulatory advantages of obtaining high credit ratings may consist of reaching a broader range of investors, reducing capital requirements or diminishing the amount of disclosure that is needed).

excessive leverage by reducing their risk-weighted capital requirements.[310] Low risk weights imply banks can expand their balance sheets and still report strong capital ratios. As a result, rating-based regulations create incentives for investors and issuers to engage in regulatory arbitrage and gaming activities. Regulatory arbitrage reflects a distortion of competitive incentives. Under such circumstances market forces do not function properly. At any rate, market participants will always attempt to circumvent regulations, thereby making the design of incentive-based regulations necessary. Appropriate regulations would create better incentives in the financial markets. Although Basel III has not revised its use of credit ratings in its risk-sensitive approach, it has already taken measures able to reduce the possibilities for banks to build up excessive leverage. Above all, the establishment of a leverage ratio as a backstop to the risk-weighted ratio consists of a significant improvement because it will reduce banks' ability to overextend their balance sheets in good times.[311]

Third, inappropriate competition among certified CRAs may result in "rating shopping" and rating inflation. In the years preceding the subprime mortgage crisis, if a CRA said no to a transaction, investment bankers would be able to go "rating shopping", i.e. to take their business to another CRA to obtain the desired triple-A rating.[312] Increased competition among CRAs worsens the problem of "rating shopping" as long as credit ratings are used for regulatory purposes.[313] The withrawal of rating-based regulations is thus the only viable solution to the problem. Moreover, rating-based regulations create incentives for certified CRAs to produce inflated credit ratings instead of accurate assessments.[314] For instance, the US Credit Rating Agency Reform Act of 2006 created inappropriate incentives in the financial markets. Increasing the number of NRSROs may have actually resulted in increased competitive pressures to inflate credit ratings.[315] The Act

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310 BLUNDELL-WIGNALL & ATKINSON, *Thinking Beyond Basel III: Necessary Solutions for Capital and Liquidity* at 12-13 (illustrating this phenomenon in the light of an example).

311 *Id.,* at 9; WELLINK, *The New Framework for Banking Supervision,* at 2.

312 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 3.

313 MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 659.

314 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55 (emphasizing that issuers and investors are interested in high credit ratings which attract lower capital requirements and expand the range of products eligible for investments or credit protection); *see also* OPP, OPP & HARRIS*, Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage,* at 26 (showing empirical evidence that rating-based regulations create incentives for CRAs to inflate their credit ratings).

315 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 11.

may well have caused a "race to the bottom" whereby issuers hired the certified CRA that was the most malleable and the most liberal with its investment-grade rating.[316]

4. Withdrawal of Rating-Based Regulations

a. Trend to Reduce Regulatory Dependence on Credit Ratings

"It is important to ensure that the use of ratings by authorities does not contribute to the lack of competition in the CRA industry."[317]

Eliminating regulatory dependence on credit ratings is the best way to foster a competitive environment for the credit rating industry. Some scholars contend that regulators should have already withdrawn rating-based regulations.[318] In fact, one of the main lessons from the recent financial crisis is that regulators should cease incorporating credit ratings into their rules.[319]

In October 2009, the SEC initiated a trend toward a decreasing reliance on NRSROs.[320] The SEC eliminated certain references to credit ratings in its regulations, thereby recognizing the detrimental effects of rating-based regulations on the financial markets.[321] The efforts made by the SEC to reduce the significant number of rating-based regulations have contributed to reducing a non-quality-dependent source of demand for credit ratings.[322]

However, at the beginning of 2010, there were still approximately 2,000 references to credit ratings in the US Federal Register.[323] Even regulatory measures to deal with the financial crisis depended to a great extent on credit ratings. For instance, in the US the Fed's 1 trillion US dollars Term Auction Lending Facility (TALF) plan – a colossal program to encourage

316 MACEY, *Corporate Governance: Promises kept, Promises Broken*, at 116-117.

317 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38.

318 *See* PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 681-707 (already in 1999 discussing the negative effects of rating-based regulations on the financial system; in fact, Professor PARTNOY suggested that regulatory references to credit ratings should be removed from regulations almost a decade before lawmakers and regulators began to take the problem seriously). *See also* WHITE, *A New Law for the Bond Rating Industry*, at 50 (stating that the SEC should have already abandoned the NRSRO framework after the Enron scandal at the beginning of the 2000s).

319 CASEY & PARTNOY, *Downgrade the Ratings Agencies.*

320 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis*, at 10.

321 SEC, References to Ratings of NRSROs, at 52,359.

322 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 151.

323 CASEY & PARTNOY, *Downgrade the Ratings Agencies* (adding that in 2010, the SEC endorsed credit ratings in regulations governing money market funds, even after removing references to credit ratings in other rules).

lending – mandated that only securities rated by at least two major certified CRAs were eligible for aid.[324] Nevertheless, in the long run lawmakers and regulators are aware that they have to dismantle rating-based regulations.

On the global scale, the Basel III framework is expected to reduce reliance on certified credit ratings. Although Basel III has not withdrawn its use of certified credit ratings, the BCBS has already mentioned that reducing the use of credit ratings is an important area of focus.[325] The BCBS has acknowledged the negative effects of the regulatory use of credit ratings.[326] Two extreme alternative approaches can for instance be envisaged in removing external credit ratings from the Basel II framework: to return to a Basel I-type approach or to use internal credit risk models.[327] A Basel I-type approach involves abandoning the risk-sensitive measurement of bank capital requirements. The shortcoming of this approach is that it creates incentives for banks to engage in risky activities.[328] Banks would hold risky assets in order to make more profit. Alternatively, the use of internal credit risk models implies further implementation of the Internal Ratings-Based (IRB) Approach of Basel II.[329] The Basel II framework did not permit the use of full credit models given the uncertainty and lack of data with respect to asset correlations, thereby forcing banks to use supervisory established correlations.[330]

b. US Dodd-Frank Act of 2010

The most significant step to move away from over-reliance on credit ratings was taken when President Obama signed the US Dodd-Frank Act of 2010 on July 21. Indeed, the agency reform embedded in the Dodd-Frank Act seeks to eliminate regulatory reliance on credit ratings. The NRSRO status should lose its importance in the long term. In fact, the agency reform has expressly removed statutory references to credit ratings.[331] Moreover, every Federal agency has one year to remove regulatory reliance on credit ratings.[332] References to credit ratings thus have to be removed from all types of government rules. Further, although CRA reform has not directly re-

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324 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform.*
325 WELLINK, *The New Framework for Banking Supervision,* at 4.
326 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55-56.
327 *Id.* at 55.
328 CHORAFAS, *Economic Capital Allocation with Basel II, Cost, Benefit and Implementation Procedures,* at 43.
329 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II),* para. 211.
330 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55-56.
331 US Dodd-Frank Act of 2010, Sec. 939(a-f).
332 *Id.* Sec. 939A.

quired the private sector to get rid of references to credit ratings, it should be interpreted as an important message from Congress.[333] It is recommended that market participants do not refer to credit ratings in investment guidelines or other internal rules. In other words, the government has taken the lead and the private sector should follow. As a consequence, investment culture is expected to change with respect to references to credit ratings.

The withdrawal of rating-based regulations is considered an important piece of the reform puzzle.[334] It will remove many of the incentives that led banks and CRAs to create an enormous market for mortgage-related securities.[335]

The simple requirement to remove the regulatory use of credit ratings will force regulators and investors to find substitutes.[336] It is a very challenging aspect of the financial reform and will take time for regulators and market participants to fully implement. At any rate, the use of credit ratings is not entirely banned under the agency reform, just not required by law.[337]

III. Regulatory Oversight of Credit Rating Agencies

"Credit rating agencies [...] play a critical "gatekeeper" role in the debt market that is functionally similar to that of securities analysts, who evaluate the quality of securities in the equity market, and auditors, who review the financial statements of firms. Such role justifies a similar level of public oversight and accountability."[338]

1. Regulation and Competition

The level of competition in any specific industry depends significantly on the way the industry is regulated. Under certain circumstances, regulatory intervention can reduce competition in the market, typically by raising regulatory barriers to entry and adding the costs of complying with the regulatory frameworks.[339] Nevertheless, the subprime mortgage crisis showed that

333 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform.*

334 CASEY & PARTNOY, *Downgrade the Ratings Agencies.*

335 *Id.*

336 *Id.*

337 *Id.* (adding that using credit ratings should be an option not a mandate to follow a government-enshrined oligopoly).

338 US Dodd-Frank Act of 2010, Sec. 931(2).

339 *See, e.g., Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 32 (suggesting that burdensome or disruptive regulation means that new entrants have to cross ever-higher regulatory barriers).

the credit rating industry can no longer stay aloof from the regulatory efforts. In the US and in the EU, regulators are currently attempting to regulate the credit rating industry in order to provide more effective supervision of the credit rating business.[340] The new set of behavioral rules will most definitely effect the competitive environment of the credit rating industry. Accordingly, regulations have to be taken into account with respect to the level of competition in the industry.

2. From Self-Regulation to the Creation of Regulatory Frameworks for Credit Rating Agencies

a. Self-Regulation in the Credit Rating Industry

Self-regulation has so far played a crucial role in establishing standards of conduct with respect to CRAs.[341] Self-regulation refers to voluntary codes aiming at influencing industry practice. The most important body that sets up self-regulatory frameworks for CRAs is the International Organization of Securities Commission (IOSCO). Its most relevant reference document is the IOSCO Code of Conduct.[342]

Adhesion to the IOSCO Code of Conduct is not compulsory so that its rules are based on voluntary compliance. Nevertheless, the IOSCO Code of Conduct has been widely recognized as the global benchmark for business standards to which CRAs are expected to adhere.[343] CRAs' compliance with the self-regulatory framework is interpreted among the investing community as a sign of good governance.

One of its core principles is the "comply or explain" principle,[344] i.e. CRAs can deviate from the IOSCO Code of Conduct if their own Code or practices are adequate. The IOSCO Code of Conduct provides no enforcement mechanism and merely uses the "comply or explain" approach.[345] Moreover, not all the IOSCO provisions are applicable to CRAs that provide credit ratings on a subscriber basis, i.e. the investor-paid CRAs.[346]

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340 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*.

341 *See, e.g.,* EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 37.

342 IOSCO, *Code of Conduct Fundamentals for Credit Rating Agencies* (Revised May 2008).

343 COMMITTEE OF EUROPEAN SECURITIES REGULATORS (CESR), *Report on Compliance of EU Based Credit Rating Agencies with the 2008 IOSCO Code of Conduct*, at 10.

344 MOLONEY, *EC Securities Regulation*, at 695.

345 *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*, at 3.

346 CESR, *Report on Compliance of EU Based Credit Rating Agencies with the 2008 IOSCO Code of Conduct*, at 11.

The IOSCO principles address (i) the quality and integrity of the rating process, (ii) CRAs' independence and the avoidance of conflicts of interest, and (iii) CRAs' responsibilities to investors and issuers.[347] Furthermore, the three leading CRAs' own Codes of Conduct contain only a few significant but well-documented variations from the IOSCO Code of Conduct.[348]

b. Merits and Weaknesses of Self-Regulation

"Self-regulation does not take place effectively where the pressure of reputation as a controlling power only exists to a certain, limited degree due to a lack of existing competition."[349]

The credit rating industry has a long tradition of being subjected to international self-regulation. As the main advantage, self-regulation is considered to be sufficiently flexible to accommodate changing market circumstances.[350] Moreover, the needs of individual CRAs may be more readily accommodated thanks to "comply or explain", instead of more prescriptive rules.[351] Accordingly, the danger of prescriptive rules would be to increase barriers to entry as smaller CRAs would encounter more difficulties in implementing stringent regulatory rules.

However, the 2007-2009 financial crisis shows that the absence of legally binding rules is a shortcoming rather than a benefit from the perspective of the financial markets as a whole. Market forces do not play their disciplinary role in the credit rating industry given the lack of competition; as a consequence, CRAs are not incentivized to implement international standards satisfactorily on a voluntary basis. In the years preceding the crisis, regulators experienced difficulties policing the IOSCO Code of Conduct, and in ensuring that CRAs claiming to comply with international standards were effectively doing so.[352] More precisely, the financial crisis that hit the world in 2007 exposed the weaknesses inherent in the IOSCO Code of Conduct when it came to identifying and addressing the risks posed by

347 MOLONEY, *EC Securities Regulation*, at 695-696.

348 *Id.*, at 698.

349 BLAUROCK, *Control and Responsibility of Credit Rating Agencies,* at 30. *See also* UTZIG, *The Financial Crisis and the Regulation of Credit Rating Agencies: A European Banking Perspective,* at 6; DE HAAN & AMTENBRINK, *Credit Rating Agencies,* at 9.

350 MCVEA, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* at 717; WEBER, *Mapping and Structuring International Financial Regulation – A Theoretical Approach*, at 657.

351 *Id.*

352 *Id.,* at 718.

structured finance.[353] Further, the IOSCO Code of Conduct lacks enforcement mechanisms.[354]

c. Toward the Regulation and Supervision of Credit Rating Agencies

The credit rating industry evolved over a period of a hundred years without being regulated. Until recently the credit rating industry has almost exclusively relied on self-regulation.[355] However, the introduction of a governmental oversight regime is inevitable because schemes for self-regulation have not been robust or stringent enough to cope with problems in the credit rating industry.[356] The 2007-2009 financial crisis has indeed shed light on the limits of self-regulatory approaches.[357] Contrary to the US, in the EU CRAs had not been subjected to direct supervision because public authorities in the Member States were not entitled to sanction a CRA when it violated the IOSCO standards of integrity, quality and transparency.[358] At any rate, the new regulatory frameworks for CRAs may incorporate elements of the IOSCO Code of Conduct in order to make those elements fully operational.[359]

Especially over the last decade, pressure has increased toward establishing a regulatory framework for CRAs.[360] In the light of the recent rating scandals, strong consensus had internationally emerged that regulatory intervention was needed.[361] In the US and in the EU, regulatory concern has focused on providing for oversight of the credit rating industry. The credit rating industry is currently subject to a major overhaul. CRA regulations

353 MOLONEY, *EC Securities Regulation*, at 699.

354 DE HAAN & AMTENBRINK, *Credit Rating Agencies,* at 17; *see generally* WEBER, *Mapping and Structuring International Financial Regulation – A Theoretical Approach*, at 658.

355 *See, e.g.,* SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 3.

356 *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*, at 3; *see also* CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 6.

357 *See generally* WEBER, *Mapping and Structuring International Financial Regulation – A Theoretical Approach,* at 688 (discussing the establishment of a new regime with respect to international financial regulation).

358 *EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment*, at 14.

359 *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*, at 3.

360 *But see* SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox*, at 13 (arguing that there is little reason to believe that an increased regulation of CRAs will improve the reliability of credit ratings).

361 ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* at 27; IOSCO, *Regulatory Implementation of the Statement of Principles Regarding the Activities of Credit Rating Agencies*, at 10.

have also emerged in many jurisdictions around the world such as Japan, Australia, Mexico, Hong Kong and Canada.[362]

3. Strengthening Credit Rating Agency Oversight

a. US Model for Agency Regulation and Supervision

(i) The US Credit Rating Agency Reform Act of 2006 and its Implementation

The US initiated the trend toward the creation of a supervisory framework for CRAs. The US Credit Rating Agency Reform Act of 2006 aims to improve credit rating quality by fostering accountability, transparency and competition in the credit rating industry.[363]

The SEC is given statutory authority to oversee the credit rating industry, more particularly NRSROs.[364] Only NRSROs fall within the scope of the regulation, i.e. those certified CRAs that are used in financial market regulations. The purpose of the US Credit Rating Agency Reform Act of 2006 is to enhance competition among NRSROs so that smaller CRAs can compete with the likes of Moody's and Standard & Poor's.

Regulators proceeded on the assumption that competition would best be increased by opening up the process of designating NRSROs. US lawmakers and regulators believed that more NRSROs would enhance competition in the credit rating industry. Therefore, the framework introduced an NRSRO registration and qualification process.[365] The idea was to establish formal procedures for designating NRSROs and to monitor their activities.[366]

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362 *Id.* at 11-12 (describing the establishment of regulatory frameworks for CRAs in Japan, Australia, Mexico and Hong Kong); ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability*, at 28 (referring to regulatory initiatives for CRA oversight in Canada). *But see* NZZ, *Debatte um "Schuld" der Rating-Agenturen, Schweizer Zurückhaltung bei anstehender Regulierung,* at 35 (stating that Switzerland has not followed this regulatory trend, preferring to leave the responsibility for CRA oversight to their home country).

363 US Credit Rating Agency Reform Act of 2006, preamble and Sec. 2(5).

364 *Id.* Sec. 2(6).

365 *Id.* Sec. 4.

366 *See, e.g.,* CANTOR & PACKER, *The Credit Rating Industry,* at 8 (explaining that serious criticism had been raised on the informality of the NRSRO designation process and the opacity of the criteria); *see also* PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 64 (mentioning that although the concept of NRSROs had been used since the 1970s, the SEC had not defined the term).

However, the US Credit Rating Agency Reform Act of 2006 may have been counterproductive as far as competition is concerned. The Act may cause a "race to the bottom" in the sense that issuers may hire the certified CRA that is the most malleable and the most liberal with investment-grade rating.[367] Increasing the number of NRSROs may actually result in ill-conceived competition whereby CRAs are actually incentivized to inflate credit ratings.[368]

Further, it is worth mentioning how the SEC made use of the regulatory powers given by the US Credit Rating Agency Reform Act of 2006 in order to supervise the credit rating industry. In June 2007, just before the sub-prime mortgage crisis hit the financial markets, the SEC adopted final rules to implement provisions of the Credit Rating Agency Reform Act of 2006.[369] In February 2009, the SEC amended its rules to impose additional requirements on NRSROs as regards rating integrity.[370] In December 2009, the SEC amended its rules to impose additional disclosure requirements and measures to address conflicts of interest on NRSROs.[371] The SEC aimed at making it possible for more NRSROs to rate structured finance products.[372] The regulation permitted disclosure of material non-public information to an NRSRO regardless of whether the NRSRO makes its credit ratings publicly available.[373] Above all, the amendment intended to accommodate subscriber-based NRSROs that do not make their credit ratings available for free.[374]

(ii) US Dodd-Frank Act of 2010

With respect to oversight, the US Dodd-Frank Act of 2010 sets up a new regulatory structure for CRAs, increasing powers to supervise the credit rating industry. These regulatory and supervisory rules result from the appreciation that CRAs play a fundamentally commercial role, thereby implying that they have to be subject to similar standards in comparison to other gatekeepers such as auditors and securities analysts.[375] The agency reform creates a new authority within the SEC, the Office of Credit Ratings.[376]

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367 MACEY, *Corporate Governance: Promises kept, Promises Broken*, at 116-117.

368 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts*, at 11.

369 SEC, Oversight of Credit Rating Agencies as NRSROs, at 33,564.

370 SEC, Amendments to Rules for NRSROs (Feb. 2009), at 6,456.

371 SEC, Amendments to Rules for NRSROs (Dec. 2009), at 63,832.

372 *Id.* at 63,844.

373 *Id.*at 63,850.

374 *Id.* at 63,850.

375 US Dodd-Frank Act of 2010, Sec. 931.

376 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(p)).

The Dodd-Frank Act is characterized by numerous regulations with respect to NRSROs.[377] There are enhanced regulations and regulators enjoy greater powers to set standards in the credit rating industry. Emphasis is especially put on transparency, requiring from CRAs a significant amount of disclosures. The intent is to provide regulators and investors with more information about NRSRO ratings. NRSROs have to file reports to the SEC and these reports must be made available to the public as well.

The regulation of the NRSRO status is enhanced. The SEC has the ability to bar NRSROs. The SEC even has the ability to revoke the registration of an NRSRO with respect to a particular class of securities.[378]

There are new governance rules. NRSROs have to establish effective internal control structures. Internal controls strive to govern the implementation of the policies, procedures and methodologies for determining credit ratings.[379] A few governance rules require CRAs to monitor conflicts of interest. For instance, dealing with conflicts of interest counts as a duty of the board of directors of the NRSROs.[380]

The SEC requires that NRSROs disclose their rating performance.[381] These disclosure requirements aim at allowing users to evaluate the accuracy of credit ratings and to compare the performance of ratings by different NRSROs.[382]

With respect to rating symbols, NRSROs have to define the meaning of any symbol and apply any symbol consistently.[383] Concretely, NRSROs can use the same symbol across different categories of financial instruments if the symbol is used in a consistent manner. Within a category of credit ratings, the NRSROs have to be consistent in their use of symbols. A triple-A rating in structured finance would have the same meaning as a triple-A rating in corporate or sovereign debt.[384] Otherwise, NRSRSOs have to use different symbols if the meaning of symbols is different across different categories of financial instruments.

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377 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform.*

378 US Dodd-Frank Act of 2010, Sec. 932(a)(3)(I) (codified as amended at 15 U.S.C. 78o-7(d)(2)(A)).

379 *Id.* Sec. 932(a)(2)(B) (codified as amended at 15 U.S.C. 78o-7(c)(3)(A)).

380 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(t)(3)(B)).

381 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(q)(1)).

382 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(q)(1)).

383 *Id.* Sec. 938(a)(2-3). The requirements for universal rating symbols ended up being a bit different than people had conceived.

384 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform.*

The Dodd-Frank Act establishes new regulation of rating methodologies.[385] With respect to rating procedures and methodologies the SEC prescribes rules for the protection of investors and in the public interest.[386]

The qualifications of the analysts also fall under regulatory scrutiny. There are requirements for standards governing CRAs' analysts.[387] A new training process is set up and supervised by the government. Hence, regulators now have a role to play with respect to who is hired by CRAs and whether analysts have sufficient skills.

b. EU Model for Agency Regulation and Supervision

The idea of establishing a supervisory framework for CRAs was immediately put forward in the EU as a response to the subprime mortgage meltdown. The absence of regulation of CRAs and the general outcry with respect to their role in the 2007-2009 financial crisis put substantive pressure on the EU to adopt promptly mandatory and enforceable rules in this field.[388] Broadly speaking, the EU has focused on establishing a more efficient, integrated and sustainable European system of supervision.[389]

In order to reassure the financial markets during the financial crisis, the EU intended to come up with new regulations rapidly, although the withdrawal of rating-based regulations was not feasible in the short term.[390] As a consequence, the EU decided to create a stringent supervisory regime for CRAs. The EU interpreted the troubles in the credit rating industry as a failure of self-regulatory efforts. Therefore, the EU opted for tight rules in order to restore the confidence of the financial markets in CRAs.[391]

The main sources of inspiration for EU regulation of CRAs are twofold: the EU seeks convergence of its policies (i) with the US legal framework for

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385 Congress succeeded in establishing new rules with respect to rating methodologies and procedures even though CRAs lobbied hard against them.

386 US Dodd-Frank Act of 2010, Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(r)).

387 *Id.* Sec. 936.

388 *EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 7; EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies.

389 *EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 6.

390 As far as the EU is concerned, the most comprehensive use of credit ratings for regulatory purposes is in the Basel II framework. It is expected that the BCBS amends Basel II in the future and adopts a new regulatory approach to measure bank capital requirements.

391 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, preamble (43).

CRAs and (ii) with the IOSCO Code of Conduct for CRAs.[392] Apart from that, the two regulatory topics of most interest are probably (i) conflicts of interest and (ii) disclosure. First, CRAs have an obligation to ensure that credit ratings are not affected by conflicts of interest.[393] Second, disclosure is a broad topic that not only includes the disclosure of methodologies, models and key rating assumptions,[394] but also the production of a transparency report by the registered CRAs.[395]

The Regulation on CRAs of 2009 introduces a framework for oversight of CRAs operating in the EU by means of a registration process for CRAs.[396] Under the EU Regulation on CRAs of 2009, the competent authority is the regulator designated by the Member State where the CRA is established. Because Moody's, Standard & Poor's and Fitch have subsidiaries in various EU countries, several EU regulators are responsible for their registration in the EU.

Looking forward, the amendment proposed in June 2010 adapts the regulation on CRAs to the new European supervisory architecture.[397] CRAs will fall within the scope of supervision by the European Securities and Markets Authority (ESMA). By this means the EU is centralizing regulatory competence in the hands of a single authority. The ESMA will assume general competence in matters relating to the registration and ongoing supervision of registered CRAs.[398]

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392 *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*, at 3.

393 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 6; McVea, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* at 724; Andrieu, *Ratingagenturen in der Krise, Über die Einführung von Qualitätsstandards für Ratings durch die Europäische Union,* at 101-106.

394 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 8; McVea, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* at 726.

395 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 12; Andrieu, *Ratingagenturen in der Krise, Über die Einführung von Qualitätsstandards für Ratings durch die Europäische Union,* at 101.

396 *EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 5; EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies.

397 *EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 4.

398 *EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 5.

The ESMA executes supervisory powers over entities with community-wide reach.[399] In this respect, local CRAs that are only active in one specific Member State are not included in the scope of action of the ESMA, and the Member State regulator remains competent for their oversight.

Further, EU legislation primarily targets CRAs whose credit ratings are used for regulatory purposes.[400] There are many explicit references to credit ratings in the sense of rating-based regulations. For instance, entities such as insurance undertakings and pension funds are only allowed to use credit ratings for regulatory purposes if they have been issued by certified CRAs.[401] In the EU, the trend toward a decreasing use of credit ratings in financial market regulations will most likely not be initiated until regulators find suitable alternatives to credit ratings. While the EU launched a public consultation in November 2010 to analyze topics that were not addressed in the EU Regulation of 2009, proposals for alternatives to credit ratings might be part of step two of the EU Regulation on CRAs.[402]

With respect to the scope of application, the EU directly supervises CRAs that have their headquarters or subsidiaries in the EU. Registration in the EU is one of the conditions for credit ratings to be used in the EU. By this means, the EU Regulation on CRAs encourages CRAs established in third countries to set up subsidiaries in the EU if they are willing to be used for regulatory purposes in the EU.[403]

Credit ratings issued outside the EU can be used in the EU through two means, i.e. endorsement or certification.[404]

(i) Endorsement

The endorsement regime allows CRAs registered in the EU to endorse credit ratings issued in third countries if such ratings comply with require-

399 *EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 3.

400 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 2, para. 1 and 3; *see* CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 6.

401 *EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, art. 4(a) (including CRAs established in the EU and registered in accordance with this Regulation).

402 *EU Public Consultation on Credit Rating Agencies,* at 1-28.

403 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, preamble (55).

404 *ESMA Guidelines on the Application of the Endorsement Regime under Article 4(3) of the Credit Rating Regulation 1060/2009, Consultation Paper,* at 5.

ments that are at least as stringent as the EU requirements.[405] In this respect, third-country CRAs are required to set up subsidiaries in the EU to allow for the effective use of the EU endorsement regime.[406] This plays a crucial role because the three leading CRAs – Moody's, Standard & Poor's and Fitch – are US agencies. As they have subsidiaries in the EU, the credit ratings that they issue in third countries can be used in the EU based on the endorsement regime. To comply with the EU Regulation, the Big Three have to demonstrate to the EU regulator that their credit ratings issued outside the EU fulfill requirements that are at least as stringent as the requirements set out in the EU Regulation.[407]

(ii) Certification based on equivalence

The other option for the use of credit ratings issued in third countries is based on an equivalence decision of the EU Commission, and subject to certain conditions.[408] First, the credit ratings are issued by a CRA subject to supervision in that third country. Second, the EU Commission has formally adopted an equivalence decision that recognize the third-country framework as equivalent to the EU requirements. By April 2011, the EU Commission had only adopted an equivalence decision concerning the Japanese framework for CRAs. It has not adopted any decision with respect to the US framework which means that Moody's, Standard & Poor's and Fitch cannot be used in the EU based on an equivalence decision; therefore, they currently have to meet the requirements of the endorsement regime outlined above. It is also interesting to mention a further condition of the equivalence regime: this opportunity is solely at the disposal of CRAs that are not of systemic importance to the financial stability or integrity of the EU financial markets.[409] In this respect, even if the EU Commission adopted an equivalence decision of the EU regime, there are grounds to believe that the Big Three would be regarded as systemically relevant to the EU.[410]

405 EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, art. 4, para 3.

406 *Id.*, art. 5.

407 *EU Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, art. 4(b) (mentioning articles 6 to 12 as the requirements to be fulfilled by third-country CRAs); EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, preamble (13) (55).

408 *Id.*, art. 5.

409 *Id.*, art. 5, para 1, let. d; *ESMA Guidelines on the Application of the Endorsement Regime under Article 4(3) of the Credit Rating Regulation 1060/2009, Consultation Paper,* at 5.

410 *See infra* Part 4.

IV. Special Treatment for Credit Rating Agencies

1. Privileged Treatment and Effects on the Competition

CRAs historically benefit from a special treatment as a result of two types of provisions. First, CRAs differ from other gatekeepers because they have been largely immune to civil and criminal liability for malfeasance.[411] Second, CRAs enjoy a privileged access to financial information.[412] The special treatment for CRAs has without doubt had a negative impact on the level of competition in the credit rating industry. Such a situation empowers CRAs with a privileged position in comparison to other gatekeepers. In this regard, other gatekeepers are considered as potential competitors. The credit rating industry takes advantage of the special treatment that other financial industries do not have. Therefore, these distinctive market features partly explain how CRAs have become so important in the financial system.

With respect to liability, the level of competition in the credit rating industry varies to a certain extent depending on the existence of liability rules. The threat of liability can be an effective tool in encouraging gatekeeper accountability.[413] From a theoretical point of view, the competitive landscape changes significantly depending on whether or not courts recognize CRA liability. The threat of litigation costs would incentivize CRAs to provide more accurate credit ratings. In fact, the presence of competition refers to a situation where the price for credit ratings is directly connected to their informational value. While analyzing the competitive environment in the credit rating industry, liability rules must be considered since they tend to make sure that the cost of providing bad credit ratings exceeds the gains resulting from the fees collected. Moreover, the absence of successful lawsuits against CRAs gives them a privileged position in comparison to other gatekeepers. The CRAs enjoy a competitive advantage. From another perspective, liability rules may, however, reduce competition if they imply an over-reliance on CRAs by market participants. A competitive credit rating market exists only if market participants perform their own due diligence while deciding to follow the credit ratings of a specific CRA. Therefore, the effects of liability rules on competition must be analyzed by taking into account the pros and cons of litigation in the credit rating industry. Liability

411 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 61.

412 *See Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (opening statement of JOSEPH I. LIEBERMAN, Chairman, Committee on Governmental Affairs), at 2-4.

413 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*.

rules are adequately designed if they are able to discipline the credit rating industry.

With respect to access to inside information, the special treatment for CRAs contributes to enhancing their privileged position in comparison to other gatekeepers. Financial information is at the core of the work of gatekeepers. Disclosure requirements make a substantive amount of information publicly available. Relevant information is already acquired directly from the issuers or borrowers. In this regard, CRAs take advantage of regulations enabling them to have access to inside information that other gatekeepers cannot use. This fact has without doubt far-reaching effects on the competitive environment in the credit rating industry. For instance, investors are forced to rely on CRAs because CRAs have a privileged access to financial information. CRAs may keep such information for themselves, which only serves to increase their strong position in the financial markets without solving any information asymmetry while forcing investors to depend on their credit ratings.

2. Historically Privileged Position of Credit Rating Agencies in the US

a. US Liability Regime for Credit Rating Agencies

Historically, CRAs have been immune to civil and criminal liability. CRAs have successfully defended themselves against litigation by claiming that their credit ratings are opinions protected by the First Amendment of the US Constitution.[414] In other words, they have enjoyed free speech protection. It is thus not surprising that CRAs prefer to compare themselves to publishing companies than to gatekeepers such as securities analysts and auditors.[415] Several judges have accepted the argument that credit ratings are opinions protected by the First Amendment of the US Constitution.[416]

414 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 66 (explaining why CRAs have been immune to liability but disagreeing with the judges who accepted their argument); CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 2.

415 *See, e.g., Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform,* at 117 (statement of RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's). *But see* PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 61, 81 (stating that even though CRAs consider themselves similar to financial journalists, their credit ratings are far more valuable than even the most prominent and respected financial publishers).

416 *But see id.* at 61 (disagreeing with the judges that exempted CRAs from liability because of the First Amendment).

Recently a court has also dismissed a case in which the underwriter liability of CRAs was questioned.[417]

Even though CRAs can invoke the First Amendment, free speech protection is not absolute and CRAs are not fully exempted from securities laws. "Free speech protection in the securities area is narrow."[418] Because credit ratings are considered to be "commercial speech", there is no heightened First Amendment protection. In this area, free speech protection goes less far than for other forms of speech.[419] For instance, the US Supreme Court has indicated that "commercial speech" can be regulated to the extent that it is false or misleading.[420] This reasoning was illustrated in the Enron case: the court stated that any First Amendment protection for credit ratings was not absolute but qualified, i.e. credit ratings can be regulated the same as other "corporate speech".[421]

In the period prior to the US Dodd-Frank Act of 2010, courts never held CRAs liable. There was even a rule in securities laws that expressly exempted CRAs from liability. CRAs were not subject to a strict liability regime because they were immune to prosecution under Section 11 of the US Securities Act of 1933.[422] Even though courts did not hold CRAs liable for fraud, there was still room for CRA liability in future cases. There were other liability rules that could have applied had CRAs committed securities fraud. This area needed clarification due to disparate judicial decisions.[423] Some decisions tended to reject CRA liability more than others. Where CRAs only played the role of information gatherers, courts were more sympathetic to their free speech claims than where CRAs were involved in structuring the transaction.[424] Nevertheless, the Dodd-Frank Act has brought the necessary clarity with respect to CRA liability, which will help litigators sue CRAs.

b. SEC Regulation FD Exemption for Credit Rating Agencies

SEC Regulation FD delimits how market participants are allowed to deal with inside information. The SEC implemented this regulation in 2000 in

417 SORKIN, *A Hand in a House of Cards.*

418 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, at 95.

419 *See id.* at 85.

420 *Central Hudson Gas & Electric Corp.* v. *Public Service Commission*, 447 U.S. 557 (1980).

421 *Newby* v. *Enron Corp*., 2005 U.S. Dist. LEXIS 4494, p. 03. (S.D. Tex., Feb. 16, 2005).

422 US Securities Act of 1933, 17 C.F.R. § 230.436(g)(1).

423 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 88.

424 *Compare, e.g., Compuware Corp.* v. *Moody's Investors Services, Inc*., 324 F. Supp.2d 860 (E.D. Mich. 2004) (in which Moody's was entitled to protection as a journalist) *with, e.g.,* In re Fitch, 330 F.2d 104, 111 (2d Cir. 2003) (in which Fitch played a significant role in structuring the transaction, that is, the CRA went beyond the activities of a journalist).

order to eliminate the selective disclosure of sensitive information to a few interested market participants.[425]

For years CRAs have enjoyed exemption from SEC Regulation FD, thereby allowing them to receive inside information from issuers that is not shared with the market.[426] Therefore, CRAs have often had access to information denied to analysts and investors.[427] They contend that the exemption from SEC Regulation FD is needed in order to fully evaluate credit risk. They also argue that the exemption allows them to alert the public to any substantial changes in the status of a security more quickly and clearly through rating upgrades, downgrades, and watchlists.[428]

However, SEC Regulation FD exemption gives CRAs an unfair privilege compared with other market participants in need of financial information.[429] Further, it is far from apparent that CRAs have incorporated inside information in their credit ratings. This has given rise to concern about information flows in the case of structured finance ratings.

3. US Dodd-Frank Act of 2010

The US Dodd-Frank Act of 2010 seeks to remove the special treatment for CRAs. With respect to CRA liability, the agency reform introduces a liability regime in order to make CRAs more accountable for the quality of their credit ratings. CRA liability is particularly necessary in modern financial markets because of the different role of structured finance ratings as compared with corporate ratings.[430] The Dodd-Frank Act has clarified the situation thanks to two provisions of the securities laws. On the one hand, the US Securities Exchange Act of 1934 was amended so that the state of mind in private actions offers an easier path to sue CRAs. In the future it will be sufficient to prove that CRAs knowingly or recklessly failed to conduct a reasonable investigation or to obtain reasonable verification of factual ele-

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425 JORION, LIU & SHI, *Informational Effects of Regulation FD: Evidence from Rating Agencies*, at 310.

426 SEC Regulation FD, 17 C.F.R. 243.100-243.103; *see* FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 477.

427 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 162.

428 Moreover, some argue that CRAs should be able to receive material non-public information from issuers for the purpose of developing unsolicited credit ratings.

429 JORION, LIU & SHI, *Informational Effects of Regulation FD: Evidence from Rating Agencies*, at 329 (observing that after SEC Regulation FD, CRAs became privileged conduits of selective disclosure to the public; CRAs obtained a competitive advantage over other gatekeepers).

430 *See* ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 15.

ments relied upon by their methodology.[431] The new rule provides a mechanism to establish the civil liability of CRAs, thereby facilitating litigation against CRAs.[432] On the other hand, CRAs will be subject to expert liability under Section 11 of the US Securities Act of 1933 thanks to the repeal of Rule 436(g).[433] Rule 436(g) had shielded CRAs from liability with respect to the disclosure of credit ratings in registration statements. Pursuant to the Dodd-Frank Act, issuers have to seek CRAs' written consent if they want to include credit ratings in their registration statements. If CRAs deliver their consent, they are potentially liable as experts under Section 11 of the US Securities Act of 1933.

With respect to access to inside information, the SEC has removed CRAs' exemption from SEC Regulation FD.[434] The exemption for CRAs allowed issuers to give material information to CRAs that was not publicly available. The US Dodd-Frank Act of 2010 has acknowledged that there is no reason to privilege CRAs as far as access to financial information is concerned. The removal of the exemption from SEC Regulation FD will have a great impact on the credit rating industry by removing the special treatment for CRAs.[435] The amendment will change the information flow and the way issuers deal with CRAs. CRAs have lost a privilege that they enjoyed for a decade. This is a very positive aspect of the agency reform. Nevertheless, the question arises as to whether issuers will react to the amendment by disclosing more information to the public or not. If yes, transparency would be enhanced in the financial markets. Investors would have more information at their disposal in order to make their decisions. This increased level of information would simultaneously allow them to develop alternatives to credit ratings more easily. However, the possibility remains that issuers do not opt for an enhanced level of disclosure to the public. Information flow would decrease as a consequence of the amendment. At any rate, a transition period will be necessary so that issuers and CRAs can adapt to the new regime. And the removal of exemption from SEC Regulation FD was a crucial aspect of the reform puzzle.

431 US Dodd-Frank Act of 2010, Sec. 933(b)(2) (codified as amended at 15 U.S.C. 78u-4(b)(2)(B)).

432 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform.*

433 US Dodd-Frank Act of 2010, Sec. 939G.

434 *Id.* Sec. 939B; SEC, Removal from Regulation FD of the Exemption for Credit Rating Agencies (implementing the US Dodd-Frank Act of 2010).

435 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*.

4. EU and Swiss Liability Regime for Credit Rating Agencies

The legal frameworks of EU countries and Switzerland have similarities with respect to civil liability rules; in this respect, the Swiss liability regime can be treated alongside the EU regime.

At present, there is debate at the EU level on the necessity of introducing a common EU level principle of civil liability for CRAs.[436] Many commentators suggest that the EU harmonize national regimes throughout Europe.[437] Unless the EU adopts a regulation establishing a single liability regime, there are as many regimes for CRA liability as there are Member States. Currently Member States determine whether or not their laws hold CRAs liable for their misconduct individually.[438]

It is worth describing the main legal systems in the EU and in Switzerland to analyze whether or not they include a liability regime for CRAs.

Broadly speaking, legislators have two options. The first implies including CRA liability in the general rules. In this respect, CRAs would receive the same legal treatment as other gatekeepers, market participants and individuals in general. It is the current situation in most legal frameworks, such as in Germany and Switzerland for instance.[439] EU legislators have not deemed it necessary to introduce a special liability regime for CRAs. The second option consists of establishing CRA liability in a special law. This would be the case in the EU if the EU regulator introduced CRA liability in a regulation concerning CRAs exclusively.

France offers the best example of a special liability regime for CRAs.[440] Indeed, in 2010 the French law of banking and financial regulation introduced a special provision establishing CRA liability.[441] The French legisla-

436 *EU Public Consultation on Credit Rating Agencies,* at 24-25.

437 *AMF Response to the European Commission Consultation on Future Measures to be taken on Credit Rating Agencies*, at 6; *but see The United Kingdom Authorities Response to the European Commission Internal Market and Services Consultation Document on Credit Rating Agencies*, at 2, 18 (contending that there is no need to introduce civil liability in the EU framework for CRAs, because it would be counterproductive to reducing the reliance on credit ratings, as well as risk weakening competition).

438 TCHOTOURIAN, *Agences de notation: encadrement et responsabilité,* at 119ss.

439 *See, e.g., for Switzerland,* TRINDADE & SENN, *Control and Responsibility of Rating Agencies in Switzerland*, at 156ss (stating that – under Swiss law – there is no specific provision ruling the civil liability of CRAs, i.e. the general standards of the Swiss Code of Obligations apply).

440 *But see* THÉPOT, *L'encadrement légal de l'activité des agences de notation par la loi de régulation bancaire et financière,* at 26ss, *and also* THÉPOT, *L'encadrement des agences de notation: "trop de loi tue la loi",* at 6 (criticizing the new liability rule for CRAs, as many French scholars and commentators do).

441 Loi française de régulation bancaire et financière, art. 10 (to be codified in Code monétaire et financier, art. L. 544-5).

tor proceeded on the assumption that the general framework for civil, contractual and tort liability is not well designed to deal with the role of CRAs in financial markets.[442] By this means, France followed the path of the US Dodd-Frank Act of 2010 and adopted a special liability rule in relation to CRAs. However, although the new liability regime offers an easier path to sue CRAs, the difficulties in proving CRA liability will make successful cases rare albeit not inexistent.[443]

In the various legal systems, the basis for civil liability may be contractual, quasi-contractual or tortious, depending on the relationship between the CRA and the market participant that sustained losses. If the two parties concluded an agreement, the ground for liability is contractual liability. Under the investor-pays business model, CRAs and investors are contractually bound, i.e. investors can sue CRAs based on the contractual relationship. Under the issuer-pays business model, the contractual relationship is between CRAs and issuers. Issuers can possibly sue CRAs on a contractual basis but investors are third parties.

If the legal basis is contractual, the conditions for liability are typically breach of contract, damage, causality and fault.[444] The advantage of contractual liability is that there is – in most legal systems – a reversal of the burden of proof that can make it easier to prove fault.[445] From another perspective however, contractual liability is generally trumped by CRAs' standardized contractual clauses on limitations and exclusions from liability.[446] Nevertheless, legal systems generally do not allow unrestricted limitations of contractual liability. In France, the new liability rule states that contractual clauses including limitations of liability that are possibly total exclusions of liability are void.[447] In Germany, concern has been voiced – given the CRAs' position of trust – that even an exclusion of liability for slight negligence jeopardizes the purpose of the contract and is thus invalid.[448] In Switzerland, according to the general rules of the Code of Obligations, clauses of exclusions of liability for intent and gross negligence are void.[449] In short, legal systems generally consider exclusions of liability as too extensive but allow limitations of liability.

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442 CHARTIER, *Rapport sur le projet de loi de régulation bancaire et financière*, at 72.

443 MARINI, *Rapport n° 703) fait au nom de la commission des finances,* at 7.

444 *See, e.g.,* Swiss Code of Obligations, art. 97.

445 BLAUROCK, *Control and Responsibility of Credit Rating Agencies,* at 18-19.

446 *Id.,* at 19.

447 Loi française de régulation bancaire et financière, art. 10 (to be codified in Code monétaire et financier, art. L. 544-6).

448 BLAUROCK, *Control and Responsibility of Credit Rating Agencies,* at 19 (with accompanying note).

449 Swiss Code of Obligations, art. 100, para. 1; EMMENEGGER, *Rating und Haftung*, at 69.

In many cases however, there is no contract between CRAs and damaged market participants. The typical case is when investors sustain losses due to their reliance on inaccurate credit ratings. If the issuer-pays business model prevails, investors cannot invoke contractual liability. This was the case relating to subprime mortgage ratings.

In the absence of a contract, the question arises as to the potential legal basis for liability. Clearly, tort liability is the most common possibility. In France, the new legislation on banking and financial regulation refers to tort law as a potential ground for liability.[450] Typically, the conditions that need to be met in order to prove liability are a tortious act, damage, causality and fault.[451] The presence of a tortious act refers to the fact that CRAs acted unlawfully. According to Swiss courts, conduct should be regarded as unlawful if it violates orders or prohibitions of written or unwritten law protecting the property that was damaged.[452]

Other legal frameworks know original types of liability that can be qualified as quasi-contractual. Broadly speaking, the ground for liability is not based on a contract but on confidence. This is the case in Germany and Switzerland where the notion of "liability based on confidence" or "liability based on trust" was developed.[453] In this respect, there are two particular conditions to be met. First, the "special position of trust" requires the presence of a relationship equivalent to a contract.[454] Second, the notion of "disappointment of confidence" means that the CRA deceived the trusting party.[455] The idea of these two conditions relates to the fact that this type of liability protects the confidence of a party that has no contract but deserves special treatment. The other conditions are – as for other types of liability – damage, causality and fault.[456] As for contractual liability, there is a reversal of the burden of proof with respect to the condition of fault.

450 Loi française de régulation bancaire et financière, art. 10 (to be codified in Code monétaire et financier, art. L. 544-5) (mentioning tort liability as "responsabilité délictuelle" et "quasi-délictuelle").

451 *See, e.g.,* Swiss Code of Obligations, art. 41.

452 TRINDADE & SENN, *Control and Responsibility of Rating Agencies in Switzerland*, at 156ss.

453 In German "Vertrauenshaftung"; the Latin expression liability for "culpa in contrahendo" is also commonly used.

454 In German "Sonderverbindung". *See, e.g., for Germany,* KORTH, *Dritthaftung von Ratingagenturen,* at 77-78 (with accompanying note).

455 In German "Vertrauensenttäuschung". *See, e.g., for Switzerland,* VASELLA, *Die Haftung von Ratingagenturen, Ein Beitrag zur Expertenhaftung,* at 252.

456 *Id*.

More particularly, there are types of liability that can count as a subset of "liability based on confidence", such as expert liability and prospectus liability.[457]

In Switzerland, prospectus liability is relevant when credit ratings are parts of prospectuses, whereby this condition can under certain circumstances even be met if credit ratings are disclosed separately from prospectuses.[458] Liability is questioned after the publication of erroneous prospectuses. CRAs can only be held liable if they knew that their credit ratings were disclosed inside or alongside the prospectuses that misled market participants.[459] Under Swiss law, CRAs can be held responsible if they decisively influenced the compilation of prospectuses of a public company.[460] In contrast, in Germany the principles on prospectus liability under stock exchange and civil laws have little relevance in this area.[461]

Apart from that, Switzerland also recognizes expert liability.[462] The Swiss Supreme Court has acknowledged the possibility of expert liability if a third-party expert opinion is conveyed to a market participant with the consent of the expert.[463] Interestingly, this situation has similarities with the solution proposed by the US Dodd-Frank Act of 2010.[464]

Finally, it is worth mentioning that the UK is reluctant to recognize CRA liability.[465] The UK authorities have recently raised concern about the detrimental impact of CRA liability on the behavior of market participants. CRA liability may potentially reduce market participants' own incentives to exercise due diligence.

In a nutshell, it tends to be more difficult to prove CRA liability if the regime is based on general liability rules. The creation of special liability rules makes it easier for market participants to sue CRAs because it demonstrates the willingness of lawmakers to make CRAs more accountable. It will be interesting to observe whether the EU decides to adopt a special liability regime for CRAs.

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457 *Id.,* at 249, 297-298. *See also* EMMENEGGER, *Rating und Haftung*, at 88 (with accompanying note).

458 VASELLA, *Die Haftung von Ratingagenturen, Ein Beitrag zur Expertenhaftung,* at 303.

459 EMMENEGGER, *Rating und Haftung*, at 96-97.

460 TRINDADE & SENN, *Control and Responsibility of Rating Agencies in Switzerland*, at 156ss; BLAUROCK, *Control and Responsibility of Credit Rating Agencies,* at 24.

461 *Id.* (with accompanying note).

462 In German "Gutachterhaftung". *See* EMMENEGGER, *Rating und Haftung*, at 88-89.

463 Swiss Supreme Court, BGE 130 III 345ss (Dec. 23, 2003).

464 *See supra* Part 2, Chapter 4(IV)(3).

465 *The United Kingdom Authorities Response to the European Commission Internal Market and Services Consultation Document on Credit Rating Agencies*, at 2, 18.

V. Regulatory Trends and Competitive Aspects

In the aftermath of the financial crisis triggered in 2007, lawmakers and regulators have acknowledged that the credit rating industry needs structural change. The EU Regulation on CRAs of 2009 and the amendments relating to CRAs adopted by the US Dodd-Frank Act of 2010 represent the most significant regulatory overhaul since the creation of the credit rating industry.

Broadly speaking, the implementation of the EU Regulation on CRAs and the US Dodd-Frank Act of 2010 will mark a turning point relating the position of CRAs in modern financial markets. In the US they will lose their privileged position and no longer benefit from regulatory reliance. Step two of the EU Regulation on CRAs will probably follow the US trend as suggested by the EU Public Consultation on CRAs. In general, over the last few decades there have been three significant periods with respect to the regulatory structure of the credit rating industry. First, at the beginning of the twentieth century through to the 1970s, CRAs were neither regulated, nor used in financial market regulations. Second, especially since the 1970s, CRAs were still not regulated, but increasingly used for regulatory purposes in financial market regulations. Third, since the Dodd-Frank Act, a transition period has been initiated so that CRAs will no longer be used in financial market regulations, but will become as highly regulated as other gatekeepers such as auditors and securities analysts. The impact of the CRA reforms in the US and the EU remains – to some extent – uncertain, but one definitive point is that they will surely bring change to the rating business.

With respect to the US, the Dodd-Frank Act of 2010 affects the three aspects related to the competitive environment in the credit rating industry. The competition level among leading CRAs will undoubtedly evolve pursuant to implementation of the CRA reform. Some of the new amendments may have positive effects on competition, while some others may be detrimental to competition in the credit rating industry.

First, the withdrawal of rating-based regulations enhances competition in the credit rating industry. In the long term, certified CRAs will cease to benefit from regulatory privilege. CRAs should no longer sell "regulatory licenses" but merely provide investors with financial information. Competition will ideally be based on the quality of the rating services. However, how long the transition toward the complete withdrawal of rating-based regulations will last is uncertain, depending on how regulators find substitutes for credit ratings. The US Dodd-Frank Act of 2010 expressly states that every Federal agency has one year to remove regulatory reliance on

credit ratings,[466] but this deadline will be difficult to meet. More time may be needed so that governmental entities can implement revised regulations using alternatives to credit ratings. Rating-based regulations cannot be instantaneously unwoven since mandates to use credit ratings have become part of the fabric of financial markets.[467] It will be very challenging for regulators and market participants to develop alternatives to credit ratings.[468] Moreover, market over-reliance on certified credit ratings will not be easy to withdraw due to the fact that over the past decades behavioral reliance has added to regulatory reliance.[469]

Second, the regulatory oversight of CRAs generates diverging and controversial opinions with respect to its effects on competition. The US Dodd-Frank Act of 2010 states that the critical gatekeeper role played by CRAs justifies the same enhanced level of regulation as that which applies to securities analysts and auditors.[470] According to this view, public oversight is necessary to discipline the credit rating industry. However, some scholars are skeptical of expanding CRA oversight to a great extent.[471] While alleviating some problems, regulators may introduce new ones. The regulatory oversight of CRAs may heal the symptoms but not the causes of troubles in the credit rating industry. Concerns have been raised about the detrimental effects of public oversight on competition.[472] Regulating the credit rating industry might inadvertently result in empowering CRAs.[473] In general, critics contend that the path to more competition simply requires lawmakers to lower regulatory barriers to entry.[474] Yet regulating the credit rating in-

466 US Dodd-Frank Act of 2010, Sec. 939A.

467 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*.

468 *See infra* Part 5, Chapter 16(II)(3).

469 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 10.

470 US Dodd-Frank Act of 2010, Sec. 931(2-3).

471 *See, e.g.,* SINCLAIR, *The New Masters of Capital, American Bond Rating Agencies and the Politics of Creditworthiness*, at 9 ("Indeed, tight regulation would potentially destroy the key thing agencies have to sell: their independent opinion on market matters").

472 *See* SEGAL, *Debt Raters Avoid Overhaul After Crisis* (arguing that the reform bills are misguided and wrongheaded due to their ironic effect of making the incumbents even more important) (quoting Professor LAWRENCE J. WHITE, NYU Stern School of Business); *see also* HILL, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* at 19 (arguing that if self-interested money managers failed to discipline CRAs, regulators would not be able to do a better job at detecting the bad quality of credit ratings); *see also* ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?* (expressing concerns about the fact that too much oversight would undermine competition in the rating industry by raising regulatory barriers to entry).

473 CHAN, *Documents Show Internal Qualms at Rating Agencies* (quoting Professor LAWRENCE J. WHITE, NYU Stern School of Business).

474 *See, e.g., Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 35 (already arguing that it is not efficient to remove one set of regulatory barriers to entry and replace it with another).

dustry may add further barriers to entry.[475] The key point is that regulatory compliance is onerous for new entrants. Therefore, although one regulatory barrier to entry may be addressed through the withdrawal of rating-based regulations, another regulatory barrier to entry may be created by the new regulatory oversight of CRAs.

Third, the special treatment for CRAs must without any doubt be eliminated in order to enhance competition in the credit rating industry. The effects of the new liability rules and the removal of CRAs' exemption from SEC Regulation FD mainly have positive effects on competition. First, CRAs will be subject to the same treatment as other gatekeepers such as other providers of financial information. Second, the new liability rules will partly enhance reputational constraints so that CRAs will face litigation costs if they issue reckless credit ratings. However, one negative aspect related to competition is that the liability regime for CRAs does not address market over-reliance on credit ratings. Investors are even more likely to rely on credit ratings given the creation of liability rules. Therefore, courts will have to define how to delimit the liability criteria so that investors do not expect too much from the new rules.

With respect to the EU framework for CRAs, the EU Regulation of 2009 relates to CRA oversight. EU regulators proceeded on the assumption that the credit rating industry should be highly regulated. Their primary concern was to fill a gap in the EU regulatory structure as CRAs were unregulated prior to the 2007-2009 financial crisis. The EU Regulation on CRAs of 2009 is regarded by scholars as a first step in the right direction as it marks the first attempt to regulate CRAs in the EU.[476] However, EU regulators were aware that they did not respond to every concern. Therefore, step two of the EU Regulation on CRAs will address topics that were not included in the Regulation of 2009 but that deserve particular attention, i.e. over-reliance on credit ratings, sovereign ratings, lack of competition, CRA liability and proposals for a new revenue model.[477]

Finally, both US and EU legislators were not able to agree on mandatory rules to solve the causes of conflicts of interest in the credit rating indus-

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475 THE ECONOMIST, *Negative Outlook, Europe Misfires in its Attack on the Rating Agencies*, at 91 (criticizing the European efforts to regulate the credit rating industry; tying CRAs even more tightly into the regulatory system is likely only to exacerbate the problem by raising barriers to new entrants and making the CRAs appear even less fallible).

476 GRANIER, *Éclairage. Le règlement communautaire sur les agences de notation: un début de régulation de l'activité?,* at 8.

477 *EU Public Consultation on Credit Rating Agencies,* at 1-28.

try.[478] The US Dodd-Frank Act of 2010 merely acknowledges that CRAs face conflicts of interest that need to be explicitly addressed in legislation.[479] Further, with respect to oversight, the new Office of Credit Ratings has to ensure that NRSRO ratings are not unduly influenced by conflicts of interest.[480] A few governance rules require CRAs to monitor conflicts of interest. For instance, in the US dealing with conflicts of interest counts as a duty of the board of directors of the NRSROs.[481] Similarly, the EU Regulation on CRAs of 2009 requires CRAs to mitigate conflicts of interest and avoid them if possible. Critics suggest that governance rules merely heal the symptoms but do not cure the causes of the problem. Conflicts of interest arise out of the issuer-pays business model. The most adequate solution would consist of moving back to subscriber-paid credit ratings.[482] However, the current situation has proven tricky to change. In the US Congress was merely able to agree on the fact that the issuer-pays business model in its current form was not satisfactory, and called for the SEC to undertake studies analyzing how to address conflicts of interest in the credit rating industry. Two SEC studies may play a role in this regard: the SEC study on strengthening credit rating agency independence and the SEC study and rule-making on assigned credit ratings.[483] In the EU, the Public Consultation on CRAs asks commentators to come up with new suggestions regarding conflicts of interest embedded in the issuer-pays business model; the EU will probably move forward with a proposal for a new revenue model in the near future.[484] Therefore, although the recent CRA reforms are the most sweeping overhaul in the credit rating industry, there are still regulatory topics of interest for future research. Regulators will still have to amend the frameworks for CRAs and introduce new rules, in particular with respect to solving conflicts of interest in the credit rating industry.

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478 *With respect to the US, see* SORKIN, *Congress Drops Changes for Credit-Rating Agencies* (explaining that Senator AL FRANKEN had championed a proposal that would end the practice of issuers choosing the rating agencies; the FRANKEN amendment would have created a board, overseen by the SEC, which would have assigned CRAs to provide credit ratings in order to eliminate conflicts of interest; however, the House of Representatives did not accept the proposed solution and Congress had to strip the FRANKEN amendment out of the financial reform bill). *With respect to the EU, see EU Public Consultation on Credit Rating Agencies,* at 26-28 (envisaging to set forth a new revenue model for CRAs in step two of the EU Regulation on CRAs).

479 US Dodd-Frank Act of 2010, Sec. 931(4).

480 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(p)(1)(A)(iii)).

481 *Id.* Sec. 932(a)(8) (codified as amended at 15 U.S.C. 78o-7(t)(3)(B)).

482 *See infra* Part 5, Chapter 17 (proposing a new revenue model for CRAs).

483 US Dodd-Frank Act of 2010, Sec. 939C. and 939D.

484 *EU Public Consultation on Credit Rating Agencies,* at 26-28.

§ 5. Road Ahead for a Competitive Credit Rating Market

I. Background

1. Credit Rating Agencies' Incentives in the Run-Up to the Subprime Mortgage Crisis

"[...] The focus of Moody's shifted from protecting investors to being a marketing-driven organization. […] Management's focus increasingly turned to maximizing revenues."[485]

Distortions of competition in the credit rating industry were particularly striking during the years preceding the subprime mortgage crisis. From 2000 through 2007, Moody's effectively behaved as a triple-A factory; in this period of time, the number one in the credit rating industry effectively attributed its triple-A credit rating to 42,625 RMBS.[486] In 2006, 869 billion US dollars worth of mortgage-related securities were rated triple-A by Moody's 83 percent of which went on to be downgraded within six months.[487] Under no circumstances could such unprecedented rating activity – followed by such massive credit rating downgrades – be consistent with a competitive market in financial information. Clearly, competitive incentives failed to play their disciplinary role in the credit rating industry.

The credit rating industry experienced the downside of competition in a context where credit ratings were used in a great number of financial market regulations. The poor performance of structured finance ratings was primarily the consequence of focusing on maintaining and increasing revenue and market share instead of competing on rating quality.[488] There had

485 MORGENSON, *Debt Watchdogs: Tamed or Caught Napping*? (quoting JEROME S. FONS, former Managing Director, Moody's).

486 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (opening remarks of PHIL ANGELIDES, Chairman, FCIC), at 1 (adding that in 2006, Moody's put the triple-A label on 9,029 MBS, i.e. more than 30 a day); *see also* BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies* (describing the leading CRAs in the years preceding the subprime mortgage crisis as "profit machines".

487 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (opening remarks of PHIL ANGELIDES, Chairman, FCIC), at 1; *see also* MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals*.

488 *Id.* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 3.

been a complete culture change at the leading CRAs.[489] Before Moody's "obsession" with gaining market share, a rating analyst's worst fear was to contribute to a wrong credit rating assignment and damage Moody's reputation; in the aftermath of the culture change at Moody's an analyst's worst fear was to jeopardize Moody's market share, impair Moody's revenue and to be fired.[490] In the run-up to the financial crisis, CRAs were overwhelmed by the significant number of transactions to be rated.[491] If they had had time, they would have seen the errors that magically favored investment bankers.[492] However, they were not concerned with allocating sufficient resources to rate deals properly.[493] They were attracted by significant issuers' fees and hence had no incentive to refuse to rate any deals.

Pressure to inflate credit ratings was exerted at two levels: senior to junior CRA employees as well as investment bankers to CRAs. The leading CRAs were under pressure from their clients, i.e. bankers and issuers, and junior CRA employees from their seniors.[494] On the one hand, "rating shopping" implied that if a CRA said no to a transaction investment bankers could easily take their business to another CRA and obtain the desired triple-A rating.[495] Given the threat of losing business to a competitor, CRA unwillingness to say no to transactions grew.[496] Indeed, agency employees recall being under pressure from investment banks to issue high credit ratings.[497]

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489 JONES, *When Junk was Gold* (arguing that the culture change at Moody's occurred when the company went public in 2000).

490 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of MARK FROEBA, former Moody's employee), at 4.

491 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* (quoting a former Moody's employee).

492 *Id*.

493 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 4 (stating that despite the increasing number of deals and their increasing complexity, Moody's group involved in rating synthetic CDOs did not receive adequate resources).

494 SEC, *Summary Report of Issues Identified in the Commission Staff's Examinations of Select Credit Rating Agencies*, at 12; *see also* HILL, *Who Were the Villains in the Subprime Crisis, and Why it Matters*, at 339; *see also Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of MARK FROEBA, former Moody's employee), at 7 ("[Moody's senior management] used intimidation to create a docile population of analysts afraid to upset investment bankers and ready to cooperate to the maximum extent possible").

495 *Id.* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 3 (explaining that he only said no to one questionable deal, and that did not stop the transaction since the banker enlisted two other CRAs and obtained two triple-A ratings).

496 *Id.* (testimony of RICHARD MICHALEK, former Moody's employee), at 2.

497 *See, e.g., Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland*

On the other hand, CRA employees had to explain and defend every missed deal to their superiors.[498] Although no explicit directives dictated lower rating standards, CRA employees felt pressured to issue high credit ratings.[499] The "cultural revolution" that senior managements imposed on rating analysts corrupted the rating analysis.[500] Rating quality decreased insofar as rating models were adapted to inflate credit ratings.[501]

2. Competition and Leading Credit Rating Agencies

Conventional wisdom reads that competitive markets lead to welfare maximization.[502] General competition law pursues this objective. In the case of externalities however, competitive markets fail to deliver expected benefits; sector-specific regulation is therefore used to correct the faulty market mechanism.[503]

Regulations can nevertheless have positive and negative effects on competition. Even though the leading objective of the US Credit Rating Agency Reform Act of 2006 was to enhance competition, it did not succeed in improving competitive incentives among leading CRAs. Regulators experienced the downside of competitive pressures in the run-up to the subprime mortgage crisis, while leading CRAs focused on increasing their market share and revenue by lowering rating standards. Ill-designed competition among NRSROs was counterproductive because of "rating shopping": issuers hired the CRA that gave the highest credit rating.[504] Critics contend that inappropriate competition creates wrong incentives because CRAs are dependent on their major clients and may provide inflated credit ratings so as not to lose them.[505] As a consequence, competition in the credit rating industry was a less popular target in the context of the recent financial regula-

Security and Governmental Affairs, Exhibit 36, at 156 ("I am getting serious pushback from Goldman on a deal that they want to go to market with today") (quoting a Moody's employee).

498 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 3.

499 *Id*.

500 *Id.* (testimony of MARK FROEBA, former Moody's employee), at 18.

501 *Id.* (adding that it would be interesting to observe correlations between material methological changes and revenue and market share pressures; in his opinion, Moody's responded to revenue and market share pressures by initiating major methodological changes).

502 JENNY, *The "Coming Out" of Abuse of Superior Bargaining Power in the Antitrust World*, at 561; *see further* MONTI, *EC Competition Law: The Dominance of Economic Analysis?,* at 6-7.

503 JENNY, *The "Coming Out" of Abuse of Superior Bargaining Power in the Antitrust World*, at 562. *See further infra* Part 2, Chapter 5(I)(3).

504 *See* IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 8.

505 *See* MATHIS, *Réformons les agences de notation* (arguing that in a competitive credit rating market, CRAs would become even more dependent on their main clients).

tory reform.[506] Some scholars and market participants even argue that competition among CRAs automatically has undesirable effects on financial markets.[507] Ill-advised competition is accused of causing a "race to the bottom" and inflated credit ratings.[508] Accordingly, the US Dodd-Frank Act of 2010 did not explicitly refer to competition in its CRA reform. Nevertheless, it is worth mentioning that competition exists not only among the CRAs themselves, but also among other providers of financial information. In this regard, the Dodd-Frank Act seeks to remove the regulatory privileges attributed to NRSROs and special treatment for CRAs.

This study proceeds on the assumption that well-designed competition is the best way to create appropriate incentives in the credit rating industry. The credit rating industry is oligopolistic and effectively dominated by the three leading CRAs – Moody's, Standard & Poor's and Fitch.[509] Over the past decades certified CRAs have played a hybrid gatekeeper role, an unusual cross between government and private providers of rating services.[510] However, the post-crisis financial reform has taken a significant step toward removing rating-based regulations. CRAs will – in the future – lose their quasi-governmental status and remain basically private actors. The scope of the functions performed by CRAs will be newly defined by market participants. Therefore, competition issues will arise in the credit rating industry. The need for a competitive environment should now become a clear target. Market forces will have to play their disciplining role with respect to rating services. The essential questions are not whether competition is required but what competition is with respect to CRAs, and what kind of competition will meet investors' needs.

As outlined above, distortions of competition are considered as a consequence of rating-based regulations; rating-based regulations have shielded CRAs from competition.[511] On the one hand, regulators can destroy competition by using credit ratings in their regulations. To make matters worse, competitive pressures have counterproductive effects as long as credit rat-

506 VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (quoting WARREN BUFFET, Chairman and Chief Executive Officer, Berkshire Hathaway Inc., who provocatively suggests that a monopoly might be the best answer since one CRA would not need to compete).

507 CAMANHO, DEB & LIU, *Credit Rating and Competition*, at 27 (arguing that competition in the credit rating industry tends to amplify CRAs' lax behavior and reduce total welfare).

508 *See supra* Part 2, Chapter 4(II)(3)(c).

509 *EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 6.

510 SEGAL, *Debt Raters Avoid Overhaul After Crisis* (describing CRAs as "one of capitalism's strangest hybrids: profit-making companies that perform what is essentially a regulatory role").

511 *See supra* Part 2, Chapter 4(II).

ings are used in financial market regulations. On the other hand, this research is based on the conviction that competitive markets do not necessarily relate to the absence of regulations. Incentive-based regulations are needed to ensure that market forces operate fairly. Therefore, every financial market regulation must be assessed with respect to its effect on competition.

3. General Competition Law and Sector-Specific Regulation

Competition principles have to coexist with other government policies "designed to correct market failure, to respond to externalities and to deal with the issue of asymmetric information" in the marketplace.[512] In other words, regulators have a role to play beside competition authorities.

The terms competition law and competition policy are not identical.[513] General competition law is a set of legal provisions that aim to protect the process of competition.[514] It is a remedy to market failure. Competition policy has a wider scope than competition law, and there are various types of public policies that amount to competition policy.[515] Typically, public policies can affect the process of competition in the marketplace. Sector-specific regulation may fall within the scope of competition policy when regulatory intervention seeks a competitive objective.

It is worth describing general competition law and sector-specific regulation in more detail. With respect to general competition law, legal frameworks contain three typical pillars as follows.

(i) Anticompetitive agreements

Combating anticompetitive practices comprises prohibiting the collusion between firms.[516] The most serious breaches of competition law are horizontal agreements and practices or conspiracies between firms such as price-fixing, market-sharing and output limitation.[517]

512 GEIGER, *The Development oft he World Economy and Competition Law,* at 238.
513 DABBAH, *International and Comparative Competition Law*, at 12.
514 *Id*.
515 *Id*, at 61.
516 *Id*., at 32-33.
517 *Id*.; *see also* GEIGER, *The Development oft he World Economy and Competition Law,* at 246 (describing agreements on price-fixing and market-sharing as universally condemned).

(ii) Abuse of dominant position

Firms can also harm competition when acting unilaterally.[518] An essential criterion to measure market dominance is market power.[519] When firms acquire market power, they can be tempted to take advantage of their privileged position in the marketplace. What is prohibited is not the achieving of market power but the abuse of dominant position, whereby discerning between legitimate behavior and illegal behavior is the central question.[520]

(iii) Merger control

Mergers – also referred to as concentrations – may occur through amalgamation, acquisition of control or joint ventures.[521] Some firms may merge to become more efficient, i.e. to generate benefits to consumers. Some other mergers may have anticompetitive effects, for instance if they decrease the number of competitors to cause adverse effects on the market.[522] As a consequence, legal frameworks may be designed to control mergers and acquisitions ex ante. However, general competition law has not played any decisive role in the credit rating industry at this stage.[523]

There is no evidence that the leading CRAs adopt colluding practices to gain unfair advantages. Moreover, CRAs have not been accused of abusing their dominant market position. Although high barriers ensure that the leading CRAs have a privileged position, there is no evidence to prove that they abuse of their market dominance. Last, mergers are currently not a relevant issue in the credit rating industry so merger control cannot help discipline the credit rating industry. Therefore, general competition law does not offer a satisfactory response to competitive problems in the credit rating industry.

With respect to sector-specific regulation, it is important to highlight that some industries tend to be more significantly regulated than others, as is increasingly the trend in the credit rating industry. Sector-specific regulation can derogate from general competition law. Nevertheless, some sector-specific rules fall within the scope of competition policy by seeking to promote or preserve competition.[524] At any rate, sector-specific regulation constitutes a massive intervention in the market process and requires well-

518 DABBAH, *International and Comparative Competition Law*, at 34.
519 MAINGUY, RESPAUD & DEPINCÉ, *Droit de la concurrence*, at 284.
520 *Id.*, at 285-291.
521 DABBAH, *International and Comparative Competition Law*, at 35.
522 *Id*.
523 PARTNOY, *The Paradox of Credit Ratings,* at 79; FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 480-482.
524 GERARDIN & KERF, *Controlling Market Power in Telecommunications, Antitrust vs. Sector-Specific Regulation,* at 1-3.

founded justification.[525] For instance, competition policy objectives can justify sector-specific regulatory intervention in cases of market power.[526]

Regulatory activity is indeed necessary with a view to disciplining market power in specific sectors.[527] For instance, the telecommunications sector furnishes a good example of which mechanisms can be used to regulate competition in a regulated marketplace.[528] In some countries, this sector offers a case study on the benefits of competition, the necessity of regulation and how to balance these two components.[529]

Clearly, the credit rating industry is being increasingly regulated and subjected to competitive concerns. Despite a cumbersome degree of regulatory control, market forces should play their disciplinary role. In this sense, competitive objectives should be a clear focus of regulatory intervention. In a nutshell, as far as the credit rating industry is concerned, sector-specific regulation may respond to competitive concerns more satisfactorily than general competition law. The only condition is that regulators clearly define competition as an objective when regulating CRAs.

II. Concerns about the Level of Competition in the Credit Rating Industry

"The real problem is not that the market underweights rating quality but rather that in some sectors it actually penalizes rating quality. It turns out that rating quality has surprisingly few friends: issuers want high ratings; investors don't want rating downgrades; short-sighted bankers labor short-sightedly to game the rating agencies."[530]

1. Concept of Competition with Respect to Credit Rating Agencies

Competition is incentive-driven. Ideally its presence creates incentives for market participants to lower prices, to innovate, or to provide services of high quality. Competitive markets are generally deemed to yield economic benefits such as economic welfare, economic freedom or economic effi-

525 KNIEPS, *Sector-Specific Market Power Regulation versus General Competition Law*, at 49.
526 *Id*.
527 *Id*.
528 DABBAH, *International and Comparative Competition Law*, at 339.
529 *Id*.
530 *Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform*, at 2 (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

ciency.[531] Overall, competition is associated with the proper functioning of private market forces. Competition protects the freedom of individuals to compete.[532] In the absence of competition, CRAs would have no incentive to provide accurate credit ratings.

There are three levels relevant to competition in the credit rating industry. First, competition in the market for information takes CRAs into account in contradistinction to other gatekeepers. Second, competition in the market for credit ratings takes into account certified CRAs as compared with non-certified CRAs, and the leading CRAs as compared with smaller CRAs. Third, competition in the market for certified credit ratings takes into account the counterproductive effects of competition among certified CRAs; competing for increasing market share and revenue may lead to a "race to the bottom" in the presence of rating-based regulations.

Broadly speaking, the credit rating industry is highly concentrated. In general, oligopolistic structures give incumbents the power to charge monopoly prices and get higher profits.[533] Some economists contend that there is enough competition in the credit rating industry because CRAs do not charge monopoly prices despite the presence of the Moody's, Standard & Poor's and Fitch oligopoly. Competition was traditionally understood in the narrow meaning of price competition. However, in the modern world, competition among CRAs does not only relate to price fixing. Over the last few decades the scope of competition has expanded beyond its initial meaning for it is crucial that CRAs compete on credit rating quality. Therefore, it is important to define competition in terms of not only price but also quality competition.

In the credit rating industry the negative impacts of the oligopoly are derived from rating inaccuracies in the sense that leading CRAs have no incentive to predict financial debacles. Competition pressures are counterproductive if CRAs engage in a "race to the bottom". Further, conflicts of interest impair the independence of the leading CRAs. The lack of competitive incentives is especially striking in the issuer-pays business model. "Rating shopping" jeopardizes the issuance of independent credit ratings. To make matters worse, the credit ratings of leading CRAs have such a substantial effect on the financial markets that they cannot afford to downgrade on a timely basis. This trend is referred to as the systemic relevance of the

531 MONTI, *EC Competition Law*, at 23-25, 44-45.

532 ZÄCH & KÜNZLER, *Freedom to Compete or Consumer Welfare: the Goal of Competition Law According to Constitutional Law,* at 71.

533 *See further* WHITE, *The Growing Influence of Economics and Economists on Antitrust: An Extended Discussion*, at 14.

leading CRAs.[534] CRAs cannot rate independently of the repercussions of their rating downgrades on the financial system.

In addition, a competitive credit rating market requires as few barriers to entry as possible, as well as no "barriers to exit" in the sense that CRAs not providing valuable information should not survive.[535]

Competition also means that market participants purchase credit ratings because of their additional value, i.e., if the expected benefit of the credit rating minus the actual cost of the credit rating is positive as well as greater than the expected benefit of an independent investigation minus the actual cost of such an investigation.[536] Nevertheless, given the nature of information as a public good it is challenging to extract investors' fees,[537] i.e. to get any individual investor to pay for credit ratings.[538]

Moreover, a competitive credit rating market signifies that there are divergent opinions, and that CRAs do not act in a homogenous way. Financial information should be available to market participants on a competitive basis.

Last but not least, reputational constraints are at the core of a competitive credit rating market. The "reputational capital" view of credit ratings is indeed consistent with the need for competition in the credit rating industry.[539] Competition means that CRAs' reputational capital is at stake in the sense that CRAs would lose more from giving inaccurate credit ratings than they would gain in receiving higher fees.[540] The reputational motivation should be sufficient to create incentives for CRAs to provide accurate credit ratings.[541] The dominant view of credit rating quality is that a well-functioning reputation mechanism will give CRAs optimum incentives for producing high-quality credit ratings.[542] In other words, if competition incen-

534 *See infra* Part 4.

535 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 639.

536 *Id.* at 629.

537 ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* at 45 (discussing the difficulties of limiting the accessibility of information by excluding investors who have not paid for it).

538 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 52.

539 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 627.

540 *Id.* at 633.

541 SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox*, at 26 (suggesting that the profitability of CRAs is directly tied to reputation).

542 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 112-114, 127-128 (adding, however, that the author does not agree with this dominant view, especially not in relation to structured finance ratings).

tives work adequately in the credit rating industry, CRAs have an overriding incentive to maintain a reputation for high-quality, accurate credit ratings.[543] Therefore, a competitive credit rating market is one which is based on reputation-driven business.[544]

2. Distortions of Competition among Leading Credit Rating Agencies

"We are meeting with your group this week to discuss adjusting criteria for rating CDOs of real estate assets this week because of the ongoing threat of losing deals.[...] Lose the CDO and lose the base business – a self reinforcing loop."[545]

Concerns have been raised about the level of competition among CRAs. Some scholars and market participants contend that competition still exists despite the oligopoly of the Big Three.[546] Other scholars argue that there is no competition since well-established CRAs keep their market share despite their poor rating performance. Some refer to an absence of competition in the credit rating industry.[547] Although disparate opinions exist concerning the level of competition in the credit rating industry, little research has been carried out to analyze the competition issue. This academic work focuses on the causes and consequences of the competitive concerns in the credit rating industry. It is crucial to understand the competitive environment in the credit rating industry in order to draw meaningful regulatory conclusions.

a. Oligopolistic Market Structure

CRAs operate in an oligopolistic market that offers limited incentives to compete on quality ratings.[548] Since the first CRA was founded at the be-

543 CANTOR & PACKER, *The Credit Rating Industry*, at 4.

544 JACKSON, *The Role of Credit Rating Agencies in the Establishment of Capital Standards for Financial Institutions in a Global Economy*, at 312 (arguing that to preserve the value of their credit ratings in this market CRAs need to maintain a good reputation for accurate credit ratings, and that this desire to maintain their reputation enhances the credibility of their credit ratings).

545 CHAN, *Documents Show Internal Qualms at Rating Agencies*; *see also* SEC, *Summary Report of Issues Identified in the Commission Staff's Examinations of Select Credit Rating Agencies*, at 26 (quoting a Standard & Poor's employee).

546 They mainly argue that CRAs compete on prices.

547 *See, e.g., Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 8 (specifically referring to the Moody's and Standard & Poor's duopoly).

548 *EU Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies*, at 2.

ginning of the twentieth century, the same three leaders – Moody's, Standard & Poor's and Fitch – have dominated the industry, and continue to dominate it.

The question arises as to whether CRAs are driven by private market forces. As regards market structure, there is no doubt that the credit rating industry is heavily concentrated.[549] Of the Big Three, the most dominant CRAs are Moody's and Standard & Poor's since they control over 80% of the credit rating market.[550] Some speak of a duopoly of these two CRAs alone.[551] The third leading CRA Fitch is also significant, hence reference to an oligopoly.[552] From the point of view of smaller competitors, the credit rating industry is purported to be a 5 to 6 billion US dollars market with Moody's, Standard & Poor's and Fitch controlling more than 90 percent of the market.[553] Further, there are only five global CRAs altogether if we add A.M. Best and DBRS to the three leading CRAs. Overall there are approximately a hundred and fifty other smaller CRAs which are regional or sectoral.[554]

Nevertheless, the high level of concentration in the credit rating industry is not sufficient to state that CRAs are immune to competitive forces. It is also important to highlight the impact of high concentration on the market behavior of the leading CRAs. Above all, regulations created high barriers to

549 *See supra* Part 2, Chapter 5(I)(3) (addressing the relationship between general competition law and sector-specific regulation).

550 *See EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment*, at 9 (stating that Moody's and Standard & Poor's have a combined market share in excess of 80 percent, and Fitch approximately 14 percent).

551 *See generally* US Credit Rating Agency Reform Act of 2006, Sec. 2(5) (stating that the two largest CRAs – Moody's and Standard & Poor's – serve the vast majority of the market); *see, e.g., Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 8; *see also* CAMANHO, DEB & LIU, *Credit Rating and Competition*, at 3 (modeling competition amongst CRAs in a duopolistic setting).

552 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 161 (describing the three leading CRAs as the only CRAs of global reach); FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 471 (referring to the three leading CRAs as the most influential in the financial markets).

553 *Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform* (statement of SEAN J. EGAN, Managing Director, Egan-Jones Ratings), at 42.

554 *See, e.g.,* ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 14; *see also* SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 1 (stating that there are approximately hundred CRAs); *see further EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N° 1060/2009 on Credit Rating Agencies*, at 7, 38 (stating that approximately fifty regional CRAs are established in the EU).

entering the credit rating industry, thereby shielding CRAs from competition. The leading CRAs became more powerful and gained market dominance due to regulatory reasons. Certified CRAs may, as a result, have little incentive to be responsive to investors' needs because they can take advantage of an oligopolistic market structure.[555]

Relevant with respect to competition is the price of credit ratings in comparison to their informational value. Some researchers contend that the credit rating industry is competitive because credit rating prices are low in proportion to the value of the markets in which they operate. However, rating prices are actually very high in terms of the additional value provided by credit ratings. CRAs are excessively profitable compared to the value of the financial information that they provide to the markets. Therefore, competition is not about the level of credit rating prices in absolute means, but about the level of credit rating prices as compared with the value of information. In a competitive market, information of little value should not be sold even at a discount. Absence of competition would imply that CRAs could sell their credit ratings even if they do not provide valuable information.

In addition, as a signal of anticompetitive practices it is worth mentioning that CRA profit margins are very high.[556] Profit margins at the leading CRAs climbed as structured finance revenues rose. Leading up to the subprime mortgage crisis Moody's enjoyed profit margins far outpacing those of the mightiest companies including Microsoft and Exxon.[557] From 2000 to 2007, Moody's documents revealed operating margins averaging 53 percent, whereas in 2007 Microsoft and Exxon had margins of 36 and 17 percent respectively.[558]

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555 BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 305 (adding that Moody's unresponsiveness to investors' needs could simply be due to the lack of competition in the credit rating industry).

556 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 655; GILLEN, *In Ratings Agencies, Investors Still Trust* (quoting DAVID EINHORN, hedge fund manager, Greenlight Capital: "As a classic oligopolist, Moody's earns exceedingly high margins while paying only the needed lip service to product quality").

557 MORGENSON, *Debt Watchdogs: Tamed or Caught Napping?*.

558 *Id.*; *see also Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs* (memorandum of Senator CARL LEVIN, Subcommittee Chairman & Senator TOM COBURN, Ranking Member), Exhibit 1a, at 5.

b. Deformation of Incentives in the Credit Rating Industry

"Now, it was a slippery slope, what happened in 2004 and 2005 with respect to subordinated tranches is that our competition, Fitch and S&P, went nuts. Everything was investment grade. It didn't really matter. We tried to alert the market. We said we're not rating it. This stuff isn't investment grade. No one cared because the machine just kept going."[559]

The lack of competition in the credit rating industry is associated with misaligned incentives.

In modern financial markets, the quality of credit ratings may not be as high as would be the case if the credit rating industry were more competitive.[560] Indeed, credit rating inaccuracies can result from distortions of competition. With respect to the subprime mortgage market, inaccuracies were observed in the form of inflated credit ratings. For instance, an extreme example was the case of Moody's: Moody's was eager to find a way for the novel instruments to be rated triple-A; when Moody's discovered flaws in its rating models, it adjusted the models so that the instruments could maintain their high credit ratings.[561] Moody's would not have maintained inflated credit ratings if its behavior had been driven by competitive market forces. CRAs should face reputational costs when rating so that they are incentivized to generate accurate and timely information.

The behavior of the leading CRAs – Moody's and Standard & Poor's – in the years preceding the subprime mortgage crisis has been referred to by the US Federal Crisis Inquiry Commission (FCIC) as the consequence of competitive pressures.[562] Critics contend that CRAs inevitably compete for a share in the market, either on price or by lowering their rating standards to attract their clients.[563] However, the problem did not result from competition in general but from ill-conceived competition. Competitive pressures can be counterproductive if they create wrong incentives. The response to past rating failures comes from competition based on credit rating quality.

Above all, regulation can distort competition. Rating-based regulations prevent reputational constraints from playing their disciplining role in the cred-

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559 *Id.* at 161 (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

560 HILL, *Regulating the Rating Agencies*, at 44 (proposing to address the problem with regulation).

561 HILL, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* at 9.

562 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibits, at 1-4.

563 VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (quoting WARREN BUFFET, Chairman and Chief Executive Officer, Berkshire Hathaway Inc., who adds that a monopoly might be the best answer since one CRA would not need to compete).

it rating industry. Regulatory reliance on credit ratings artificially gives recognition to a few certified CRAs.

Finally, one major source of a lack of competition among leading CRAs comes from the payment structure. Since the 1970s, the leading CRAs have increasingly been paid by issuers and not investors. The resulting conflicts of interest jeopardize credit rating quality. CRAs have less need to be responsible to investors. Issuer-paid CRAs tend to rate as high as possible to generate issuers' fees but in so doing disregard investors' interests.

III. Creation of a Competitive Market for Financial Information

"I firmly believe that robust competition [...] is the best way to promote the continued integrity and reliability of credit ratings."[564]

The key aspect of a competitive market structure is restoring the position of CRAs as mere information intermediaries. A competitive market for credit ratings or financial information in a broader sense would increase the disciplining role of private market forces in the credit rating industry. CRAs would be able to receive revenues in proportion to the value of the information they provide to the financial markets.[565] It is also crucial that other gatekeepers are able to compete with the credit rating industry. Moreover, smaller CRAs and new entrants should be able to compete with the leading CRAs.[566]

1. Information Intermediaries and Competitive Incentives

The market for financial information does not only involve CRAs but also other market participants such as gatekeepers.[567] It is important to look at the economic motivation of the different market participants and their incentives. With respect to CRAs, it is crucial to address the market disruptions that have been observed during the recent rating scandals. Focus is put on removing structural impediments to competition. As mere informa-

564 *Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of PAUL SCHOTT STEVENS, President, Investment Company Institute), at 7.

565 *See* BIRCHLER & BÜTLER, *Information Economics*, at 31-33.

566 *See further* THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 ("The European Commission is looking at the idea of creating a home-grown rating agency as a counterweight to the American trio").

567 *See* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 29 (stating that CRAs "have never been the only source of information about bonds").

tion intermediaries, CRAs should seek to provide additional information and resolve information asymmetries.[568] The presence of CRAs in financial markets should tend to increase market transparency and decrease the cost of capital.[569] The advantage of intermediaries in financial markets is that they may be able to capture some of the value that market participants having information cannot earn due to the reliability problem, i.e. investors would not easily rely on information coming directly from from borrowers and issuers.[570] Indeed, the cost of capital for borrowers and issuers would be higher if CRAs did not act as information intermediaries by providing investors with independent information.[571]

The classical view of the market for financial information implies that there is a supply of and a demand for information.[572] The market for information is a competitive business if CRAs compete on rating quality to procure fees to provide their services. Credit ratings must be regulated as financial information. As a market for information, the credit rating market can be considered to be competitive if it is characterized by a diversity of opinions. A too concentrated credit rating industry that benefits from excessive market power can lead to a homogenization of opinion whereas financial markets should reflect a diversity of opinions driving market participants to trade according to their own perceptions. Credit ratings cannot be used as the unique source of information.[573] In this respect, financial markets exist because market participants interpret uncertainty in a variety of ways. If information is homogenized, a confidence crisis in credit rating accuracy may totally destabilize the market. Therefore, the market for information should be a very competitive market.

568 *See* SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox,* at 12; *see also* BEAVER, SHAKESPEARE & SOLIMAN, *Differential properties in the ratings of certified versus non-certified bond-rating agencies,* at 306.

569 LYNCH, *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, at 241.

570 *See generally* ALLEN, *The Market for Information and the Origin of Financial Intermediation*, at 3 (referring to the principal-agent problem).

571 MOLONEY, *EC Securities Regulation,* at 687-688.

572 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 631.

573 *See further* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 29.

2. Information Asymmetries and the Cost of Financial Information

The presence of asymmetric information means that borrowers or issuers always know more than investors.[574] As information intermediaries, CRAs are supposed to address information asymmetries. However, concern has been raised that they fail to clear the fog of information asymmetry because they take advantage of their role as financial information gatekeepers. In the absence of competition, leading CRAs take advantage of information asymmetries and have no incentive to provide market participants with valuable information. The presence of information intermediaries resolve information asymmetries but can also serve as a smokescreen as was the case in the years preceding the subprime mortgage crisis.

CRAs should be disciplined by competitive incentives so that they seek to reduce information asymmetries in the financial markets.[575] In the presence of a competitive market for information, CRAs that fail to provide investors with additional and valuable information would not survive. Accordingly, information asymmetry can partly explain the reoccurence of systemic crises.[576] If investors are left with no other means but to rely on CRAs, information asymmetries will be exacerbated in difficult times. When the subprime mortgage market collapsed, investors could not distinguish between good and bad assets.[577] From the investors' perspective, all bonds with the same rating looked alike.

The cost of information is another important aspect of a competitive market for financial information. Issuers and investors purchase credit ratings based on the benefits that they expect from the information provided. Generally, the cost of financial information is the expected utility with the information minus the expected utility without.[578] Issuers and investors estimate the difference between the additional value provided by the information and the price paid to obtain that information.

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574 It is the case of a principal-agent relationship between issuers and investors whereas issuers – as agents – have more information than borrowers – as principals.

575 *See, e.g.,* HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 138, 155 (stating that competitive incentives – in the sense of reputation for quality – exist if market participants can monitor CRA performance ex-post).

576 KUHNER, *Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Systemic Risk*, at 5.

577 *See* AKERLOF, *The Market for „Lemons": Quality Uncertainty and the Market Mechanism*, at 490-491.

578 BIRCHLER & BÜTLER, *Information Economics*, at 32, 42.

Under the issuer-pays business model, the value of credit ratings is linked to the expected benefits that issuers – as buyers of credit ratings – expect from the ratings. If issuers get regulatory advantages by purchasing credit ratings, the price for credit ratings will be distorted as a consequence thereof. In modern financial markets, there is serious reason to doubt that the substantial fees paid by issuers are consistent with a competitive market for financial information.[579]

Under the investor-pays business model, competitive markets make sure that investors pay for the value of the information. They price information. CRAs should be paid only if they provide additional information. Nevertheless, credit ratings are often blamed for being lagging indicators of the creditworthiness of borrowers or debt instruments. In this sense, they do not provide more information than already publicly available. Investors have no incentive to pay for credit ratings if they do not get valuable information. A competitive market for financial information would make sure that CRAs bear negative consequences when they fail to anticipate financial shocks. Therefore, market forces should discipline the leading CRAs so that their market value reflects the informational value of their credit ratings.

§ 6. Preliminary Conclusion

The competitive environment in the credit rating industry depends to a substantial extent on the regulatory structure. CRA reforms have played an important role in the US and in the EU in the aftermath of the 2007-2009 financial crisis.

Three types of regulatory intervention effect the interplay of market forces among CRAs. First, the withdrawal of regulatory references to credit ratings undoubtedly enhances the level of competition in the credit rating industry. CRAs that are not recognized for regulatory purposes may be able to compete with the leading CRAs more easily. Looking for alternatives to credit ratings may also open the door to new entrants in the market for financial information.

Second, enhanced CRA oversight may have positive but also detrimental impacts on competition. Although public oversight is necessary to discipline CRAs, the establishment of a stringent regulatory framework may also raise additional barriers to entering the credit rating market. Accord-

[579] PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 655.

ingly, designing CRA oversight should always be assessed as to its effect on competitive incentives.

Third, special treatment for CRAs clearly reduces competition in the credit rating industry. In the US, CRAs used to benefit from a privileged position given their immunity from lawsuits and their exemption from SEC Regulation FD. The Dodd-Frank Act of 2010 amended the legal and regulatory framework so that CRAs will be treated the same as other financial gatekeepers such as securities analysts and auditors. The EU is also considering harmonizing CRA liability regimes throughout Europe to enhance accountability in the credit rating industry.

In the case of Switzerland, although a registration process for CRAs has not been created in the aftermath of the financial crisis, several regulatory and legal provisions refer to CRAs. First and foremost, the FINMA has established a list of CRAs that can be used for regulatory purposes. To date the Swiss regulator has not shown any intent to move away from the regulatory use of credit ratings. Apart from that, with respect to civil liability CRAs are treated similarly to other private actors as they are subject to the general liability rules of the Swiss Code of Obligations.

As a consequence, regulatory intervention is one of the most important catalysts for competition in the credit rating industry, in particular since CRAs have become increasingly regulated post-crisis.

The next step entails analyzing competitive incentives in the credit rating industry. In the run-up to the 2007-2009 financial crisis, the leading CRAs competed on increasing their market share by lowering rating standards instead of focusing on rating quality.

The question arises as to whether general competition law or sector-specific regulation offers the most adequate solution to the problem. This study argues that general competition law is not sufficient to solve competitive issues in the credit rating industry. Instead, the establishment of sector-specific regulation is necessary to take into account the particular situation of CRAs. Sector-specific regulation can more effectively attain competitive objectives.

With respect to competitive concerns, the high concentration in the credit rating industry undoubtedly plays a crucial role. It is important to analyze how the presence of an oligopolistic credit rating market affects the level of competition. Furthermore, misaligned incentives suggest that the problem did not emanate from competitive pressures but rather from ill-conceived competition. The leading CRAs did not compete on quality but on revenues

from issuers demanding inflated credit ratings. In sum, solving competitive problems requires the creation of better incentives in the credit rating industry. The credit rating market should be viewed as a market for information where CRAs should compete on the quality of financial information. As information intermediaries, CRAs should be willing to resolve information asymmetries by providing investors with valuable information.

PART 3: Uses and Abuses of Credit Ratings in Structured Finance

§ 7. Background

The role of the leading CRAs in structured finance ratings has given rise to significant concern in modern financial markets. In the run-up to the subprime mortgage crisis, CRAs attributed inflated credit ratings to mortgage-related securities that ended up performing very poorly.[580] In the aftermath of the resulting rating scandals, lawmakers reformed the credit rating industry by means of a financial regulatory overhaul.[581]

I. Credit Ratings and Structured Finance

The rating of structured finance products has contributed to a major change in the credit rating business over the last four decades. If the structured finance segment has enhanced the profitability of CRAs, credit ratings have played an equally crucial role in the extraordinary expansion of structured products. Indeed, the key to the successful launch of novel instruments was their assessment by a supposedly independent third party. From an issuers' perspective, the leading CRAs appeared to be the ideal entities to provide this service. Moreover, from the 1970s to the 2000s regulators increasingly used credit ratings in their financial market regulations. Investors were, in turn, willing to buy securitized assets that received high credit ratings.[582]

Last but not least, courts considered credit ratings to be mere opinions protected by the First Amendment of the US Constitution. CRAs were exempted from liability even when their credit ratings proved to be inaccu-

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580 GRIFFIN & TANG, *Did Subjectivity Play a Role in CDO Credit Ratings?*, at 28-29 (finding empirical evidence that CRAs shockingly inflated credit ratings by issuing even higher credit ratings than implied by their own risk models); ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?*; MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* (discussing how the leading CRAs collaborated with Wall Street banks to structure the deals); CASEY & PARTNOY, *Downgrade the Ratings Agencies* (stating that CRAs helped create the financial crisis by giving inflated credit ratings); VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (arguing that the great number of triple-A ratings fuelled the demand for risky mortgage-related securities and generated substantial revenues for the leading CRAs).

581 US Dodd-Frank Act of 2010; EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies.

582 Investor reliance on credit ratings was partly due to the regulatory use of credit ratings in financial market regulations.

rate.[583] Accordingly, CRAs benefited from a privileged position in the financial markets. Issuers took advantage of hiring CRAs in order to rate mortgage-related securities. They were able to convince CRAs to give high credit ratings to complex financial instruments in exchange for a fee.

As the structured finance segment grew, CRAs faced new incentives. Rating complex financial instruments rapidly generated a significant source of revenue for CRAs.[584] From 2002 to 2007 in particular, the three leading CRAs doubled their revenues, from approximately 3 billion US dollars to 6 billion US dollars per annum.[585] The problem was that leading CRAs were not competing on rating quality in order to increase their market share. The leading CRAs were attracted by significant profits and were not deterred from rating complex financial instruments by reputational constraints. In the short-term, they had little to lose when providing investors with inaccurate credit ratings. The leading CRAs were competing with each other in order to attract more business. They were concerned about maintaining and increasing their market share. As a consequence, they had incentives to satisfy the interests of their principal clients who were the issuers of debt securities. If their rating models were too strict, issuers would hire another CRA that enjoyed the same regulatory and behavioral reliance but did not have such high rating standards.[586]

The structured finance segment highlights how the credit rating industry became very profitable without providing investors with valuable information. In competitive markets, CRAs that do not provide useful information should not be paid to rate financial products. In fact, CRAs were involved in rating financial instruments that were increasingly complex without having any incentive to allocate more resources to improve the quality of their credit ratings.[587] They did not have any incentives to refuse to rate financial

583 *See supra* Part 2, Chapter 4(IV)(2)(a).

584 COVAL, JUREK & STAFFORD, *The Economics of Structured Finance*, at 4 (reporting that 44 percent of Moody's revenues in 2006 came from rating structured finance products, surpassing the 32 percent of its revenues from rating corporate bonds).

585 *Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform*, at 211; *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs* (opening statement of Senator CARL LEVIN), at 2; *see also* LOWENSTEIN, *Triple-A Failure, The Ratings Game* (stating that Moody's' stock price increased sixfold and its earnings grew by 900 percent).

586 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibits, at 1-4 (reporting that the leading CRAs could not afford to use rigorous rating models if they wanted to maintain or gain market share).

587 *See* HILL, *Regulating the Rating Agencies*, at 81 (arguing that CRAs did probably not make a sufficient investment in order to keep pace with the increasingly complex securities that they were rating); *see also* ROSNER, *Toward an Understanding: NRSRO Failings in Structured*

instruments that they could not fully understand.[588] When large banks asked the leading CRAs to rate synthetic CDOs, they did not have adequate rating models at their disposal. Instead of refusing to rate complex securities that they did not fully understand, CRAs accepted rating the novel products with the assistance of banks that provided their own models.[589] Given their links with CRAs, banks could easily figure out how to maximize the credit ratings of mortgage-related securities.

In competitive markets, investors would not blindly rely on credit ratings. Market participants should be able and willing to do their own research and take informed investment decisions. Instead, investors ended up buying highly rated securities without sufficient knowledge of the underlying assets. CRAs – traditionally considered as information intermediaries – contributed to the creation of an opaque market for securitized assets. The lack of transparency that allowed the market to grow in the first place ensured that the entire market would collapse as soon as a crisis of confidence arose. Accordingly, the subprime mortgage crisis was triggered in 2007 by massive credit rating downgrades by the leading CRAs. Investors instantly lost confidence in CRAs with respect to their ability to rate structured products.

II. Financial Market Context

1. From a Bank-Based to a Market-Based Financial System

Banks traditionally act as an intermediary between investors and borrowers. Financial disintermediation has allowed capital to flow directly from investors to issuers of securities, and CRAs have benefited from this evolution.[590] Whereas banks always scrutinized the creditworthiness of potential borrowers on behalf of depositors, the increasingly widespread practice by holders of capital to bypass the bank and invest directly in securities strengthened the profile of CRAs which can accumulate and simplify information about the risks associated with a wide range of securities.[591] In a

Ratings and Discreet Recommendations to Address Agency Conflicts, at 8 (arguing that CRAs were not sufficiently well equipped to rate most structured securities).

588 *See further Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of ERIC KOLCHINSKY, former Managing Director, Moody's), at 3 (explaining that, to make matters worse, "rating shopping" prevented CRAs from saying no to a deal since issuers could merely hire another CRA that would give the desired triple-A rating).

589 LEWIS, *The Big Short, Inside the Doomsday Machine*, at 76 (quoting a former CDO trader, Goldman Sachs).

590 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 168.

591 *Id.*

market-based financial system, CRAs are increasingly involved in rating debt instruments rather than the direct borrowers. If investors directly intervene in the financial markets, CRAs will focus more on rating the issued securities rather than the financial institutions that provide funding.

In fact, the process of disintermediation removes intermediaries – such as bank lenders – between the company and the ultimate source of funds, the capital markets.[592] The primary reason is that bank loans are expensive and corporations tend to seek means of funding that do not entail bank lending.[593] In modern financial markets, a large fraction of financial assets – both equity and debt – are sold directly by borrowers to investors, via stock and bond markets, thereby bypassing traditional banking.[594] For instance, big companies issue commercial papers to gain access to a cheaper source of funds than bank loans.

As market participants increasingly gained direct access to the financial markets, the financial system shifted from a bank-based to a market-based financial system. This shift has incentivized banks to engage in a more diverse range of activities. Banks have responded to increased competition by shifting their business models from reliance on traditional deposit-taking and lending to new business segments.[595] Banks have accommodated themselves to the system by intervening in the capital markets, for instance by acting as brokers and being paid a fee for their service. Under such a system they engage in lucrative activities while holding less risk on their balance sheets. In the market-based system financial innovation has gained prominence; hence banks have developed new financial instruments to capture a greater part of the profit opportunities. Even when they do not intervene as bank lenders, they play a key role in managing and structuring transactions.

The market-based financial system was initially praised because it dispersed risk among investors instead of being concentrated in the hands of financial institutions.[596] Many types of CRT instruments were subsequently created to promote credit risk as a separate asset class.[597]

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592 SCHWARCZ, *Enron and the Use and Abuse of Special Purpose Entities in Corporate Structures*, at 1315.

593 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 153.

594 HENDRICKS, KAMBHU & MOSSER, *Systemic Risk and the Financial System,* at 7.

595 LUMPKIN, *Resolutions of Weak Institutions: Lessons Learned from Previous Crises*, at 18.

596 HENDRICKS, KAMBHU & MOSSER, *Systemic Risk and the Financial System,* at 8.

597 BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 4.

However, the subprime mortgage crisis showed that risk had not successfully moved outside the financial system. Concern has been raised for instance about the concentration of risk in a large number of investors acting homogeneously.[598] CRT instruments failed to spread risk. Accordingly, the danger in a market-based financial system results from the occurrence of a market-gridlock systemic crisis.[599] When financial turmoil erupts, financial institutions are not immune. They may suffer losses that can destabilize the financial system. When risk is supposedly spread, and market participants cannot locate the losses in the financial markets, they will pay increasing attention to counterparty risk while trading in the markets. In such a situation market participants tend to distrust their counterparty and move away from the markets.

In sum, the market-based system involves different risks compared with the bank-based system, and those types of risk should be increasingly taken into account in modern financial markets.

2. Expansion of Credit Risk Transfer Instruments

New financial instruments were created to disperse credit risk throughout the financial system. Modern financial markets are characterized by an extraordinary expansion of CRT instruments. Banks can trade credit risk in the capital markets instead of holding that risk until maturity. Banks have primarily been interested in the novel instruments for reasons of funding.[600] Two developments in modern financial markets for transferring credit risk have been credit derivatives and CDOs.[601] Credit derivatives allow CRT without the sale of the loan, and CDOs are an application of the securitization technology.[602]

In the subprime mortgage market, securitization was the primary tool used by financial institutions to transfer credit risk to a broad range of investors. It is worth mentioning that asset securitization started in the mid-1980s and expanded significantly over the last three decades.[603] Basically, securitization helps to raise funds and reduces the cost of credit.[604] Moreover, asset securitization is supposed to enhance liquidity in the market. As regards

598 Alexander et al., *Financial Supervision and Crisis Management in the EU*, at 5.
599 Hendricks, Kambhu & Mosser, *Systemic Risk and the Financial System,* at 8.
600 Whalen, *The Subprime Crisis, Cause, Effect and Consequences*, at 5.
601 Lucas, Goodman & Fabozzi, *Collateralized Debt Obligations and Credit Risk Transfer*, at 3.
602 *Id*.
603 Crouhy, Jarrow & Turnbull, *The Subprime Credit Crisis of 07*, at 8.
604 Partnoy, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 666.

mortgage loans, a market for securitized assets can be created where traditional banking would have carried mortgages on bank balance sheets until maturity. Further, securitization allows the arranger to turn medium-quality debt into a mix of high- and low-quality debt, thereby changing debt quality.[605] Last but not least, securitization can allow banks to raise large amounts of money while shifting the resultant debt off the balance sheet.[606] Large banks have used and abused financial innovation to hide part of the risks they have been taking.

3. Increasing Leverage of Financial Institutions

The typical large bank balance sheet has become much more complex as a result of the shift from traditional lending to trading and market-making in various market segments.[607] The opportunity for financial institutions to dramatically increase their leverage consists of another feature of the modern financial markets. Financial institutions like leverage, yet regulators try to prevent them from excessively increasing it. As a consequence, financial institutions have a tendency to circumvent regulatory requirements in order to become more leveraged. As opposed to other types of businesses, the particularity of financial institutions is that their balance sheets do not reflect the size of their risk exposure.[608] The use of financial engineering makes banks appear better capitalized and less risky than they are in reality.[609]

Over the past decades banks increased their leverage in two ways that were supported by the regulators. First, banks engaged in off balance sheet activities. Regulators accepted the fact that certain banking activities did not need to be included in the financial statements. Hence banks took leveraged positions that were hidden from regulators and investors.[610] For instance, securitization helped many banks to free up their balance sheets while allowing them to put the resulting assets in off balance sheet vehicles.[611] An-

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605 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 177.

606 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 148-149.

607 LUMPKIN, *Resolutions of Weak Institutions: Lessons Learned from Previous Crises*, at 18.

608 *See* BUFFET, *Berkshire Annual Report 2002*, at 15 ("When Charlie and I finish reading the long footnotes detailing the derivatives activities of major banks, the only thing we understand is that we *don't* understand how much risk the institution is running").

609 PARTNOY & TURNER, *Bring Transparency to Off-Balance Sheet Accounting,* at 14.

610 *Id.*

611 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 7; *see also* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 10-11 (arguing that Structured Investment Vehicles (SIV) enable banks to finance long-term debt with short-

other way of increasing leverage in the financial market was to take advantage of the fact that derivatives markets were not sufficiently regulated. Financial institutions were in a position to engage in transactions that lacked capital or margin requirements. Therefore, a strategy of many financial institutions was to sell debt insurance – for instance in the form of CDS contracts – as a means of generating premiums and recording income from off balance sheet contracts.[612] Second, the shift to risk-sensitive bank capital requirements enabled banks to extend their balance sheets.[613] Banks took advantage of attributing low risk weights to their assets. Under the Standardized Approach in Basel II, which remains part of Basel III, banks were able to rely on credit ratings in order to measure their risk-weighted assets.[614] If banks carried highly rated assets on their balance sheets, they needed less regulatory capital than without the allocation of risk weights. The new capital adequacy rules significantly helped banks extend their balance sheets. As a consequence, bank balance sheets no longer reflected banks' actual risk exposure.

III. Subprime Mortgage Crisis

"When the music stops in terms of liquidity, things will get complicated. But as long as the music is playing, you have got to get up and dance. We are still dancing."[615]

The financial turmoil that had the US subprime mortgage market at its epicenter spread throughout the world and through other market segments. The resulting financial crisis resulted from a chain of events and from the involvement of various actors in the process. The term subprime mortgage crisis refers to the earlier stages of the financial crisis.[616] The factors that led to the collapse of the subprime mortgage market provide a striking example of wrongdoing in the credit rating industry. It is worth focusing on the structural causes and on the first stage of the 2007-2009 financial crisis.

term debt; by conducting business through capital markets SIV escape the capital adequacy regulation to which banks are subject).

612 MURPHY, *An Analysis of the Financial Crisis of 2008: Causes and Solutions,* at 18.

613 *See* WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 8.

614 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II),* para. 50.

615 SORKIN, *Citi Chief on Buyouts: "We're Still Dancing"* (quoting CHARLES O. PRINCE, former Chairman and Chief Executive Officer, Citigroup).

616 *See* SCHWARCZ, *Keynote Address: Understanding the Subprime Financial Crisis,* 549.

Concern has been raised about determining the extent of the role of the various market participants implicated in the process, instead of pointing the finger of blame at one specific group over another. While those involved early in the chain did not bear the risk, those involved later in the chain did not know what and where the risk was.[617] The demand-side was blinded by the appetite for securitized assets offering higher yields than equally rated corporate or municipal debt issues. The leading CRAs were involved in the subprime mortgage market as a part of the chain. Although they were supposed to enhance transparency relating to asset valuation, they actually raised uncertainty due to their poor rating performance. Their credibility and the quality of their risk models were questioned as soon as they started to massively downgrade mortgage-related securities.

At a structural level in the financial system, the conditions prevailing before the financial crisis were ample liquidity and low interest rates.[618] The exceptional liquidity of the financial markets fostered higher leverage and greater risk-taking.[619] Low interest rates had driven up housing prices artificially.[620]

Moreover, asset securitization increased risk throughout the financial system. Financial innovation contributed to the dramatical growth of the subprime mortgage market segment. In particular, novel structured products could help meet investor demand for highly rated assets that had higher yields than corporate bonds.[621] This favorable context enabled CDO arrangers to get involved in a very lucrative business. They generated a positive net present value investment merely from re-packing cash flows.[622] Instead of holding credits that they had originated, financial institutions would sell them off into the capital markets.[623] The process of pooling loans and selling them to investors through securitization is referred to as the "originate-and-distribute" model of financial intermediation.[624] This process, in turn, boosted the demand by CDOs for RMBS and created pressure to increase the supply of subprime mortgages.[625]

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617 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 29.

618 DE LAROSIÈRE Report, at 14.

619 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 5.

620 SCHWARCZ, *Keynote Address: Understanding the Subprime Financial Crisis,* 551.

621 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 6, 7.

622 *Id.* at 7.

623 BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 4.

624 MCVEA, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* at 709.

625 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 6, 7.

This business model seemed to work brilliantly as long as the markets were very liquid. However, the financial crisis that hit the financial markets in 2007 dramatically confronted market participants, the investing community and regulators with the downsides of the model. After a prolonged phase of risk-taking and credit expansion, the subprime mortgage crisis represented a sharp re-pricing of credit risk.[626] The resulting financial instability turned into a liquidity crisis.

One underlying feature of the financial turmoil was that mortgage lenders had no incentive to ensure high lending standards given the fact that they were able to transfer credit risk through Mortgage-Backed Securities (MBS) or CDOs.[627] Moreover, financial disintermediation meant that banks did not monitor the borrowers as they would have done if they had kept the mortgages on their balance sheets. In this situation, financial markets needed a gatekeeper. Market participants would buy complex financial instruments only if they were rated by an independent and reputable third party.[628] Issuers hired the leading CRAs, which were attracted by significant fees to accomplish this service; issuers gained advantages in terms of the marketability of their products and regulatory privileges. The problem was that CRAs were not driven by any incentive to provide investors with valuable information. Conflicts of interest were particularly acute in the structured finance segment and reputational constraints did not play their disciplining role. CRAs ended up basing their credit ratings on inaccurate or outdated risk models. CRAs lacked sufficient historical data relating to the US subprime market, underestimated correlations in the defaults that would occur during a downturn, and failed to take into account the severe weakening of underwriting standards by certain originators.[629]

It was well-known that subprime borrowers were typically not very creditworthy and that they were often offered mortgage products to finance 100 percent of their homes.[630] Market participants paid no attention to these troubles as long as the financial markets were very liquid and borrowers could refinance with rising housing prices.[631]

Distress among subprime mortgage lenders already became visible in 2006 when the Fed started to raise interest rates in the US, thereby raising the cost of borrowing and making it more expensive for people to meet the

626 BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 9.
627 DE LAROSIÈRE Report, at 9.
628 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 18.
629 DE LAROSIÈRE Report, at 9.
630 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 6.
631 *Id*., at 5.

floating rate interest payments on their loans.[632] Another reason for the rise in mortgage defaults was the increase in teaser interest rates to market levels after the introductory period of, typically, 5 years had expired.[633] Overall, the resulting foreclosures brought an excess supply of homes onto the market, thereby causing residential real estate prices to fall.[634] The model failed for borrowers who were relying on refinancing for loan repayment.[635] Subprime lenders had to tighten their underwriting standards significantly and many originators completely stopped originating subprime mortgage loans.[636] New Century, a big subprime lender, filed for bankruptcy in early April 2007.

Under the circumstances outlined above, the subprime mortgage machine was ready to explode. It was merely waiting for an event to trigger the crisis. And the most immediate trigger of the financial crisis was the massive downgrading of securitized assets by the leading CRAs in July 2007.[637] During the second week of July 2007, Standard & Poor's downgraded 7.3 billion US dollars of securities, and a few weeks later Moody's slashed credit ratings on 691 securities originally worth 19.4 billion US dollars.[638]

If the financial markets expected the lowest CDO tranches to deteriorate in value, the biggest surprise came from the losses of "senior" tranches. Under no circumstances could market participants imagine that a triple-A asset could be downgraded to junk status within a few days.[639] For the highest-rated tranches were where the losses were the greatest because they were the most over-estimated. Investors rapidly lost confidence in credit ratings, and fewer investors meant that the price of debt securities started falling.[640] The success of the originate-and-distribute model of intermediation depends to a great extent on the liquidity of the financial markets. The problem is that liquidity is a very elusive and slippery concept. Liquidity can rapidly dry up.

632 *Id.* at 11.

633 MURPHY, *An Analysis of the Financial Crisis of 2008: Causes and Solutions,* at 13.

634 *Id.*

635 SCHWARCZ, *Keynote Address: Understanding the Subprime Financial Crisis,* at 550.

636 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 24.

637 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs* (opening statement of Senator CARL LEVIN), at 4.

638 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9; WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 11.

639 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9.

640 SCHWARCZ, *Keynote Address: Understanding the Subprime Financial Crisis,* at 552.

The subprime mortgage financial crisis highlighted the fact that novel financial instruments cannot successfully transfer credit risk outside the financial system.[641] For regulatory or reputational reasons, banks had to take risk back to their balance sheets or they failed to transfer risk because for some other reasons they also had kept more risk than expected on their balance sheets. When this reality became clear, financial market concern raised about counterparty risk, i.e. banks ceased to trust each other, which led to the collapse of the interbank market in particular.

IV. Financial Instruments at the Heart of the Subprime Mortgage Crisis

"Wall Street reaped huge profits from creating filet mignon AAAs out of BB manure."[642]

Financial innovation has given rise to much concern in modern financial markets. Attention is being paid to the financial instruments that played a role in generating the financial turmoil. Overall, financial innovation supported the originate-and-distribute model of intermediation and helped financial institutions build up more leverage in the financial system. Novel financial instruments have supported banks' off balance sheet activities as well as regulatory arbitrage with respect to bank capital requirements.

The subprime mortgage crisis has given rise to concerns about the securitization of lower-quality mortgage loans. Asset securitization has been a fact of modern financial markets since it started in the mid 1980s.[643] The securitization process implies that loans are originated, structured, and then sold to investors.

The securitization process involves a financial institution that buys mortgage loans from the original lender. Any kind of loans can be securitized. The underlying loans at the core of the subprime mortgage crisis include subprime loans[644] and Alt-A loans.[645] In fact, the loans that have typically

641 CLERC, *A Primer on the Subprime Crisis*, at 1, 3.

642 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 14 (quoting MIKE BLUM, former CMBS surveillance expert, Goldman Sachs).

643 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 8.

644 LUCAS, GOODMAN & FABOZZI, *Collateralized Debt Obligations, Structures & Analysis,* at 113 (explaining that subprime borrowers fail to satisfy the underwriting standards of mortgage lenders; their borrower characteristics include a compromised credit history and a payment-to-income ratio that is too high. Subprime mortgages and home equity loans (HEL) are used interchangeably to designate these loans); CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 4, 5 (stating that subprime borrowers typically pay 200 to 300 basis points above prevailing prime mortgage rates).

underperformed in recent years are subprime or Alt-A adjustable-rate mortgages. One type of loan especially illustrates the deterioration of lending standards in the years preceding the subprime mortgage crisis: the interest only negative-amortizing adjustable-rate subprime mortgage.[646] This type of loan highlights how lenders were actually willing to extend credit without caring about the borrowers' ability to pay off the principal. Subprime lenders did not monitor borrowers and uncreditworthy borrowers would end up in increasing debt.

The financial institution then pools the purchased subprime mortgages into securities. Financial institutions designed securities labeled MBS, which are a special case of ABS. These securities can be transferred to buyers. Financial institutions are the initial buyers and they created CDO structures – an application of the securitization technology – in order to make the targeted assets marketable to a broader range of investors. A CDO is generally constructed by creating an entity that buys assets and issues bonds backed by the assets' cash flows.[647] The issuing entity is set up by the deal arranger – typically a bank – and acquires a pool of assets, namely MBS. The purchase of assets is financed by issuing bonds to investors.[648] Technically, the CDO arranger partitions the purchased assets into tranches of bonds in order to make them marketable. Each tranche has a different claim on the pooled assets.[649] In principle the tranches are called "junior", "mezzanine" and "senior".[650] Should the portfolio of assets experience any losses due to the failure of individual assets, these losses are first allocated to the "junior" tranche, then to the "mezzanine" tranche and eventually to the "senior" tranche.[651]

645 LUCAS, GOODMAN & FABOZZI, *Collateralized Debt Obligations, Structures & Analysis,* at 112-113 (explaining that – like prime A loans – Alt-A loans are meant to include creditworthy borrowers; but the Alt-A program offers flexibility in terms of necessary documentation and borrowers are willing to pay a premium for the privilege); CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 4, 5 (stating that borrowers who have better credit scores than subprime borrowers – but fail to provide sufficient documentation – are eligible for Alt-A loans).

646 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 28-29; *see also* BURRY, *I Saw the Crisis Coming. Why Didn't the Fed* (referring to pay-option adjustable-rate mortgages to characterize the types of loans in which the borrower does not need to pay off the principal).

647 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 5. The issuing entity is referred to as a Special Purpose Entity (SPE), Structured Investment Vehicle (SIV), Special Purpose Vehicle (SPV) or trust.

648 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 12.

649 *Id.*

650 *Id.*

651 *Id.* at 13.

Credit enhancement is the amount of loss that can be absorbed before the targeted tranche sustains any loss.[652] In a CDO structure, credit enhancement comes from subordination, overcollateralization, excess spread or CDS. Subordination represents the maximum level of loss that could occur immediately without being allocated to the tranche in question.[653] Overcollateralization requires the CDO arranger to commit more assets to the securitization pool than there are liabilities.[654] Alternatively, the CDO arranger could rely on external credit enhancement through reliance on CDS typically sold by insurance companies such as American International Group, Inc. (A.I.G.).[655]

CRAs played a significant role as regards the composition of CDO structures. They closely participated in the design of the novel financial instruments.[656] They were in a position to perform such a function because investors relied on their credit ratings for many novel products.[657] Issuers were willing to make sure that their debt instruments would attain the required credit rating. CRAs, in turn, gained a new status in the financial markets. They were practically fixing the structuring criteria as regards CDOs. Issuers could exploit the importance of credit ratings while convincing CRAs to adjust their rating models.

Technically, CRAs were assessing how much credit enhancement was needed in order to issue a given credit rating. The rating process could be split into two steps: first the estimation of a loss distribution and second the simulation of the cash flows.[658] Then, with a loss distribution in hand, CRAs were able to measure the amount of credit enhancement necessary for a tranche to attain a given credit rating.[659]

Relating to the CDO structures, the "senior" tranche often got a triple-A rating, the "mezzanine" tranche could range from double-A to single-B rating.[660] The "junior" tranche – not being investment grade – was normally not rated and was also called an equity tranche since it was generally not sold to investors. Depending on the underlying assets, the probability of

652 ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit*, at 40.
653 *Id.*
654 LUCAS, GOODMAN & FABOZZI, *Collateralized Debt Obligations, Structures & Analysis*.
655 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008,* at 579.
656 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9.
657 *Id.* at 8-9.
658 ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit*, at 40.
659 *Id.*
660 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 13.

receiving payment was so low that the equity tranche would have been associated with junk status.

Tranching could effectively raise the credit rating of some parts of the underlying assets. Being rapidly able to get around rating models, CDO arrangers could calculate how to build CDO structures that would generate a sum of tranches greater than the whole portfolio. This process amounted to the financial wizardry of CDO arrangers. They could earn a lot of money out of the packaging process.

"CDO squared" structures would allow CDO arrangers to exploit such profitable opportunities even further. A "CDO squared" consisted of re-packaging the hard-to-sell "mezzanine" CDO tranches to create more triple-A bonds for institutional investors.[661] CDO arrangers were able to make money merely by re-packaging triple-B CDOs. Due to the high credit ratings they were also able to sell off credit risk to investors where it would normally not have been possible. Notably, in the process CDO equity – which could normally not be sold to investors – was partly included into the squared structure.

This business became so lucrative that financial institutions sought more "mezzanine" tranches to re-package. At one point supply of "mezzanine" tranches was insufficient.[662] Finding enough "mezzanine" tranches became cumbersome. Accordingly, CDO arrangers found a more convenient way to fuel the CDO machine. In 1997 they started to get involved in building synthetic CDOs.[663] As opposed to cash CDOs, these debt instruments do not need to be sold to an issuing entity such as a Special Purpose Vehicle (SPV).[664] Thanks to the use of credit derivatives, CDO arrangers did not need to purchase the portfolio of assets on which the CDO would be structured. Instead, the transfer or credit risk was synthetic.[665] The synthetic CDO gained credit exposure to the subprime mortgage market by selling credit protection via CDS.[666] Thus, banks took advantage of credit derivatives in the sense that CDS could replicate the payoff profile of cash bonds without requiring the upfront funding of buying a cash bond.[667]

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661 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 12.

662 *Id.* at 14; LEWIS, *The Big Short, Inside the Doomsday Machine*.

663 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 58.

664 *Id.*

665 *Id.*

666 LUCAS, GOODMAN & FABOZZI, *Collateralized Debt Obligations and Credit Risk Transfer*, at 9; PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 6.

667 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 13.

From the perspective of the Wall Street banks that arranged the CDO structures, the use of CDS made it easy for them to construct enormous CDO transactions and to generate quick and high profits from building the synthetic CDO structures. To create a cash CDO composed of triple-B-rated subprime mortgage bonds in order to re-package it took time and effort.[668] To create a synthetic CDO was quick and boundless. As a result, the subprime mortgage market experienced an explosion of synthetic ABS CDOs from 2006 through 2007. By the end of 2007, the CDS market was a 60 trillion US dollars market.[669] The use of credit derivatives helped the CDO machine to grow at an extraordinary pace. Synthetic CDOs accelerated the securitization process and allowed market participants to amplify their risk exposure to the subprime mortgage market. Wall Street banks used CDS to feed the CDO machine.

From the perspective of the market, CDS needed buyers and sellers. On the sell-side, sellers were typically insurance companies such as A.I.G. or monoline insurers.[670] There were also investors with a risk appetite for highly rated instruments having a higher yield than other highly rated assets; these investors were typically pension funds. There were also financial institutions that perceived profitable opportunities without needing regulatory capital upfront while significantly increasing their exposure to the subprime mortgage market.

On the buy-side, Wall Street banks first experienced more difficulty in finding counterparties. Eventually, a handful of investors entered the CDS market to bet against the subprime mortgage market. In fact, shorting the subprime mortgage market directly was not practically feasible because borrowing securitized tranches would be difficult.[671] An indirect option was to short companies that were exposed to the subprime mortgage market. Another option was more straightforward, easier to implement and a lot cheaper: buying CDS.[672] CDS were inexpensive because market sentiment was homogeneously favorable to the subprime mortgage market. At that point, only outsiders were willing to take this side of the bet. Wall Street banks were happy to find a few hedge funds willing to buy CDS. A market

668 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 74.
669 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008,* at 586.
670 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 16 (describing monoline insurers as counterparties of financial institutions selling to them surety wraps in the form of credit derivatives).
671 BURRY, *A Primer on Scion Capital's Subprime Mortgage Short,* at 3.
672 *Id.*

for side bets was able to develop alongside the subprime mortgage market.[673]

At a later stage, some market participants acknowledged the risk related to their high exposure to the subprime mortgage market. Especially in 2007, Wall Street banks preferred to buy CDS to decrease their risk exposure. Buying CDS could work as an insurance against the default of subprime borrowers.

In the Abacus case, Goldman Sachs was even accused by the SEC of structuring synthetic CDOs with the assistance of the hedge fund Paulson & Co., which bet against the subprime mortgage market.[674] Goldman Sachs' wrongdoing allegedly consisted of failing to disclose that Paulson & Co. was not investing in the deal, but betting against it.[675] Goldman Sachs acted as a CDO arranger and allowed Paulson & Co. to select the mortgage-related assets against which to bet. Accordingly, Paulson & Co. could buy CDS of the assets that – in its opinion – would underperform. Goldman Sachs used these CDS to build the synthetic CDOs that it sold to investors such as IKB Deutsche Industriebank and ACA Capital Management. In July 2010, the SEC and Goldman Sachs settled the Abacus case.[676] By forcing Goldman Sachs to admit to some wrongdoing, the SEC signaled a more confrontational approach that would expose Wall Street to more investor lawsuits in the future.[677] Moreover, Goldman Sachs partly recognized being short on the mortgage-related securities when the subprime mortgage market collapsed. Goldman Sachs may have engaged in proprietary trading in order to bet against the subprime mortgage market, i.e., by trading on its own account as well. In any case, litigation following the financial crisis will bring clarity to Goldman Sachs' dubious activities in the run-up to the subprime mortgage debacle.

Apart from the use of CDS in order to bet against the subprime market, hybrid CDOs were also created as a mixture of debt securities and synthetic assets. The debt securities consisted of the subprime mortgage assets. The synthetic assets were typically CDS. If these CDS were bought by the vehicle, they provided credit enhancement to the CDO structure. In this way they were able to partly hedge hybrid CDO investors against the credit risk exposure to the subprime mortgage assets. For this reason the buy-side was either composed of investors betting against the subprime mortgage market

673 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 6.
674 PULLIAM & PEREZ, *Criminal Probe Looks Into Goldman Trading.*
675 PARTNOY, *Wall Street Beware: The Lawyers are Coming*.
676 WESTBROOK & GALLU, *SEC's Demand That Goldman Admit "Mistake" Could Spur Lawsuits.*
677 *Id.*

or investors willing to decrease their exposure to the subprime mortgage market.

§ 8. Growth of the Structured Finance Segment

I. Regulatory Incentives

Since the 1970s the regulatory environment has encouraged both the expansion of structured finance and the use of credit ratings. Furthermore, an environment of low interest rates encouraged investors to seek instruments that offered yield enhancement.[678]

As a result of a combination of OTC derivatives, risk-based capital requirements and favorable accounting rules, Wall Street banks were able to create a "de facto" assembly line for purchasing, packaging and selling unregistered securities, such as CDOs, to a wide range of institutional investors.[679] Regulators argued that the transfer of risk from bank balance sheets to a broad range of investors was a desirable spreading of credit risk.[680] To a great extent regulators encouraged the proliferation of off exchange-traded derivatives and the use of off balance sheet entities.[681] However, in the light of the subprime mortgage crisis the size and concentration of risk proved to be destabilizing.[682]

Two types of rating-based regulations artificially increased the importance of credit ratings. First, risk-based capital requirements may rely on CRAs to attribute risk weights to individual assets. Capital adequacy rules represent the most extensive incorporation of credit ratings in financial market regulations. Globally the BCBS establishes international standards relevant for national regulators and financial institutions such as international banks. The BCBS enacted the Basel II framework in 2004 to provide a solution to determine the riskiness of assets based on CRAs' assessments.[683] Hitherto, post-crisis reform measures taken in the Basel III framework continue to rely extensively on credit ratings. The Standardized Approach of Basel II and III uses credit ratings to attribute different risk weights to assets.[684]

678 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 4.
679 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 5.
680 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 26.
681 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 5.
682 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 22.
683 WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 4.
684 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II),* para. 50

Highly rated instruments have lower risk weights and badly rated instruments have higher risk weights. Because OTC assets like CDOs often carried investment-grade ratings, these less liquid assets carried lower risk-based capital requirements than other assets.[685] Banks were incentivized to design securities so as to get high credit ratings from the leading CRAs. Moreover, banks were incentivized to hold highly rated instruments on their balance sheets.

With the help of high credit ratings, a substantive amount of mortgage-related securities benefited from lower risk weights than regular loans according to Basel II, which encouraged the securitization of loans.[686] Basel II ignored the systemic risks attached to concentrated positions in securities held by banks.[687]

Second, especially in the US, investment limitations require that certain types of investors only invest in investment-grade securities. These regulations force a certain range of investors to take credit ratings into account while trading in the financial markets. Issuers need high credit ratings in order to make their products available to a broader range of investors. If CRAs downgrade securities to speculative-grade ratings, charter-constrained investors have to sell off the downgraded securities. As we have seen the use of credit ratings in financial market regulations has a substantial effect on the behavior of market participants.

II. Crucial Role Played by Credit Rating Agencies in the Expansion of Structured Finance

"Rating agencies continue to create an even bigger monster – the CDO market. Let's hope we are all wealthy and retired by the time this house of cards falters."[688]

1. Credit Rating Agencies' Key Position in Structured Finance

The rapid expansion of structured products is closely associated with the issuance of structured finance ratings. The leading CRAs first issued credit

685 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 6.
686 SOROS, *Do Not Ignore the Need for Financial Reform*.
687 *Id.*
688 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibit 27, at 124 (quoting a Standard & Poor's employee).

ratings for MBS in the mid-1970s.[689] Relating to securitized assets they began rating cash CDOs in the late 1990s and synthetic CDOs in the early 2000s.[690]

In fact, the shift to a market-based financial system has raised new issues as regards the role of information intermediaries such as CRAs. Banks needed novel instruments to be rated by an independent and reputable third party, and the three leading CRAs offered this service.[691] CRAs have thus played a significant role in the functioning of the originate-and-distribute model of intermediation.[692] The objective of the study is to examine how CRAs helped the financial institutions that developed the complex financial instruments. They were an essential part of the chain. Without their involvement, structured finance could not have grown at such an extraordinary pace.

The favorable credit ratings of the leading CRAs were crucial for investor acceptance of the new financial instruments.[693] Investors relied on CRAs' assessments of the riskiness of securitization products because of their complexity and because the contents of the underlying asset pool were frequently not revealed.[694] Lack of transparency in the financial markets increased the importance of credit ratings.

The traditional rating scale was used by CRAs in the structured finance segment. CRAs argued that their credit ratings were consistent between traditional and novel instruments.[695] They were not willing to develop different credit rating methodologies for traditional products and structured products because investors were already familiar with corporate ratings, and were reassured by the comparison made possible between traditional and novel products.[696] Linking the risk of novel products to the traditional rating scale was therefore crucial to the growth of structured product markets.[697]

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689 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 20; *see also* HILL, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* at 5.

690 IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 5.

691 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 18.

692 ARNER, *The Global Credit Crisis of 2008: Causes and Consequences*, at 22.

693 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 119.

694 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 40.

695 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis"*, at 161 (adding that, however, ratings on novel financial products behaved differently from corporate ratings during the recent financial crisis).

696 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 16.

697 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis"*, at 161.

As a consequence of the evolving financial market structure, the leading CRAs may have acted as gatekeepers in the development of the structured finance market.[698] The dramatical growth of the structured finance segment would not have been possible without their involvement. In practice the leading CRAs' gatekeeper status seems unlikely to change in the near future.[699]

2. Credit Ratings as a Marketing Tool for Securitized Assets

The involvement of CRAs deserves particular attention in the securitization process. The key to a successful securitization is a high credit rating by one of the leading CRAs.[700] Without the sanction of the leading CRAs, most securitization would fail.[701] Therefore, the sale of most structured securities in the primary market was rating-dependent.[702]

Issuers take advantage of high credit ratings to sell their products. Debt rated investment-grade tends to have more marketability, liquidity, and a lower interest rate than otherwise identical debt that is not rated.[703] As a consequence, to obtain a high credit rating can become a motive for the creation and marketing of securities.[704] The best example in the subprime mortgage market was the pooling and re-packaging of triple-B-rated tranches into a new CDO structure with a view to enhancing the overall rating of the asset pool. Securitization offered the opportunity to transform below-investment-grade assets into triple-B to triple-A assets, i.e. investment-grade assets.[705] The newly obtained triple-A-rated tranches could be sold off to a broad investor base eager to buy highly rated assets.

The reason is that triple-A assets with higher yields than other triple-A assets were especially appealing to investors. Indeed, the use of credit ratings permitted investors to buy triple-A-rated assets that paid 20 times the spread of other triple-A-rated instruments.[706]

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698 *Id.* at 176.

699 *Id.* at 178.

700 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies,* at 154.

701 *Id.* at 160-161.

702 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 12.

703 HILL, *Regulating the Rating Agencies*, at 53.

704 THE ECONOMIST, *Exclusion zone, Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

705 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 4.

706 PARTNOY, *Do away with rating-based rules*.

To some extent, there is a regulatory explanation since a certain category of investors was restrained from buying speculative-grade assets. Accordingly, investment-grade ratings remained an important requirement in marketing structured finance products to a broader investor base.[707] Due to regulatory concerns, investment-grade ratings enhanced the marketability of the rated assets, thereby making them available to a broader investor base. CDOs allowed these investors to gain exposure to assets that, on their own, had been too risky.[708] Through the securitization process, issuers could make these investment available to a broader investor base.

As a consequence, investors subject to regulatory investment limitations were particularly attracted to triple-A-rated structured credit products that had a higher yield than other safe assets.[709] For institutional investors in particular they seemed to constitute a great opportunity for gain as they were simultaneously considered safe.

3. Proliferation of Rating-Driven Transactions

Some transactions are merely designed to capture high credit ratings.[710] To some extent, financial institutions learned how to take advantage of rating models and build structured products with the sole purpose of attracting higher credit rating from the CRAs. CDO structures reflect the situation in the most illustrative way. Since the tranching could raise the credit rating of some parts, many of the subprime mortgages were included in structured finance products.[711] In some structured finance products, the sum of the parts could even be greater than the whole, which should not be possible in a competitive and efficient market.[712] This situation led banks to re-package triple-B CDOs and make a profit from the transaction. The CDO machine generated significant revenues partly thanks to generous credit ratings.

The rating process helped issuers get around the rating models.[713] Issuers first hired a CRA to rate the financial instruments. If not satisfied with the

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707 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 9.

708 BARNETT-HART, *The Story of the CDO Market Meltdown: An Empirical Analysis,* at 7.

709 INTERNATIONAL MONETARY FUND (IMF*), Global Financial Stability Report, Containing Systemic Risks and Restoring Financial Soundness*, at 57.

710 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 668-670.

711 IMF, *Global Financial Stability Report, Containing Systemic Risks and Restoring Financial Soundness,* at 57.

712 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 667.

713 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals*.

determination of the CRAs, issuers had the opportunity to adjust the structure to provide the requisite credit enhancement of the "senior" tranche in order to get the triple-A rating.[714] This endeavor is evidence that the transaction was rating-driven. The added credit enhancement was merely provided in order to get a higher credit rating.

Last but not least, the investment-grade ratings allowed a market for side bets to develop alongside the subprime mortgage market. Depending on the way they were used, synthetic CDOs allowed market participants to place giant bets that had no other economic purpose than to bet against the subprime mortgage market. Synthetic CDOs replicated the cash flow structures of cash CDOs and significantly increased market exposure to the subprime mortgage market. High credit ratings allowed the market for synthetic CDOs to grow at an extraordinary pace. Without the labeling provided by leading CRAs, this market would have never reached such a significant proportion. Criticism has been voiced about the fact that synthetic CDOs did not add economic value to the financial system.[715] Only high credit ratings were able to make investors purchase securities without caring about the content of the assets. Hence synthetic CDOs were able to find investors as long as they were marketed as safe by the leading CRAs.

III. Regulatory Arbitrage and Rating Arbitrage

The opportunity for regulatory arbitrage deserves particular attention because it largely explains why investors craved for highly rated securities without caring about the quality of the underlying assets. Market behavior was partly caused by wrong regulatory incentives in the financial markets.

First, bank capital requirements allowed large banks to extend their balance sheets by applying low risk weights to their highly rated assets. Under such circumstances, buying triple-A-rated assets meant a relief of regulatory capital.[716] Two examples may highlight how these regulatory incentives played a structural role in the context of the subprime mortgage crisis. First, Citigroup was a big CDO arranger. Instead of selling off all the triple-A-rated securities, Citigroup took advantage of holding numerous assets with the lowest possible risk weight on its balance sheet.[717] Second, the Swiss bank

714 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 21.

715 *See generally* IMF, *Global Financial Stability Report, Containing Systemic Risks and Restoring Financial Soundness*, at 54.

716 BLUHM, *CDO Modeling: Techniques, Examples and Applications,* at 7.

717 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 15; LEWIS, *The Big Short, Inside the Doomsday Machine,* at 86.

UBS had very high exposure to the subprime market partly due to the same regulatory incentives. More precisely, with respect to UBS two aspects were combined allowing the investment bank part of UBS to massively invest in the subprime mortgage market. The first aspect was the low internal rates applied at the universal bank so that the investment bank part of UBS could borrow at low internal rates from the commercial bank part of UBS.[718] The second aspect was the low risk weights applied to highly rated mortgage-related securities.[719] Indeed, UBS was able buy a substantive amount of triple-A-rated "super senior" CDO tranches.[720] Before the subprime mortgage crisis, the UBS investment bank could mark a kind of arbitrage profit from investing in "super senior" with a slightly higher yield than the internal cost of capital. Just before the subprime mortgage crisis was triggered, UBS was declared highly capitalized.[721] UBS was still investing in triple-A-rated CDOs in July 2007.[722] Immediately after the massive credit rating downgrades, UBS capital ratio changed dramatically and showed a UBS that needed more capital to be considered safe. These two examples illustrate the regulatory incentives associated with bank capital requirement regulations.

Second, investors that were not allowed by regulations to engage in risky activities found a way to take risk with the consent of regulators thanks to the high credit ratings given to securitized assets. Because the same credit ratings were given to securities with greatly differing risks, charter-constrained investors were able to buy structured securities offering yields many times higher than equally rated corporate or municipal debt issues.[723] As a result, some financial institutions were able to engage in regulatory arbitrage and rating arbitrage on a large scale.[724]

Rating arbitrage involves finding a way of obtaining high credit ratings out of assets that are worth less, i.e. a sort of artificial transformation of debt quality.

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718 *See* NZZ, *Währungshüter halten Geld weiterhin billig, Aufwertungsdruck auf den Franken erhöht* (quoting THOMAS JORDAN, former vice-president, Swiss National Bank (SNB)).

719 *See* ZAKI, *UBS, Les dessous d'un scandale, Comment l'empire aux trois clés a perdu son pari*, at 125 (stating that UBS relied excessively on CRAs).

720 *See further id.* at 124 (adding that 75 percent of the total of "super senior" tranches on UBS bank balance sheet turned out to come from synthetic CDOs).

721 *See id.* at 188 (stating that UBS could expand its balance sheet with the help of the risk-sensitive approach of the Basel II framework); FINMA, *Finanzmarktkrise und Finanzmarktaufsicht,* at 39 (also recognizing that regulators cannot content themselves with risk-sensitive capital ratios but have to take into account the expansion of bank balance sheets), at 40-41.

722 LEWIS*, The Big Short, Inside the Doomsday Machine*, at 216.

723 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 8.

724 NOCERA, *Propping up a House of Cards.*

Wall Street investment banks were in a position to circumvent CRAs' models in order to obtain the highest rating possible.[725] For instance, CRAs used the average FICO scores[726] of pools of borrowers instead of looking at the list of FICO scores.[727] As a result, it was possible to include a borrower that had a very low FICO score and was virtually certain to default.[728] In order to offset the borrowers with low scores, the financial institutions had to find borrowers with high FICO scores. Again, it was possible for the banks to circumvent the system since CRAs did not discern between "thin-file" and "thick-file" FICO score.[729] A "thin-file" FICO score depended on a short credit history, thereby allowing immigrants with a low income for instance to have a high "thin-file" FICO score.[730]

Because the pricing of CDOs depended extensively on credit ratings, CDO arrangers were able to engage in rating arbitrage, more particularly in spread arbitrage.[731] Investors would accept lower yields thanks to the high credit ratings. The issuing entity made a profit out of the difference between the payments that it got from the underlying assets and the lower yield that goes to its bond holders.

Further, the temptation when CDO arrangers were manufacturing a structured security had been to put riskier assets from each rating class into the portfolio.[732] Traders were then able to arbitrage between assets carrying different risks but the same credit rating.[733]

If high credit ratings attract the same regulatory privileges, and highly rated securities seem to be similar, financial institutions able to understand that not all triple-A securities bear the same risk could benefit from that knowledge.

725 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 101.

726 FICO is an acronym for the Fair Isaac Corporation, the creator of the FICO scores. FICO scores are credit reports that statistically calculate the creditworthiness of individuals.

727 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 99-100.

728 *Id*.

729 *Id.* at 100.

730 *Id*.

731 BLUHM, *CDO Modeling: Techniques, Examples and Applications,* at 6.

732 THE ECONOMIST, *Exclusion zone*, *Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

733 *Id*.

§ 9. Wrong Incentives in the Credit Rating Industry

I. Conflicts of Interest in the Credit Rating Industry

"The truth is [CRAs] are working for Wall Street, and they are going to give to Wall Street what Wall Street wants".[734]

1. Issuer-Pays Business Model

CRAs' conflicts of interest are particularly acute in the structured finance segment. Since the 1970s the credit rating industry has shifted from an investor-pays business model to an issuer-pays business model.[735] CRAs could not count on investors to pay for credit ratings. This is based on the fact that information is a public good. Due to the public-good nature of credit ratings, it is hard to get any individual investor to pay for credit ratings.[736]

It is worth mentioning that communication technology has changed dramatically since the creation of the credit rating industry in 1909.[737] Above all, since the 1970s low-cost photocopying explains why investors are not willing to pay for information that can easily be spread.[738] Information economics theory highlights the fact that credit ratings are hard to sell to investors. The equilibrium selling price for rating information is zero.[739] In fact, each recipient of a credit rating could secretly sell the information to other investors for a somewhat lower price until the price for the rating information falls to zero.[740] From another perspective, less reliance on the CRAs to provide valuable information may partly have moved investors away from credit ratings.

In order to be profitable, CRAs had to rely on another source of revenue and they started being paid by the issuers. Accordingly, in modern financial markets one reason for CRAs' profitability is the issuers' strong demand for credit ratings.[741] Currently, conflicts of interest have been particularly acute

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734 KETEYIAN, *Ratings Agencies to Face Grilling on Goldman* (quoting Senator BERNIE SANDERS).
735 *See supra* Part 1, Chapter 2(IV)(2).
736 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 52.
737 BIRCHLER & BÜTLER, *Information Economics,* at 106.
738 WHITE, *A New Law for the Bond Rating Industry*, at 49; SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets,* at 41.
739 BIRCHLER & BÜTLER, *Information Economics„* at 105-106.
740 *Id.*
741 *Id.* at 106-107 (also stating that the industry's profits are less impressive when compared to the aggregate value of rated bonds).

since the vast majority of the leading CRAs' revenues are from issuers' fees.[742]

There is evidence that issuers did not hire CRAs because of the value of their credit ratings. Instead, they started to pay for the credit ratings because of the regulatory privileges they could get. Moreover, issuers might take advantage of high credit ratings in order to lower the cost of capital.[743] If investors are reassured about the quality of an investment, they tend to demand lower returns.[744] Further, high credit ratings make debt instruments marketable to a broader range of investors due to regulatory and behavorial reliance.

When CRAs depend to a large extent on issuers' fees, they lose their independence. CRAs automatically tend to concentrate on satisfying the needs and interests of their clients.[745] For instance, the rapid expansion of business opportunities creates a conflict of interest by encouraging corner-cutting to attract business from issuers.[746] In other words, CRAs focused more on raising revenues than on enhancing the quality of their credit ratings.[747] They did not allocate the necessary resources to improve their rating models. Furthermore, they are accused of inflating credit ratings in order to attract new deals or keep their market share. The competitive pressures gave rise to a "race to the bottom". The leading CRAs increased or kept their market share by lowering their rating standards. Collecting fees and minimizing costs allowed them to maximize their profits.

The revenue model poses further problems as far as the ongoing monitoring of credit ratings is concerned. The ongoing fee payment structure created a second incentive problem among CRAs.[748] CRAs were reluctant to downgrade their credit ratings for fear of losing their market share.[749] The reli-

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742 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 68-69 (adding that approximately 90 percent of CRAs' revenues come from issuers' fees; however, the concern about conflicts of interest is more systemic than individualized since CRAs do not depend on any particular issuer).

743 Nevertheless, this can have beneficial effects on the financial markets as long as it is deemed to address the principal-agent problem. Problems arise as soon as CRAs lose their independence, which is most likely to happen under the issuer-pays business model.

744 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 6.

745 LYNCH, *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, at 246.

746 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 41-42.

747 *Credibility of Credit Ratings, the Investment Decisions Made Based on those Ratings, and the Financial Crisis: Hearings & Testimony Before the FCIC* (testimony of MARK FROEBA, former Moody's employee), at 4.

748 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9.

749 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and*

ance on issuers' fees relating to the structured finance segment contributed to impair CRAs' independence.

2. Ancillary Services

The ancillary business contributed to a large part of CRAs' revenue in the structured finance segment. Nevertheless, the practice of offering ancillary services causes the most controversy. The risk arises that the integrity of the rating process may be damaged if ratings are used to generate lucrative additional business from issuers.[750] Doing ancillary business may generate conflicts of interest.[751] Concern has been raised about the influence of the purchase of ancillary services on the CRAs' rating decisions. Issuers may hope to get higher credit ratings if they purchase ancillary services or may conversely fear that their failure to do so could negatively impact on their credit rating.[752]

Further, ancillary services gave issuers the opportunity to work with CRAs on the composition of structured products. As far as CDOs were concerned, the selection and slicing were done in close association with CRAs, so that each tranche was awarded the appropriate credit rating.[753] The CRAs told the CDO arrangers the procedure it would use to rate the bonds such as the methods, historical default rates, prepayment rates and recovery rates.[754] The rating process was a fixed target: the CDO trust structured the liability structure to obtain a significant percent of triple-A bonds.[755]

Therefore, issuers did not hire CRAs to take advantage of their expertise but rather to know how to design financial instruments in order to get a given credit rating.[756] CRAs' assistance did not help to enhance the quality of the structured product substantially. Instead, CRAs' advice was used to maximize the obtained credit rating. This process contrasts with the corporate rating process where issuers have far less opportunity to influence

Governmental Affairs (written statement of FRANK L. RAITER, former Managing Director, Standard & Poor's), at 2.

750 MOLONEY, *EC Securities Regulation*, at 691.

751 *See, e.g.,* HILL, *Regulating the Rating Agencies,* at 51; *see also* PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 68; *see also* EMMENEGGER, *Die Regulierung von Rating-Agenturen,* at 35-36.

752 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 11.

753 THE ECONOMIST, *Exclusion zone*, *Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

754 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9.

755 *Id.*

756 *But see* FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 480 (criticizing the practice of providing ancillary services, yet adding that documenting inappropriate behavior would be extremely difficult).

credit ratings.[757] This gives rise to concern about completely separating the formulation of credit ratings from the ancillary services offered to issuers on the engineering of complex financial products.[758]

3. Interferences between Credit Rating Agencies and Issuers

"I am getting serious pushback from Goldman on a deal that they want to go to market with today."[759]

The securitization process may have worked better if there had been greater independence in the creation of the CDO packages and their credit ratings.[760]

CRAs saw drafts of the documentation during the structuring of the transaction, they could criticize it and exchange their ideas with issuers.[761] Issuers could accept these comments, or provide the requisite credit enhancement for the senior tranche to fulfill CRAs' expectations and obtain the desired triple-A rating.[762] They could also decide not to hire the CRA, in which case the issuer might or might not – depending on the engagement contract – have paid the CRA a "break-up fee".[763]

"Rating shopping" was possibly practiced as a result of interferences between issuers and CRAs. For instance, issuers frequently asked several CRAs to provide prospective assessments on CDO tranches before deciding which CRA to hire.[764] This process allowed issuers to shop around to insure they could get a triple-A rating for their products.[765] Under such circumstances, investment banks were able to put pressure on CRAs. If CRAs did not give the highest credit ratings, investment banks would simply hire another CRA.

In addition, interferences between issuers and CRAs partly resulted from disclosure rules on CRAs in the US; in the spirit of transparency CRAs had to disclose computer application software that enabled issuers to input a

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757 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 19.

758 DE LAROSIÈRE Report, at 19.

759 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibit 36, at 156 (quoting a Moody's employee).

760 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 18.

761 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 154.

762 *Id.*; IOSCO, *Report of the Task Force on the Subprime Crisis*, at 21.

763 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 21.

764 *Id.* at 28.

765 DE LAROSIÈRE Report, at 9.

CDO package and see what credit rating that package would acquire.[766] This helped issuers get around the rating system.[767] Investment banks worked backward and got involved in the practice of "reverse-engineering".[768] They could adjust their CDO packages to get the desired credit rating while minimizing the efforts made to improve the quality of the package.

Apart from that, CRAs used to hire out some of the CRA employees who had devised the credit ratings.[769] Former CRA analysts helped investment bankers construct the deals to be rated. They could easily get around rating models and get the highest credit ratings for investments that were riskier than the credit ratings suggested. These practices seriously jeopardized the independence of the issuers and CRAs.

Furthermore, Wall Street banks used to help CRAs create the rating models used to rate securitized assets. This endeavor was particularly striking as far as complex synthetic CDO structures were concerned. Initially CRAs did not have their own rating models to rate complex financial products, so banks sent their own models to the CRAs which agreed to rate a large part of the newly securitized assets triple-A.[770] In this regard, investment banks improperly influenced the rating process.

Last but not least, interferences between issuers and CRAs were also common during the ongoing monitoring of the rated instruments. CRAs could threaten issuers with downgrading the debt instruments if issuers did not act in a certain way. As far as CDO structures were concerned, if substitutions were permitted the portfolio composition could be changed in order to maintain the desired credit rating.[771]

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766 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 18.

767 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* (suggesting that because CRAs had to explain how they did things, investment banks could sometimes game it) (quoting DAN ROSEN).

768 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* ("Reverse-engineering" means gaming rating models in order to get the highest credit ratings possible even though the financial product did not always deserve them. By sharing their rating models, CRAs gave investment bankers the tools to tinker with their complicated mortgage deals until the models produced the desired credit ratings. Investment banks were able to engage in rating-driven transactions in order to get higher credit ratings while structuring the deal slightly differently without having to substantially enhance the quality of the underlying assets).

769 MORGENSON & STORY, *Rating Agency Data Aided Wall Street in Deals* (For instance, SHIN YUKAWA, a former Fitch employee, joined Goldman Sachs in 2005 and helped create Abacus 2007-AC1. The most part of the Abacus deal could obtain triple-A credit ratings that were not deserved).

770 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 76 (quoting a former CDO trader, Goldman Sachs).

771 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 19.

II. Absence of Reputational Constraints in Rating Structured Products

"We rate every deal... it could be structured by cows and we would rate it."[772]

Lack of competition in the credit rating industry meant that CRAs rated structured products recklessly even when they knew they were not able to provide accurate information. Reputational capital means that CRAs issue inaccurate credit ratings at their peril.[773] The reputational capital view of CRAs works only if CRAs lose more in reputational capital from giving false credit ratings than what they gain in increased fees.[774] However, in the structured finance segment reputational incentives failed to work. CRAs were not deterred from issuing low-quality credit ratings on novel products because the structured product markets were a great source of profit. The profit they could get was higher than the reputational constraints they faced. In other words, for that profit it was worth taking the risk of losing reputation in an uncertain future.

Evidence from the subprime mortgage crisis suggests that novel-product rating was lucrative enough to tempt CRAs to take the risk of reputational spillover.[775] If financial innovation continues to be important, CRAs will continue to face that temptation.[776]

The presence of conflicts of interest in the credit rating industry partly explains the wrong incentives that discouraged CRAs from acting independently. Issuers paid the leading CRAs to rate mortgage-related securities. CRAs had no incentive to refuse. If they were paid by investors, they would be subject to reputational constraints. It is not surprising that CRAs tended to satisfy the interests of the client that paid for the credit rating. Issuers were interested in low credit rating standards. Investors would have favored high quality credit ratings. As far as competitive pressures in terms of rating quality are concerned, CRAs are subject to reputational constraints only

772 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibit 30a, at 132 (quoting a Standard & Poor's employee).

773 *See, e.g.,* OPP, OPP & HARRIS, *Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage*, at 4 (stating that rating inaccuracies would be punished by investors through the loss of future business if rating-based regulations did not create wrong incentives in the credit rating industry).

774 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 633.

775 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 172.

776 *Id.* at 173.

under the investor-pays business model. As opposed to the investor-pays business model, the issuer-pays business model creates competitive pressures in terms of a "race to the bottom" as regards the rating standards.

Overall, market participants did not seem to care about rating quality.[777] To make matters worse, the market even penalized quality by awarding rating mandates based on the lowest credit enhancement needed for the highest credit rating.[778] In fact, the leading CRAs were facing a dilemma to maintain both market share and credit rating quality.[779] CRAs opted for market share in the sense that competitive pressures incentivized them to loosen their rating standards in order to guarantee issuers' fees. The CRA that required the lowest credit enhancement for the highest credit rating attracted the most business.[780] CRAs overreached themselves in order to capture higher fees from more complex deals, thereby compromising their standards.[781] Moreover, the leading CRAs had no incentive to allocate more resources in order to improve credit rating quality. Even if keeping pace with financial innovation would have required larger investment from the CRAs, it seems likely that a sufficient investment was not made.[782] As a consequence, there is a serious danger of rating inflation when CRAs lose the long-term value of their reputation due to the rapid expansion of business opportunities.[783]

In the critical area of rating novel credit instruments, such as those which may have contributed to the recent credit market meltdown, a well-functioning reputation mechanism is unlikely to produce ideal incentives for high credit rating quality.[784] CRAs are unlikely to be constrained from issu-

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777 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibit 24b, at 115 ("It turns out that ratings quality has surprisingly few friends: Issuers want high ratings; investors don't want rating downgrades; short-sighted bankers labor short-sightedly to game the rating agencies for a few extra basis points on execution") (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

778 *Id.* (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

779 WUTKOWSKY & YOUNGLAI, *Lawmakers, Former Execs Blast Credit Raters* (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's); *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs,* Exhibit 24b, at 116 (suggesting that bad credit ratings should be perceived to have worse consequences than market share slippage, which is not easy to implement) (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's).

780 WUTKOWSKY & YOUNGLAI, *Lawmakers, Former Execs Blast Credit Raters.*

781 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 10.

782 HILL, *Regulating the Rating Agencies*, at 81.

783 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 41-42.

784 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 112-115.

ing a credit rating on a novel product for fear of depleting their reputational capital; if they have the opportunity to get high fees from rating a new and complex product, they will do it regardless of reputational constraints due to the fact that they have never rated the target product before.[785] Therefore, as long as financial innovation continues, CRAs will not be fixated on improving the reputation mechanism.[786]

Another reason is that a low-quality credit rating in a novel segment will not affect CRAs' reputations in traditional segments. Even though they cannot rate novel products satisfactorily, CRAs face no negative spillover in traditional segments such as the corporate segment.[787] Therefore, there is no reason not to issue a credit rating on novel products. CRAs can only benefit from rating novel instruments. Given that the expected benefits from rating novel products are high enough relative to the expected magnitude of negative spillover, CRAs will most likely risk any negative spillover effects.[788]

III. Over-Reliance on Quantitative Models

1. Failure to Adapt Rating Models to New Market Trends

CRAs over-relied on quantitative models when rating structured products. Structured finance ratings are characterized by their heavy reliance on quantitative models while corporate debt ratings are more dependent on a long historical record and analyst judgment.[789] Models that are used to rate structured products are based on statistically derived assumptions while models that are used to rate corporate debt are based on a long history of empirical data.[790]

The failure to anticipate the subprime mortgage crisis was not primarily due to the scarcity of historic track records, but rather a failure to incorporate new information – such as increasing delinquency rates and falling house prices – in rating models.[791]

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785 *Id.* at 114, 172.

786 *Id.* at 114.

787 *Id.* at 169-172.

788 *Id.* at 172.

789 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 5; *see also* ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit*, at 44.

790 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts*, at 10.

791 *But see* CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 23 (arguing that the lack of comprehensive historical data is consider-

Available databases with histories of mortgage loans were not representative of new risk trends because the new mortgage loans typically had teaser rates, no principal payments in the beginning, different loan standards such as high loan to value ratios, and no documentation.[792] CRAs should have incorporated new market trends in the assumptions on which their rating models were based.[793]

In principle, historical data is used as an indicator to predict the future. Comprehensive historical data generally help to forecast market fluctuations. However, CRAs could not accurately base their models on historic track records because what was happening in the subprime mortgage market had never previously been experienced. In the past, mortgages tended to have high recovery rates, yet this was changing due to the declining underwriting standards in the subprime mortgage market, high debt to value ratios and falling house prices.[794] Historical data was almost useless because the past had only known an environment of low delinquency rates and rising house prices.

As a result, CRAs based their models on erroneous assumptions. As a consequence, their estimates of the probability of default and of the loss given default no longer reflected the reality.[795] The question arises whether CRAs could have seen what was happening in the subprime mortgage market earlier. In this regard, the lack of historical data was not the problem. Rather, the problem was the failure to perceive significant changes in the subprime mortgage market. CRAs should have focused more on understanding and interpreting the new circumstances that were impacting on the subprime mortgage market. If they had based their judgments on information reflecting market evolution, they should have seen that delinquency rates were rising and that house prices were about to fall.

Therefore, the problem was not that CRAs did not have historical data at their disposal, but that they kept using outdated models instead of taking into account new data.

ed to have been an important source of model errors as revealed during the subprime mortgage crisis).

792 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 16.

793 CHAN, *Documents Show Internal Qualms at Rating Agencies* (reporting that the inquiry found that CRAs neglected to take mortgage fraud, lax underwriting and a declining housing market into account in their models).

794 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 10.

795 *Id.*

2. Flaws in the Rating Models

It is worth recalling that the central assumptions at the core of CRA models in structured finance are default rates, recovery rates and correlations.[796] There were modeling inaccuracies that had to do with the complexity of the CDO structures in the subprime mortgage market.[797] Above all, the conventional wisdom is that quantitative mistakes resulted from underestimating the cross-correlation of default.[798] Securitization theories fail to work if correlations are so high that asset diversification is not able to sufficiently reduce risk.[799] Moreover, to model the CDO collateral pool, CRAs needed to model the ABS bonds of the many different ABS trusts – approximately 100 – incorporated into the CDO structure.[800] ABS credit ratings, in turn, relied crucially on the ability of the CRA to predict how the level of losses for a particular loan pool would respond to different economic scenarios.[801] Furthermore, the modeling of the cash flows was almost impossible due to the scarcity of generally timely data on the collateral pool of specific ABS trusts.[802] Available data was incomplete with respect to the current state of the underlying mortgage loans.[803]

The modern portfolio theory developed by Harry Markowitz and extended by Robert Merton lies at the core of CRAs' statistical risk models.[804] Risk and return of instruments are distributions. Even though the resulting models have strong scientific support, market participants cannot rely on them exclusively.

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796 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 13; *see further* ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit,* at 43 (stating that correlated losses must be taken into account in structured finance ratings since ABS structures represent claims on cash flows from a portfolio of underlying assets).

797 ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 8 (stating that CRAs failed to use adequate risk-measurement methodologies to assess the underlying risks embedded in complex financial instruments).

798 *See generally* ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit,* at 43. Default was viewed as borrower-specific; however, correlated losses should have been taken into account.

799 *See generally* LUCAS, GOODMAN & FABOZZI, *Collateralized Debt Obligations and Credit Risk Transfer*, at 14 (stating that there is a higher correlation of default in the CRT market).

800 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 16.

801 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 5.

802 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 16.

803 *Id.*

804 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 22.

Blind reliance on mathematical models can lead to an underestimation of the consequences should a low-probability event be realized.[805] What happened as regards the subprime mortgage crisis came from a low-probability economic event.[806] The market was over-confident because the highest tranches seemed to enjoy a low probability of default. However, due to the high risk correlation, even though the probability that the risk would materialize was low, if it did happen the whole market would collapse.

Furthermore, the subprime mortgage crisis has shed light on a shortcoming of equilibrium thinking, the tendency to underestimate the likelihood of sudden large events.[807] Financial fluctuations have fat tails, i.e., large fluctuations are more likely than normal distribution suggests.[808]

CRAs are reputed to do a better job at providing borrowers or debt instruments' relative credit risk than their absolute credit risk.[809] In terms of relative credit risks, they gave higher credit ratings to higher tranches than lower tranches. Investors were convinced by the distinctions made between the various tranches. This gave the misleading impression that the highest tranches were protected from bad economic events.

However, CRAs and investors tended to forget systemic risk and human judgment.[810] Investors also relied on CRAs without sufficiently taking liquidity risk into account. Measuring and limiting liquidity risk cannot be achieved merely through quantitative criteria.[811] The originate-and-distribute banking model, i.e. the process of pooling and selling off loans,[812] has introduced a new dimension of liquidity risk that should be taken into account by market participants.[813] For instance, certain financial instruments such as Structured Investment Vehicles (SIV) depend to a large degree on short-term funding.[814] SIV typically invest in long-term assets and rely on short-term debt to finance their activities. Further, CRAs ignored counterparty risk. For example, the highest credit rating could be obtained by pur-

805 *See generally* GRIFFIN & TANG, *Did Subjectivity Play a Role in CDO Credit Ratings?,* at 28-29 (relating to rating inflation).

806 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 22.

807 BUCHANAN, *Crazy Money: How Can we Stop the Financial Markets Creating so Much Misery? Forget Textbook Economics, the Answer Lies Elsewhere.*

808 *Id.*; *see also* LEWIS, *The Big Short, Inside the Doomsday Machine*, at 218 (quoting JOHN MACK).

809 ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 131.

810 MURPHY, *An Analysis of the Financial Crisis of 2008: Causes and Solutions*, at 6-7 (mentioning human judgment).

811 DE LAROSIÈRE Report, at 18.

812 *See supra* Part 3, Chapter 7(III) (describing the originate-and-distribute model of banking).

813 DE LAROSIÈRE Report, at 18.

814 *Id.*

chasing a surety wrap from a triple-A-rated insurer.[815] This procedure failed to take into account the full picture of counterparty risk by over-relying on credit ratings to assess counterparty risk. In a nutshell, such rating flaws show that CRAs excessively depended on their models to assess liquidity or counterparty risk instead of exercising human judgment to measure qualitative criteria.

3. Dependence on Rating Models for Valuation Purposes

Moreover, credit ratings were crucial for pricing in structured finance.[816] Some investors – especially institutional investors – relied exclusively on credit ratings for valuation purposes.[817] As a result, credit ratings can explain a substantial proportion of variation in launch spreads as far as structured finance products are concerned.[818] The most striking example is the case of CDOs. The relationship between price and credit rating for each tranche is very close and consistent across all types of securitizations and considerably stronger than in the case of corporate bonds.[819] Investment bankers are able to sell to investors in the primary market at prices that depend only on credit ratings.[820]

In the subprime mortgage market, over-reliance on credit ratings led to a complete mispricing of credit risk. A good example is provided by the CDS market, i.e. the market for insuring securitized bonds. The valuation of mortgage-related CDS should logically have depended on new pieces of information relating to the mortgage market. Before the subprime mortgage crisis was triggered in July 2007, CDS prices of securitized assets should have been an early signal of a deteriorating market. Buying CDS should have become more expensive every time negative news hit the subprime mortgage market – at least since early 2007. Surprisingly however, CDS prices were falling just before the subprime mortgage crisis erupted.[821] If other factors played a role, one of the problems was undoubtedly that valuation depended on the credit ratings of the synthetic CDOs based on CDS. The triple-A-rated tranches of synthetic CDOs in particular were very valuable before the massive credit rating downgrades. As a consequence,

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815 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 7.
816 FIRLA-CUCHRA, *Explaining Launch Spreads on Structured Bonds,* at 16.
817 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37.
818 FIRLA-CUCHRA, *Explaining Launch Spreads on Structured Bonds*, at 16.
819 *Id.* at 24.
820 BRENNAN, Hein & Ser-Huang, *Tranching and Rating*, at 1, 17, 23, 24.
821 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 95, 129.

market participants failed to incorporate market trends in CDS prices. The market for CDS was very distorted.

Another example from the subprime mortgage crisis illustrates the over-reliance on rating models for valuation purposes. For instance, a Morgan Stanley hedge fund wanted to bet against the worst mortgage-related assets. The hedge fund selected triple-B-rated CDOs that it could short by purchasing CDS.[822] In order to pay the premium, the hedge fund invested in triple-A-rated CDOs.[823] Because the highly rated assets had a lower yield than the triple-B assets, the hedge fund had to purchase a significant amount of these triple-A assets.[824] The price of mortgage-related securities directly depended on their credit ratings. Because the hedge fund had to purchase many times more triple-A assets in order to finance its CDS bet, it suffered significant losses as soon as the subprime mortgage crisis hit the financial markets. Its great exposure to highly rated bonds resulted from an over-reliance on credit ratings with respect to the pricing of credit risk.

IV. Market Over-Reliance on Credit Ratings in Structured Finance

In the run-up to the subprime mortgage crisis, investors over-relied on CRAs that were over-relying on quantitative models. There are several reasons that led to market over-reliance on CRAs in the structured finance segment.

First, information intermediaries such as CRAs have played an increasing role in monitoring CRT instruments. Indeed, the dispersion of credit risk through CRT instruments implies that holders of credit risk do not have a direct relationship with the borrowers.[825] Due to the breaking up of credit exposures into more diversified portfolios, risk takers have less capacity themselves to monitor the creditworthiness of individual borrowers.[826] As a consequence, many market participants effectively outsourced their own valuations and risk analyses of mortgage-related securities to the leading CRAs.[827] In the first place it may have been considered a cheap and convenient solution to partly outsource credit risk management to CRAs.[828]

822 *Id.* at 95, 206.
823 *Id*.
824 *Id*.
825 CGFS, *Credit Risk Transfer,* at 23.
826 *Id*.
827 IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 2.
828 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 55. However, when the subprime mortgage market collapsed, market participants ended up paying

Some institutional investors ended up relying too heavily on credit ratings in their investment guidelines and choices, in some cases fully substituting credit ratings for independent risk assessment and due diligence.[829]

Second, the dependence on credit ratings was particularly acute in structured finance due to the complexity of the rated products. Structured products are often considered to be less transparent and far more complicated than corporate debt instruments. Just before the subprime mortgage crisis was triggered, investors appeared to have relied heavily or solely on the CRA ratings as far as mortgage-related securities were concerned.[830] The complexity of financial instruments partly explains the over-reliance on credit ratings characterizing the structured finance segment. The analysis of the underlying assets and the estimate of correlations are quite challenging.[831] Investors in highly-rated products with low risk premia may lack expertise or be incentivized to avoid the costs of doing their own analysis.[832] Moreover, the absence of an active secondary market for these products and the lack of sufficient historical performance data make valuations of structured products even trickier.[833] These factors contributed to a situation where the investing community largely relied on CRAs to assess the risk of holding structured finance products.[834]

As a consequence, when the subprime mortgage crisis called the quality of credit ratings in question, investors were left with no independent means of assessing the risk of mortgage-related securities.[835] In sum, a particular failing relating to the subprime mortgage crisis has been investor acceptance of structured finance ratings without understanding the basis on which those structured products were provided.[836] The financial turmoil emphasizes the importance for investors of exercising informed judgment.[837]

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the high price; *see* LEWIS, *The Big Short, Inside the Doomsday Machine*, at 102 (suggesting that the subprime mortgage market had subcontracted its credit analysis to entities that were not even doing the credit analysis).

829 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37.

830 IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 7-8.

831 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37.

832 *Id*.

833 *Id.* at 37-38.

834 *Id.* at 38.

835 *Id*.

836 DE LAROSIÈRE Report, at 16.

837 *Id.* at 32.

Third, the regulatory use of credit ratings creates and maintains an artificial demand for credit ratings and excessive reliance on CRAs.[838] Rating-based regulations are often considered to be the most important piece of the over-reliance puzzle. Basel II undoubtedly increased reliance on credit ratings by many buy-side firms.[839] Currently Basel III does not seem to reverse this trend; there is still hope that the BCBS focuses more on reducing over-reliance on credit ratings in the future. Market participants tend to rely extensively on certified CRAs, which are referred to as ECAIs under the Basel II and III frameworks.[840] The use of credit ratings in financial market regulations should never eliminate the need for those taking investment decisions to exercise their own judgment.[841]

Fourth, to make matters worse, behavioral reliance on credit ratings has added to regulatory reliance.[842] This behavioral over-reliance probably derives from decades of regulatory dependence on credit ratings.[843] For instance, credit ratings help to determine at what cost a borrower can borrow money in the capital markets.[844] Another example is the extensive use of credit ratings in contracting. Credit rating downgrades or upgrades are widely used as a contractual signal of a borrower's creditworthiness.[845] "Rating triggers" can mean that payment obligations require the posting of collateral based upon a credit rating downgrade.[846] A downgrade can trigger a demand for a higher rate of interest on a loan or bond.[847] Contractual clauses can specify that counterparties are given the right to accelerate repayment of an outstanding loan if the rating falls below a certain level.[848] As a consequence, a credit rating downgrade can throw a company into default under the terms of its debt covenants.[849] Behavioral reliance on credit

838 *See* MACEY, *Corporate Governance: Promises kept, Promises Broken*, at 114; *see also* CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9; *see also* DE LAROSIÈRE Report, at 9.

839 *Id.* at 16.

840 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 23.

841 DE LAROSIÈRE Report, at 16.

842 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 10.

843 *Id.*

844 ACKERMANN & JÄCKLE, *Ratingverfahren aus Emittentensicht*, at 878-879.

845 THE ECONOMIST, *Exclusion zone*, *Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

846 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 8.

847 THE ECONOMIST, *Exclusion zone*, *Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

848 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 8.

849 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs* (testimony of JONATHAN R. MACEY, J. DuPratt White Professor of Law, Cornell Law School), at 44.

ratings enhances the effects of rating changes, thereby increasing market volatility.[850]

V. Exploitation of Information Asymmetry in the Market for Securitized Assets

The over-reliance on CRAs that over-relied on quantitative models supported the creation of an opaque market for securitized assets. The securitization process generated information asymmetry in the financial markets. Investors in complex credit products had less information at their disposal to assess the underlying credit quality of the assets they held in their portfolios than the originators.[851] As information intermediaries, CRAs are supposed to alleviate information asymmetries in the financial markets. Third-party certifiers of quality should be able to reduce the "lemons problem"[852] in the financial markets.[853] In general, the "lemons problem" refers to a situation in which the market value of an investment does not relate to its true value given informational inefficiencies.[854] In the subprime mortgage market. CRAs could ideally have acted as private-sector certifiers of quality but they did not.[855] At any rate, end investors heavily relied on CRAs to assess the riskiness of the securitized assets. However, concern has been raised about CRAs' disinterest in providing investors with valuable information. They have no incentive to alleviate information asymmetry in the financial markets since they get paid even if their credit ratings are not accurate. Rather than helping investors to accurately value securitized assets, CRAs acted as a smokescreen and benefited from market opacity. Their credit ratings facilitated the development of "lemons markets" for securitized products instead of mitigating the problem.[856] When the subprime mortgage market confronted investors with serious inaccuracies in the rating models, the market for securitized assets suddenly dried up. The absence of an independent means of valuing assets in a liquidity crisis created a confidence crisis and increased uncertainty in the financial markets.[857] Accordingly,

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850 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 611.

851 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9.

852 *See* AKERLOF, *The Market for „Lemons": Quality Uncertainty and the Market Mechanism*, at 490-491 (explaining the "lemons problem" in general).

853 SCHWARCZ, *Disclosure's Failure in the Subprime Mortgage Crisis*, at 1121.

854 DALLAS, *Short-Termism, the Financial Crisis and Corporate Governance,* at 37.

855 *Id.*

856 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008,* at 553.

857 *See* FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37-38; *see also* IOSCO, *Report of the Task Force on the Subprime Crisis*, at 23.

certification of quality by private parties such as CRAs cannot be expected to reduce the asymmetric-information problem.[858]

(i) The first aspect of the information asymmetry problem is that CRAs played a crucial role in helping issuers create a "lemons market" for securitized assets; in this respect, issuers favored informational inefficiencies, making the subprime mortgage market resemble a "market for lemons".[859] The originate-and-distribute model of intermediation implied that banks could sell off their exposure to the subprime mortgage market. CRT markets are particularly subject to the "lemons problem" because issuers have an incentive to transfer their low-quality assets. Banks could not have transferred credit risk as extensively without the help of the leading CRAs. Safe in the knowledge that they would receive triple-A ratings for the highest tranches of their securitized assets, banks permitted pools to become infected with low-quality assets.[860] CDO originators paid little attention to scrutinizing the quality of the underlying assets because the investment-grade ratings would help them sell off their product. They could get around rating models in such a way that the low quality of the underlying assets would not be reflected in the credit ratings.[861] CRAs did not reflect upon the pools' decreasing quality of assets in their credit ratings. Information failure on the CRAs' side implied that pools constituting assets of different quality would get similar credit ratings.

Nevertheless, investors relied on credit ratings for asset valuation purposes. Over-reliance on CRAs was an essential factor that contributed to developing an opaque market for securitizations.[862] CRAs ended up being the entities that priced the securitized assets. Indeed, the triple-A tranches all traded at one price, the triple-B tranches all traded at another, notwithstanding the important differences from one triple-B tranche to another.[863] Therefore, the most over-priced securitized assets were the ones that had been the most ineptly rated.[864] And the subprime mortgage meltdown showed that the most over-priced assets were generally the triple-A-rated assets. It is worth recalling that the defaults did not even need to eat into triple-A tranches to make them lose value; the mere fact that the cushion provided by the lowest

858 SCHWARCZ, *Disclosure's Failure in the Subprime Mortgage Crisis*, at 1121. In the current state of the financial markets CRAs do not fulfill the requirements of an independent third-party certifier of quality. Conflicts of interest are too acute in the credit rating industry.

859 DALLAS, *Short-Termism, the Financial Crisis and Corporate Governance,* at 1.

860 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008,* at 579.

861 *See Id.*

862 *Id.* at 582.

863 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 101.

864 *Id*.

tranches was eaten up made triple-A tranches lose value because they became more risky.

In this way the whole process generated a financial "lemons market".[865] CRAs facilitated the creation of a "lemons market" because they did not pay attention to reducing information asymmetry in the subprime mortgage market. They only performed the function of marketing issuers' financial instruments. Instead of acting as gatekeepers, they acted as guardians of information asymmetry.

The adverse selection problem that led to the creation of a "lemons market" was especially striking in the CDS market. Arrangers of synthetic CDOs could select which subprime mortgages to include in the synthetic pool. CDS buyers were interested in insuring the worst mortgage-related securities. On the other side of the bet, investors merely relied on credit ratings to assess the riskiness of the novel product. CDO arrangers that hired the leading CRAs knew that they could get high credit ratings independently of the quality of the underlying assets. Therefore, CDO arrangers could accept the assistance of interested CDS buyers in the composition of the asset pool that would form a synthetic CDO, and sell off the resulting product thanks to the favorable credit ratings.

The Goldman Sachs case provides a good example as far as information asymmetry in the market for securitized assets is concerned. CDO arrangers such as Goldman Sachs did not fully rely on credit ratings.[866] Nevertheless, they could benefit from high credit ratings and were able to use information that was not reflected in credit ratings. In order to have CDS buyers, CDO originators would allow the interested hedge funds to select the subprime mortgages to include in the deal.[867] This endeavor gives rise to evidence of adverse selection in the composition of synthetic CDOs. In the Goldman Sachs case, the hedge fund Paulson & Co. helped select the subprime mortgages included in the Abacus 2007-AC1 deal.[868] As a CDS buyer, Paulson & Co. was interested in the worst CDO positions in order to bet against them. As a CDO arranger, Goldman Sachs agreed with the proceeding because it could get high credit ratings independently of the composition of the synthetic CDOs. The favorable credit ratings, in turn, allowed Goldman Sachs to sell off the product to investors. Therefore, informed market participants benefited from the high credit ratings and simultaneously took ad-

865 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008,* at 579.

866 *See* PARTNOY, *Wall Street Beware: The Lawyers are Coming; see also* WESTBROOK & GALLU, *SEC's Demand That Goldman Admit "Mistake" Could Spur Lawsuits.*

867 PULLIAM & PEREZ, *Criminal Probe Looks Into Goldman Trading.*

868 *Id.*

vantage of their knowledge of the subprime market in order to bet against the transaction.[869]

Furthermore, there was not only a problem of information asymmetry but also a problem of information failure on both sides.[870] To some extent, not even the CDO originators understood where the risks were. Some investment banks even considered the highest CDO tranches to be a safe asset to hold on their own books. For instance, Citigroup kept a significant amount of triple-A-rated CDO tranches on its balance sheet.[871]

(ii) The second aspect of the "lemons problem" is that when investors lost confidence in the asset valuation of mortgage-related securities, they completely moved away from the market. The market suddenly dried up. If securitized assets were overestimated before the crisis, market illiquidity drove asset valuations down to levels below their economic value. When investors in triple-A-rated assets realized that they actually owned junk bonds, a crisis of confidence destabilized the financial markets.[872] Unable to distinguish between good assets and bad assets, market participants stopped trading mortgage-related securities altogether.[873] The widespread gravity of the valuation troubles came to light in August 2007 when BNP Paribas froze three hedge funds, stating that it was impossible to value the securitized assets due to a lack of liquidity in the market.[874] Credit modeling tools proved completely ineffective in valuing CDO tranches in distressed market conditions.[875]

Market losses spilled over to the highest tranches. The tranches that were supposed to be the safest ones had the highest price and the lowest yield.

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869 SORKIN, *What the Financial Crisis Commission should ask*; Goldman is accused of misleading its clients because it sold the synthetic CDOs without saying that Paulson & Co. had composed the asset portfolio in order to bet against the securitized product. As market-maker or broker-dealer, investment banking activities usually imply no fiduciary duties, but disclosure requirements as regards informing their clients should be imposed on banks such as Goldman Sachs.

870 SCHWARCZ, *Disclosure's Failure in the Subprime Mortgage Crisis,* at 1119.

871 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 15; LEWIS, *The Big Short, Inside the Doomsday Machine,* at 86.

872 KRUGMAN, *A Catastrophe Foretold.*

873 As a result, the liquidity crisis became even deeper. Confidence was lost. There was a contagion to other market segments. Furthermore, market participants could not locate the losses. Financial institutions no longer trusted their counterparties. The interbank market was collapsing. *See further* IMF, *Global Financial Stability Report, Containing Systemic Risks and Restoring Financial Soundness*, at 55 ("The absence of liquid markets and the reliance on models for valuations meant that parties were unsure of the undisclosed losses on their own and others' balance sheets, as the interaction of credit and liquidity risk drove market valuations down to levels below theoretical assumptions.").

874 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 21.

875 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 29.

They were the ones that lost the most in value, not least because they had much more value to lose than the lowest tranches. It is worth recalling that CDO tranches were primarily designed to inflate the value of the highest tranches. Therefore, the highest tranches were logically the ones that would lose the most value in an economic downturn.

Financial institutions had built up a "shadow banking system" in which there was little knowledge of the size and location of credit risk.[876] It became evident that CDO investors did not know the risk and therefore the value of their positions; to make matters worse, many CDO investors did not know whether they were exposed to the subprime mortgage market or even if they did know, they had little clue as to the quality of their positions.[877]

In an opaque market, investment decisions are based on artificial confidence. This confidence is elusive and slippery. Events such as sudden credit rating downgrades can easily trigger a loss of confidence in the market. A confidence crisis has wide repercussions on the behavior of market participants since they are left with no means to value their positions and the positions of their counterparties.[878] If they had blind faith in good times, they become risk-adverse and want to avoid riskier investments at any price in bad times, which partly explains the flight to quality.

There is a profound lack of transparency in the derivatives markets, especially with respect to OTC transactions. It is not disclosed who is on the other side of the bet. As a result bad economic events are able to trigger panic and result in a liquidity crisis because people do not know the size and location of the losses.

The market for "lemons" was characterized by the fact that liquidity in the market for securitized assets suddenly dried up. The entire market collapsed even though not all the securitized CDO tranches were about to default. All triple-A-rated tranches were revalued at much lower prices even where the underlying portfolio was of good quality.[879] Buyers could not distinguish between good and bad assets. Although a number of financial products still had a residual economic value, no buyers were interested in buying them. The reason was uncertainty. Because market participants failed to deal with asymmetric information, trade did not even take place at a discount.[880]

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876 DE LAROSIÈRE Report, at 8.

877 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 29.

878 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience,* at 37-38; IOSCO, *REPORT OF THE TASK FORCE ON THE SUBPRIME CRISIS,* at 23.

879 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 30.

880 Akerlof, *The Market for „Lemons": Quality Uncertainty and the Market Mechanism*, at 490-491.

§ 10. Preliminary Conclusion

In modern financial markets structured finance is a crucial business segment for CRAs. Rating structured finance generates significant fees and has contributed to enhancing CRAs' profitability over the past decades. Moreover, CRAs have played a leading role in the growth of the structured finance segment as issuers needed high credit ratings to make their financial instruments marketable to a broad range of investors.

However, rating flaws in the structured finance segment became apparent when the subprime mortgage crisis was triggered in July 2007. The practice of inflating credit ratings to generate issuers' fees was particularly acute in the years preceding the 2007-2009 financial crisis. Ill-advised competition between the leading CRAs allegedly resulted in "rating shopping", and caused a "race to the bottom".

Issuer-paid CRAs cannot rate independently of issuers who pay for credit ratings. Restoring competition in the credit rating industry requires establishing the independence of CRAs vis-à-vis the rated entities. Conflicts of interest in the credit rating industry need to be eliminated or mitigated in order to increase CRAs' incentives to provide investors with accurate credit ratings.

Although CRAs are supposed to resolve information asymmetries by providing investors with useful information, in the run-up to the subprime mortgage crisis reliance on the leading CRAs resulted in the creation of an opaque market for securitized assets. As a consequence, investors moved away from the market when they lost confidence in rating assessments. Persistant information asymmetries exacerbated the collapse of the subprime mortgage market. Investors were not able to locate the losses as they were left with no independent means of assessing the value of mortgage-related securities.

In a nutshell, the structured finance segment provides an illustrative example of how the leading CRAs' lack of independence jeopardizes competitive incentives in the credit rating industry. Market forces fail to play a disciplinary role when CRAs are not incentivized to improve rating quality.

PART 4: System-Wide Effects of Credit Rating Downgrades

"There are two superpowers in the world today in my opinion. There's the United States and there's Moody's Bond Rating Service. The United States can destroy you by dropping bombs, and Moody's can destroy you by downgrading your bonds. And believe me, it's not clear sometimes who's more powerful."[881]

§ 11. Background

I. Systemic Importance of Credit Ratings in Modern Financial Markets

The systemic relevance of credit ratings issued by the leading CRAs gives rise to increasing concerns in modern financial markets. On the one hand, stringent criticism has recently been raised about the credit rating industry in Europe, where politicians were livid at the recent downgrades of sovereign debt such as the Greek debt.[882] Leading CRAs have been accused of exacerbating the financial turmoil in Europe by downgrading a number of sovereign bonds, thereby making bond refinancing more difficult.[883] On the other hand – with respect to legislation – the US Dodd-Frank Act of 2010 expressly acknowledges the systemic importance of credit ratings.[884] This Act gives particular weight to the question by mentioning the systemic issue in the first sentence of its CRA reform. However, the agency reform embedded in the Dodd-Frank Act has not taken any direct measures specifically designed to address systemic problems in the credit rating industry. Hitherto only a few research articles have focused on the systemic issue related to credit ratings.[885] On the global scale, the Financial Stability

881 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies,* at 620 (quoting *The News Hour with Jim Lehrer: Interview with Thomas L. Friedman* (PBS television broadcast, Feb. 13, 1996) (transcript on file with author)).

882 THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 (emphasizing that credit rating downgrades of Greece to junk status occurred just as officials were about to unveil a support plan); CHARTIER, *Rapport sur le projet de loi de régulation bancaire et financière*, at 12.

883 NZZ, *Debatte um "Schuld" der Rating-Agenturen, Schweizer Zurückhaltung bei anstehender Regulierung,* at 35.

884 US Dodd-Frank Act of 2010, Sec. 931(1).

885 To date, there has been but one prominent example among the very few articles focusing on the systemic importance of credit ratings: SY, *The Systemic Regulation of Credit Rating Agencies*

Board (FSB) released its Principles for Reducing Reliance on CRA Ratings in October 2010.[886] The fact that the FSB draws attention to the credit rating industry highlights the systemic relevance of CRAs as this international body is mandated to strengthen the financial system and deal with systemic risk. Therefore, the topic clearly presents an important agenda for research, and will without doubt gain prominence in the future.

In the financial markets, it is inappropriate to give the same financial information to every market participant at the same time.[887] More precisely, CRAs that have systemic relevance cannot reveal financial information of major importance without causing financial turmoil. It is thus not surprising that the leading CRAs are often accused of adopting a conservative stance as regards rating updates.

This part of the study analyzes the systemic importance of credit ratings in the light of credit rating downgrades. The lack of competition among leading CRAs manifests itself as a reluctance to downgrade credit ratings that are systemically relevant. Especially over the last decades, CRAs have without doubt performed poorly in anticipating major debacles. Investors have raised concern over how slow CRAs are to downgrade their credit ratings.[888] Leading CRAs tend not to lower their credit ratings until the evidence of poorer creditworthiness is overwhelmingly confirmed by external evidence.[889]

Relating to corporate ratings, in many cases leading CRAs have kept their high credit ratings until a few day before bankruptcies. In this respect, energy company Enron, telecommunications company WorldCom and investment bank Lehman Brothers are the most insightful examples.[890] The three leading CRAs lowered Enron's credit ratings to a level below the in-

and Rated Markets (discussing the necessity of macroprudential regulation in addressing the systemic risk inherent to credit ratings).

886 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 1-7.

887 This statement is true independently of the value of the financial information. It does not depend on the accuracy of the financial information but only on its wide diffusion.

888 *See, e.g.,* ELLIS, *Different Sides of the Same Story: Investors' and Issuers' views of Rating Agencies,* at 37; *see also* BAKER & MANSI, *Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors,* at 1387 (analyzing the results of a survey asking investors and issuers about the timeliness of credit ratings).

889 *See, e.g.,* ELLIS, *Different Sides of the Same Story: Investors' and Issuers' views of Rating Agencies,* at 37.

890 HILL, *Regulating the Rating Agencies*, at 78 (stating that "Enron is just one among a number of spectacular accounts of [CRAs'] lackluster performance in anticipating major debacles"). Another prominent example of a belated rating action is Long-Term Capital Management (LTCM) in 1998.

vestment grade just four days before Enron declared bankruptcy.[891] WorldCom retained its high credit rating until a few days prior to collapsing.[892] Lehman Brothers was downgraded to junk status on September 12, 2008 and filed for bankruptcy on September 15, 2008.[893] In each case CRAs proved unable to predict financial crises.

As far as structured finance ratings are concerned, the mortgage-related securities that caused the subprime mortgage crisis were all investment grade prior to triggering the 2007-2009 financial crisis. Empirical evidence suggests that the subprime mortgage crisis followed four years of inflated credit ratings.[894] The leading CRAs could have warned before July 2007 that the market was in danger of collapse but they were too slow. When they eventually downgraded the mortgage-related securities, they did so massively.[895] The first explanation relates to conflicts of interest in the credit rating industry.[896] CRAs have strong ties to the financial industry. With respect to the subprime mortgage market, the leading CRAs did not act independently since they were paid by the issuers they were rating. Accordingly, conflicts of interest partly explain why leading CRAs did not provide valuable information about deteriorating conditions in the subprime mortgage market. Another explanation relates to the impact of credit rating downgrades as regards the timing of the subprime mortgage meltdown. The fi-

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891 *Rating the Raters: Enron and the Credit Rating Agencies: Hearing Before the Senate Committee on Governmental Affairs*, at 97. Enron was a big US energy company that was involved in extremely risky activities and went bankrupt after the fraud was discovered. *See* FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 166 (Enron carried out much of its trading in derivatives through off balance sheet financing with special purpose vehicles. By 2000, Enron had derivative-related liabilities of 10.5 billion US dollars); *see also* HILL, *Why Did Anyone Listen to the Rating Agencies after Enron?*, at 292.

892 SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 3.

893 *See* BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies.*

894 A number of empirical papers support this argument: GRIFFIN & TANG, *Did Subjectivity Play a Role in CDO Credit Ratings?,* at 28-29; MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 658-659; OPP, OPP & HARRIS, *Rating Agencies in the Face of Regulation, Rating Inflation and Rating Arbitrage*, at 5, 26; STANTON & WALLACE, *CMBS Subordination, Ratings Inflation, and the Crisis of 2007-2009*, at 39-40 (discussing rating inflation in the Commercial Mortgage-Backed Security (CMBS) market due to over-optimistic subordination levels in the years preceding the subprime mortgage crisis).

895 *Testimony Concerning Oversight of Nationally Recognized Statistical Rating Organizations: Hearing Before the Senate Committee on Banking, Housing, and Urban Affairs* (statement of CHRISTOPHER COX, Chairman, SEC) (As of February 2008, Moody's had downgraded at least one tranche of 94.2 percent of the subprime RMBS rated in 2006. As of March 2008, Standard & Poor's had downgraded 44.3 percent of the subprime tranches rated between the first quarter of 2005 and the third quarter of 2007. As of December 2007, Fitch had downgraded almost 34 percent of the subprime tranches rated between 2006 and the first quarter of 2007).

896 *See supra* Part 3, Chapter 9(I).

nancial crisis was triggered immediately after the leading CRAs downgraded mortgage-related securities to junk status. Indeed, leading CRAs started to downgrade mortgage-related securities massively in July 2007, i.e. when market participants were about to disclose significant losses in the subprime mortgage market. Hence, leading CRAs are necessarily slow to downgrade in a market environment where their rating announcements can trigger financial turmoil.

With respect to sovereign ratings, Moody's and Standard & Poor's rate the risk of lending to more than one hundred sovereigns; the two CRAs together accounting for approximately 90 percent of the market for sovereign debt rating.[897] Sovereign ratings have especially gained prominence over the last decades due to the increased reliance of countries on bond financing. Greek debt was rated investment grade by the leading CRAs until the country got into financial troubles.[898] Standard & Poor's and Fitch downgraded Greek debt during the financial turmoil, thereby causing disruptions in the financial markets. [899] However, at the height of the Greek debt crisis, Moody's – the number one in the credit rating industry – had not downgraded Greek debt to junk status.[900] During the Greek rescue, Moody's was aware of Greece's low competitiveness and high budget deficits, yet took no rating action.[901] Moody's only downgraded at a later stage. Evidence has shown that the leading CRAs are reluctant to downgrade borrowers and debt instruments when the repercussions of their decisions can be devastating to the financial markets.[902] If their initial credit ratings do not always give satisfaction, the ongoing monitoring of their credit ratings gives rise to even more alarming concerns. The situation is best explained by market over-reliance on leading CRAs and the systemic importance of credit ratings. When leading CRAs downgrade, there are direct effects on the financial markets. Especially Moody's – as the number one in the credit rating industry – could not afford to downgrade Greek bonds even though it was not actually fully confident of the ability of the country to repay its debt.

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897 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 162.

898 *See* CARRIGAN, *Greece May Have Rating Lowered to Junk, Moody's Says*.

899 THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 (emphasizing that credit rating downgrades of Greece to junk status occurred just as officials were about to unveil a support plan).

900 CARRIGAN, *Greece May Have Rating Lowered to Junk, Moody's Says* (reporting that, in May 2010, Moody's was conducting a review of the Greek debt, but had not downgraded Greece).

901 *See further id.*

902 *See, e.g.,* CLARK, *Euro falls as Spain suffers rating downgrade* (reporting that on May 28, 2010, Fitch cut its sovereign rating for Spain by a single notch from triple-A to double-A+); *see also* CARRIGAN, *Greece May Have Rating Lowered to Junk, Moody's Says.*

After the flagrant rating flaws related to the recent financial debacles, market reliance on credit ratings would be expected to diminish. Thehe subprime mortgage crisis in particular could have marked a transition given that the leading CRAs went beyond any limits in terms of rating inaccuracies. However, the Greek debt crisis highlights that market participants still depend on their credit ratings. Even though the subprime mortgage crisis shed light on the poor rating performance of the leading CRAs, market over-reliance on credit ratings seems to persist in the financial markets. Interest rates significantly increased immediately after the credit rating downgrades.[903] There was a direct link between Greek cost of capital and the rating of its bonds. Further, when the European Central Bank (ECB) accepted junk bonds as collateral, the financial markets reacted negatively, perceiving this decision as a bad signal in the first place.[904]

Accordingly, in most of the recent financial crises criticism has been raised about the fact that CRAs can harm the financial markets as a whole by the mere fact of massively downgrading debt issues. As a response to rating scandals, regulators have focused on providing an oversight of the credit rating industry in order to enhance CRAs' performance. Financial regulatory reforms in the aftermath of the subprime mortgage crisis have recognized the need to address conflicts of interest in the credit rating industry. Lawmakers and regulators believe that agency reforms will help create more adequate incentives in the credit rating industry. However, in the short term, the recent regulatory overhaul will not be able to solve the problems of market over-reliance on the leading CRAs and the systemic effects of credit rating downgrades.

II. Financial Stability and Systemic Risk

"As investors began to perceive that defaults could spread beyond mortgages, the systematic risk premiums began to rise across all debt instruments, resulting in a fall in debt prices across the board. Systematically falling debt prices led to further increases in perceived systematic risk and further rises in systematic risk premiums in a cycle that brought us to the 2008 financial crisis."[905]

The stability of the financial system can be jeopardized by systemic risk. Systemic risk refers to the phenomenon whereby the misconduct of certain

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903 Standard & Poor's and Fitch downgraded Greek bonds at the height of the Greek debt crisis, thereby causing the turmoil to escalate.

904 KENNEDY & TOTARO, *ECB Comes to Greece's Aid by Waving Collateral Rules.*

905 MURPHY, *An Analysis of the Financial Crisis of 2008: Causes and Solutions*, at 13.

market participants is able to cause the collapse of the financial system as a whole.[906] Systemic risk is the risk that an entire system or market collapses – as opposed to one entity within that system.[907] If systemic linkages exist, a trigger event can cause a chain of bad economic consequences.[908] As a result, financial shocks can potentially lead to substantial, adverse effects on the real economy, for instance by causing a reduction in productive investment.[909] Regulators are responsible for ensuring the safety and soundness of the financial system and financial stability is one of the main objectives.[910] The financial system encourages economic growth, and economic growth is advanced by financial stability.

Regulators should focus on reducing systemic risk in the financial system. With respect to competition, particular attention has been paid to the "too big to fail" problem. The failure of system-relevant institutions disrupts the financial system. Regulators have to solve this problem because they cannot keep dealing with financial institutions that could bring down the economy by failing.[911]

Moreover, systemic risk is not only a question of financial institutions that are "too big to fail" but can also result from the failure of financial instruments that are linked to the financial system. In a market-based system, debt instruments are supposed to spread risk in the system.[912] A number of financial theorists plead for the diversification of credit risk. However, their theories fail to work if correlations are high. There is indeed the danger of underestimating correlations. With respect to complex financial instruments, not only are firm-specific risk characteristics to be taken into account, but also correlations between assets.[913]

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906 FINMA, *Finanzmarktkrise und Finanzmarktaufsicht*, at 69.

907 SCOTT, *Addressing the Conditions Leading to "Systemic Risk" on a Global Basis*.

908 SCHWARCZ, *Systemic Risk,* at 198.

909 KAMBHU, SCHUERMANN & STIROH, *Hedge Funds, Financial Intermediation, and Systemic Risk*, at 5.

910 WEBER & ARNER, *Toward a New Design for International Financial Regulation,* at 392-393 (discussing financial stability with respect to international financial architecture); *see* ANDERSON, *Regulatory and Supervisory Independence: Is There a Case for Independent Monetary Authorities in Brazil?*, at 267, 294 (discussing a new financial regulation system in Brazil).

911 JOHNSON, *The Quiet Coup,* at 10 (arguing that "too big to fail" is "too big to exist").

912 For instance, CRT instruments are used as a way of spreading credit risk and should be in the hands of market participants that are able to bear the risk, typically risk absorbers.

913 ASHCRAFT & SCHUERMANN, *Understanding the Securitization of Subprime Mortgage Credit*, at 43 (explaining that corporate ratings are largely based on firm-specific risk characteristics; however, complex financial structures such as ABS structures represent claims on cash flows from a portfolio of underlying assets, implying that their credit ratings have to take into account systemic risk).

Further, derivatives cause system-wide problems.[914] Linkages between counterparties can trigger serious systemic problems.[915] If large amounts of credit risk are concentrated in the hands of relatively few derivatives dealers, troubles can quickly infect their counterparties.[916] The use of credit derivatives makes it possible for market participants to multiply their risk exposure.[917] With respect to the subprime mortgage crisis, credit derivatives such as CDS multiplied the effect of defaulting mortgage holders significantly beyond the original notional values, thereby increasing systemic risk.[918]

With respect to the subprime mortgage crisis triggered in 2007, financial institutions were confronted with the fact that asset securitization did not successfully move financial risk outside the financial system. One surprise of the financial crisis was indeed the substantial losses sustained by financial institutions. Even investment banks were excessively exposed to the subprime mortgage market. This was because they failed to spread risk in the financial system, and their CRT instruments were not in the hands of market participants able to bear the credit risks.

In particular with respect to the insurance sector, concern has especially been raised about the "too interconnected to fail" problem.[919] Insurers and reinsurers are subject to systemic risk due to the fact that they conduct much of their business with others.[920] In the aftermath of the subprime mortgage debacle, the big insurance company A.I.G. was the subject of a bailout due to its high exposure to the derivatives market, more precisely the CDS market.[921] As the situation worsened in the subprime mortgage market, CDS buyers called for further collateral on companies selling the insurance – typically A.I.G.[922] The premiums charged on the CDS had not provided sufficient compensation for the higher default rates on mort-

914 *See, e.g.* BUFFET, *Berkshire Annual Report 2002*, at 15 (suggesting – by way of illustrating the systemic dangers embedded in credit derivatives – that they are "financial weapons of mass destruction").

915 *Id.* at 14 (arguing that some counterparties are linked in ways that could cause them to run into problems even because of a single event).

916 *Id.*

917 WHALEN, *The Subprime Crisis, Cause, Effect and Consequences*, at 6 (explaining that – with respect to synthetic CDOs – market participants could sell almost unlimited amounts of CDS without margin requirements or reserves, making the potential to multiply the basis risk used to define a given transaction open-ended).

918 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 17.

919 *See generally* ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 8 (stating that the excessive use of credit derivatives such as CDS has increased the complexity and interconnectedness of financial markets).

920 BUFFET, *Berkshire Annual Report 2002*, at 14.

921 *See* NOCERA, *Propping up a House of Cards.*

922 MURPHY, *An Analysis of the Financial Crisis of 2008: Causes and Solutions,* at 13.

gages.[923] As a consequence, companies such as A.I.G. got into financial difficulties. If A.I.G. collapsed, its counterparties would have sustained significant losses. Therefore, A.I.G.'s bailout was unavoidable given the systemic relevance of the insurance company.

To make matters worse, various other factors are able to exacerbate financial shocks in modern financial markets. All these factors cause procyclicality in modern financial markets. Even small market shocks can lead to contagious failures. In other words, market responses can be disproportionally large compared to the initial shock.[924] When there is a financial contagion following a downward change in asset prices, the shock may be accentuated by factors such as market-to-market accounting, bank capital requirement ratios or solvency constraints.[925] Regulatory requirements homogenize market behavior and have the potential to exacerbate market trends.

Moreover, in modern financial markets, market contagion is able to turn a financial shock into a liquidity crisis of systemic nature. A liquidity crisis emerges when market participants cease providing liquidity to the market, thereby aggravating the price declines.[926] The situation arises when more and more market participants sell, driving prices down.[927] As prices decline further, eventually no buyers step in.[928] Liquidity dries up and market gridlock takes hold.[929]

Therefore, typically in a market-based financial system, the disintermediation of financial activities implies the likelihood of an abrupt shift from ample liquidity to liquidity shortage.[930] Liquidity can suddenly vanish.[931] Liquidity is an elusive, slippery concept that even financial market experts have trouble to define and fully understand.

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923 *Id.*

924 CIFUENTES, FERRUCCI & SHIN, *Liquidity risk and contagion,* at 7.

925 *See id.* (stating that the combination of market-to-market accounting and solvency constraints has the potential to exacerbate market shocks); *see also* ALEXANDER ET AL., *Crisis Management, Burden Sharing and Solidarity Mechanisms in the EU,* at 12 (stating that the major weakness of bank capital requirement regulations embedded in the Basel II Accord was their procyclicality. In an upturn, bank assets would appear safe and attract a lower capital charge; yet in a downturn, bank assets would appear riskier and attract a higher capital charge, thereby exacerbating a market shock).

926 HENDRICKS, KAMBHU & MOSSER, *Systemic Risk and the Financial System,* at 9.

927 *Id.*

928 *Id.*

929 *Id.*

930 CLERC, *A Primer on the Subprime Crisis*, at 4 (explaining this phenomenon by the prevailing uncertainty in the financial system).

931 *See, e.g.,* PERSAUD, *Liquidity Black Holes, And Why Modern Financial Regulation in Developed Countries is making Short-Term Capital Flows to Developing Countries Even More Volatile,* at 4 (defining episodes where liquidity suddenly disappears as "liquidity black holes").

It is worth mentioning that financial crises often cause problems to correlate.[932] Even previously uncorrelated assets may become correlated when market contagion takes place.[933] In fact, investors who share similar assets try to sell the same assets at the same time, thereby making volatility rise further.[934] Volatility spills over to other financial instruments, leading to a rise in correlations.[935] Under such circumstances, previous risk models immediately become erroneous with respect to their assessment of correlations. New risk measurements prompt investors to sell even further.

In addition, leading CRAs can play a crucial role in enabling and exacerbating financial crises. In the modern world, CRAs pose a systemic risk.[936] Credit ratings have spillover effects when market participants react to rating announcements so sharply that credit rating downgrades are able to trigger a financial crisis. Accordingly, the purpose of this part of the study is to analyze one of the factors that can trigger a systematic failure: massive credit rating downgrades by leading CRAs. The source of the problem arises out of the homogenizations of financial information and market behavior.[937] Credit rating announcements have a direct impact on financial markets. Leading CRAs may significantly contribute to determining asset prices, resulting in the repricing of credit risk in the event of a downgrade. Such a situation may trigger further sales of assets leading to further asset depreciation leading to further sales.

§ 12. System-Relevance of Credit Ratings

Credit ratings are system-relevant if two criteria are fulfilled. The first depends on the importance of the CRA that issues the credit ratings. If the issuing CRA has enough market power, its credit ratings are likely to have a massive impact on the financial markets. Above all, the presence of a rating oligopoly makes rating announcements very powerful especially if the three leading CRAs – even coincidentally – coordinate their rating practices. The second criterion is the intensity of market reliance on credit ratings. Especially since the 1970s rating-based regulations have artificially increased reliance on credit ratings. Further, behavioral reliance has increased over

932 BUFFET, *Berkshire Annual Report 2002*, at 14.
933 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 6.
934 *Id.*
935 *Id.*
936 *See* SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 3.
937 *See, e.g.,* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 19 (explaining the homogenization of reactions to credit rating downgrades in the subprime mortgage market).

the last decades and plays a significant role in modern financial markets. The combination of regulatory and behavioral reliance has driven to market over-dependence on credit ratings. In sum, the leading CRAs benefit from qualified market reliance on their credit ratings.

I. Credit Rating Oligopoly

"Three is no crowd."[938]

The question arises as to whether CRAs are in fact driven by private market forces. Regulatory concern has been raised about the lack of competition in the credit rating industry. The three leading CRAs – Moody's, Standard & Poor's and Fitch – have repeatedly been accused of abusing their market power. They are allegedly able to mislead investors that rely on their credit ratings. The dominance of the rating market by the three leading CRAs may have detrimental effects on the proper functioning of competitive forces in the credit rating industry.[939] One specific issue is related to the potentially devastating effects of credit rating downgrades by the leading CRAs.

In this part, attention is first paid to describing concentration in the credit rating industry. Market shares are almost exclusively divided among the three leading CRAs. Second, competition is reduced by high barriers to entering the credit rating industry. The underlying reasons preventing new entrants from gaining market share to the detriment of the three leading CRAs are primarily derived from historical, natural and regulatory barriers to entry.[940] Third, as a consequence Moody's, Standard & Poor's and Fitch are well-established in the credit rating industry.[941] Their strong position in the financial markets results in market power they can use to protect their interests.

1. High Concentration in the Credit Rating Industry

The credit rating industry is without doubt a heavily concentrated industry. As regards market structure, the credit rating industry is a 5 to 6 billion US dollar market with Moody's, Standard & Poor's and Fitch controlling more

938 THE ECONOMIST, *Three is No Crowd, Regulators need a new approach to an entrenched industry,* at 15.

939 *See supra* Part 2, Chapter 5.

940 HILL, *Regulating the Rating Agencies*, at 84, 91.

941 *See, e.g.,* FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 471.

than 90 percent.[942] Moody's and Standard & Poor's control over 80% of the credit rating market so that some talk about a duopoly of these two CRAs.[943] The third leading CRA, Fitch, is also very significant in the sense the three are commonly referred to an oligopoly.[944] Overall, there are approximately a hundred and fifty other smaller CRAs, which are regional or sectoral.[945] In any case, the three leading CRAs are the only relevant CRAs from the perspective of the international financial architecture. The three leading CRAs issue 98 percent of the total credit ratings and collect approximately 90 percent of the total rating revenue.[946]

2. Barriers to Entering the Credit Rating Industry

Barriers to entering the credit rating industry can undermine competition.[947] From a structural perspective, barriers to entry are the primary cause of the high concentration in the credit rating industry. Moreover, they reinforce the leading CRAs' market power. The presence of barriers to entry leads – in any case – to less vigorous competition than in a situation with fewer barriers and more players.[948] Potential competitors are able to exercise competitive pressure only if they are in a position to enter the credit rating

942 *Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform* (statement of SEAN J. EGAN, Managing Director, Egan-Jones Ratings), at 42.

943 *See EU Commission Staff Working Document, Accompanying the Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, Impact Assessment*, at 9 (stating that Moody's and Standard & Poor's have a combined market share in excess of 80 percent, and Fitch has approximately 14 percent). *See generally* US Credit Rating Agency Reform Act of 2006, Sec. 2(5) (stating that the two largest CRAs – Moody's and Standard & Poor's – serve the vast majority of the market); *see, e.g., Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 8.

944 *See* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 10 (referring to Moody's and Standard & Poor's as the two largest CRAs and to Fitch as the third one – a modest sized firm); *see also* BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies* (stating that Moody's, Standard & Poor's & Fitch are colloquially known as "The Big Three").

945 *See, e.g.,* ESTRELLA ET AL., *Credit Ratings and Complementary Sources of Credit Quality Information*, at 14; *see also* SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 1 (stating that there are approximately hundred CRAs); *see further EU Commission Staff Working Document, Impact Assessment, Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) N°1060/2009 on Credit Rating Agencies*, at 7, 38 (stating that approximately fifty regional CRAs are established in the EU).

946 SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 3.

947 *See supra* Part 2, Chapter 4(II)(3)(a) (defining barriers to entering the credit rating industry and explaining that the regulatory barrier to entry should be removed to enhance competition among CRAs).

948 HILL, *Regulating the Rating Agencies*, at 63.

market. Therefore, a key feature of a competitive market structure consists of keeping barriers to entry as low as possible.

CRAs face historical, natural, institutional and regulatory barriers to entry.[949] The historical barrier to entry results from trust based on the reputational capital that the leading CRAs have built up over many years.[950] Issuers tend to hire CRAs that are widely recognized among investors; new entrants – i.e. potential competitors – cannot present historic track records.[951] The natural barrier to entry is derived from the fact that the rating market may not be able to accommodate many general-purpose CRAs.[952] The presence of economies of scale suggests that the credit rating industry may necessarily be dominated by few leading CRAs.[953]

The regulatory barrier to entry is created by regulators and does not exist "per se".[954] Rating-based regulations raise a regulatory barrier to entry.[955] In particular, the regulatory recognition of CRAs can potentially act as a barrier to entry for new market participants, i.e. potential competitors.[956] Hence the certification process reduces competition in the credit rating industry by limiting potential entrants.[957]

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949 *Id.* at 84, 91.

950 FLOOD, *Rating, Dating, and the Informal Regulation and the Formal Ordering of Financial Transactions: Securitisations and Credit Rating Agencies*, at 160.

951 BLAUROCK, *Verantwortlichkeit von Ratingagenturen – Steuerung durch Privat- oder Aufsichtsrecht?*, at 607.

952 HILL, *Regulating the Rating Agencies*, at 62 (adding that pre-NRSRO history provides some support for this argument).

953 SCHWARCZ, *Private Ordering of Public Markets: The Rating Agency Paradox,* at 12. Economies of scale exist if only large scale entries are possible or if potential competitors suffer disadvantages when they try to conduct small scale entries).

954 *See, e.g.,* WHITE, *Financial Regulation and the Current Crisis: A Guide for the Antitrust Community,* at 30.

955 PINTO, *Control and Responsibility of Credit Rating Agencies in the United States*, at 9 (stating that the NRSRO status reduces competition in the credit rating industry by limiting new entrants, i.e. potential competitors); CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 9; FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38; WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations*, at 6.

956 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 38; *but see* IOSCO, *Report on the Activities of Credit Rating Agencies,* at 9 *and* IOSCO, *Report of the Task Force on the Subprime Crisis, Final Report*, at 27 (noting that the nature of the CRA market makes it difficult for new entrants to succeed regardless of any regulatory barriers to entry; moreover, regulatory recognition criteria are based on how extensively credit ratings are used by market participants, i.e. the reputation of CRAs in the market; in addition, market participants prefer to use credit ratings that regulators also use, implying that the cycle of discrimination is perpetual).

957 PINTO, *Control and Responsibility of Credit Rating Agencies in the United States*, at 9 (referring to the NRSRO status in the US).

The combination of historical with regulatory barriers to entry has resulted in the widespread dominance of the leading CRAs.[958] As a consequence, eliminating the regulatory dependence on credit ratings is the best way to foster a competitive environment in the credit rating industry. If rating-based regulations are withdrawn, barriers to entry will probably not be fully eliminated but will at least be reduced significantly.

3. Collective Market Power of the Leading Credit Rating Agencies

High concentration in the credit rating industry and high barriers to entry resulted in the strong market dominance of the three leading CRAs – Moody's, Standard & Poor's and Fitch. Indeed, the Big Three enjoy a certain privilege since market participants have little alternative to their credit ratings. Over the past decades, although rating scandals have repeatedly tarnished their reputation, the Big Three continue to flourish in the financial markets.[959] They have long dominated the credit rating market and continue to do so despite their failure to predict the subprime mortgage crisis.[960] The strong market power of the three leading CRAs significantly contributes to the lack of competition in the market for information.[961] Leading CRAs dominate the credit rating market and – to some extent – even the market for information in a broader sense.

Further, the fact that issuers and investors prefer to choose CRAs that enjoy the most market recognition reinforces the market power of the three leading CRAs. Concern has especially been raised about the issuer-pays business model. The issuer-pays business model is heavily criticized because it creates conflicts of interest in the rating process.[962] In this regard, the issuer-pays business model jeopardizes the independence of the CRAs. Moreover, as regards the market power of the Big Three there is another reason to be skeptical of the issuer-pays business model. Under the issuer-pays business model issuers prefer to hire CRAs that enjoy the greatest market reliance.[963] This means that CRAs that have the greatest market shares will automatically tend to be selected by issuers. Issuers are only willing to pay for credit ratings if the hired CRAs enjoy sufficient market

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958 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 173.

959 *See, e.g.,* GILLEN, *In Ratings Agencies, Investors Still Trust*.

960 BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies.*

961 *See supra* Part 2, Chapter 5.

962 *See, e.g.,* MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 669.

963 IOSCO, *Report on the Activities of Credit Rating Agencies, at 9; IOSCO, Report of the Task Force on the Subprime Crisis, Final Report*, at 27.

recognition. This phenomenon contributes to strengthening the rating oligopoly even when the leading CRAs do not allocate more resources to the rating process. The more a specific CRA gains market share and obtains market reliance, the more issuers are interested in getting their debt instruments being rated by the targeted CRA. Therefore, leading CRAs tend to attract even more market power and be decreasingly subject to competitive pressures.

II. Market Over-Dependence on the Leading Credit Rating Agencies

"The stability and functioning of financial markets should not depend on the opinions of a small number of agencies."[964]

Over the past decades credit ratings have been increasingly used in the financial markets. On the one hand, regulators – especially since the 1970s – are partly responsible for this phenomenon. They have incorporated credit ratings into several types of financial market regulations. On the other hand, market participants have increasingly used credit ratings regardless of any regulatory mandates. Behavioral reliance has added to regulatory reliance.[965] The combination of regulatory and behavioral reliance on credit ratings has attributed a system-wide importance to CRAs. Accordingly, the credit ratings issued by the leading CRAs are deeply anchored in the financial markets.

1. Regulatory Reliance on Credit Ratings

Regulators are important users of credit ratings. They have created rating-based regulations, thereby forcing market participants to rely on credit ratings. Regulators also use credit ratings on their own behalf. For instance, central banks may rely on credit ratings when deciding which securities to accept as collateral.

a. Rating-Based Regulations

There are several mandates to use credit ratings in financial market regulations. Two types of regulatory intervention have system-wide impacts on the financial markets.

964 DE LAROSIÈRE Report, at 19.
965 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 10.

First, risk-sensitive measures of regulatory capital increase the importance of certified CRAs if their credit ratings are widely used to attribute the various risk weights to assets in the financial markets. The Basel II framework encouraged global implementation of risk-sensitive bank capital requirements, and the Basel III framework continues to do so. The use of external credit ratings in order determine the appropriate risk weights is described under the Standardized Approach of Basel II and III.[966] The system-relevance of this method is derived from the use of credit ratings and its global acceptance. The fact that regulatory-prescribed risk models were widely adopted contributed to homogenizing market participants behavior.[967] Before the subprime mortgage crisis, banks were able to report relatively high risk-weighted capital ratios.[968] Basically, banks could benefit from risk-sensitive capital requirements. They were holding triple-A-rated assets on their balance sheets. The contrast between the risky activities that banks were increasingly associated with and the increasingly healthy ratio of their regulatory capital was striking.[969] As long as bank assets were highly rated, banks could extend their balance sheets and enjoy high leverage ratios with the consent of regulators.[970] However, troubles became visible along with massive credit rating downgrades in July 2007. In the subprime mortgage crisis triple-A-rated assets were downgraded to junk status in an extremely short space of time. This phenomenon had negative impacts on the capital ratios of banks using credit ratings to define the risk weights of their assets. Bank capital ratios deteriorated instantly after the downgrades so that affected banks had to raise new capital or dispose of assets.[971] Therefore, the use of credit ratings in bank capital market regulations exacerbates market trends if widely adopted by regulators and market participants. In this respect, a significant improvement of the Basel III reform measures is the idea of countercyclical capital buffers to mitigate the procyclical effects of the risk-weighted capital requirements.[972]

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966 BCBS, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework (Basel II),* para. 50.

967 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 20.

968 *Id.* (arguing that at the end of 2006, the ratio of regulatory capital to risk-weighted assets was 13 percent in the US, 12.9 percent in the UK, 12.2 percent in Germany, 10.7 percent in Italy – significantly above the 8 percent minimum).

969 *Id.*

970 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 60 (recognizing that the Basel II framework allowed banks to build up excessive leverage while still reporting strong risk-based capital ratios).

971 DE LAROSIÈRE Report, at 12 ("Once [CRAs] started to revise their credit ratings for CDOs downwards, banks were required to adjust their risk-weighted capital requirements upwards. Once again, already highly leveraged, and faced with increasing difficulties in raising equity, a range of financial institutions hastened to dispose of assets, putting further pressure on asset prices").

972 BCBS, *Consultative Document, Countercyclical Capital Buffer Proposal*, at 1.

Second, investment limitations imposed on charter-constrained investors can – under certain regulations – depend on credit ratings.[973] Financial market regulations using credit ratings to design permitted investments have essentially been developed in the US for the pension funds and insurance sectors. Highly regulated entities are subject to portfolio restrictions in view of investor protection.[974] As a consequence, market participants may be forced to sell their holdings for regulatory reasons.[975]

Such rating-based regulations can have unintended and counterproductive effects. At any rate, they contribute to increasing the importance attributed to the credit ratings of certified CRAs.[976] Especially massive credit downgrades may have negative impacts on the financial markets. Before the subprime mortgage crisis, charter-constrained investors were allowed to buy mortgage-related securities as long as they were rated investment grade by the certified CRAs. As a direct consequence of the massive credit rating downgrades in July 2007, charter-constrained investors were forced to sell the assets downgraded to a level below the investment grade.[977] They had to sell at the worst moment since the repricing of credit risk implied a repricing of asset prices at lower levels. Moreover, the fact that market participants were homogeneously selling dropped asset prices even further.[978] Therefore, regulations forcing market participants to rely on credit ratings cause exacerbated market reactions to credit rating downgrades. The purpose of investor protection was not achieved when highly regulated market participants had to sell at the worst time.

The two aforementioned examples highlight the serious repercussions of rating-based regulations on the behavior of market participants. When designing financial market regulations, regulators should take into account the unintended effects of their regulatory activities. A macroprudential approach to financial market regulations is required in order to assess the side effects of the regulatory frameworks.[979]

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973 THE JOINT FORUM, *Stocktaking on the use of credit ratings*, at 7.

974 *See further id.* at 8 (explaining that, for instance in Italy, credit ratings are required by regulation only when securities are sold to non-professional investors; in this regard, regulatory intervention aims at protecting unsophisticated investors).

975 CASEY & PARTNOY, *Downgrade the Ratings Agencies.*

976 ABDELAL, *Capital Rules, The Construction of Global Finance*, at 171 (stating that the dangers of using credit ratings in regulations to limit investors' exposure to risky securities became clear very quickly).

977 CASEY & PARTNOY, *Downgrade the Ratings Agencies* (arguing that – due to investment restrictions requiring so many funds to hold highly rated assets – a credit rating downgrade can set off a financial collapse by forcing investors to sell).

978 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 25.

979 SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 3.

b. Collateral Policy of Central Banks

Regulators can also use credit ratings for their own purposes. More particularly, the use of credit ratings by central banks plays a crucial role in modern financial markets and partly contributes to over-reliance on credit ratings.[980] Central banks have, to a considerable extent, incorporated credit ratings into their lending rules in order to determine eligible collateral for loans. In other words, certified CRAs play a crucial role in helping central banks decide what assets can be used as a guarantee for central bank loans.

Central banks' collateral rules gain prominence in times of crisis. Central banks extend facilities in a liquidity crisis. During a financial crisis, central banks extensively intervene as providers of liquidity since financial institutions do no longer adequately perform this function. Generally, central banks agree to lend money if borrowers provide investment-grade securities as a guarantee. Credit ratings are typically used in central bank policies due to their convenience. Although CRAs proved to be unreliable in the subprime mortgage market, central banks continued to use credit ratings to determine eligible collateral at the height of the financial crisis.[981]

In the US, the Fed's 1 trillion US dollar TALF plan – a colossal program to encourage lending – mandated that only securities rated by at least two major NRSROs were eligible for aid.[982] Borrowers could only use triple-A rated assets as collateral.[983] In other words regulatory reliance on credit ratings still persisted in the aftermath of the subprime mortgage crisis. Critics questioned the use of credit ratings in the Fed's collateral rules, yet central banks seemed to have difficulty finding a practical alternative.[984]

In Europe, the ECB experienced the downside of using credit ratings to determine eligible collateral with respect to the Greek rescue package. The ECB took steps to accept below-investment-grade bonds as collateral for ECB loans, which was not welcomed by the financial markets.[985] Investors interpreted this decision as a bad signal. They believed that the situation had deteriorated to such a considerable extent that the ECB was willing to accept junk bonds as collateral.

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980 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 3.

981 THE WALL STREET JOURNAL, *The Big Barofsky, Someone in Washington is Standing up for Taxpayers* (quoting NEIL BAROFSKY, Special Inspector General, Troubled Asset Relief Program (TARP)).

982 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*.

983 CASEY & PARTNOY, *Downgrade the Ratings Agencies.*

984 *See, e.g.,* THE WALL STREET JOURNAL, *The Big Barofsky, Someone in Washington is Standing up for Taxpayers* (quoting NEIL BAROFSKY, Special Inspector General, TARP).

985 KENNEDY & TOTARO, *ECB Comes to Greece's Aid by Waving Collateral Rules.*

It is worth mentioning how central banks address global liquidity squeeze in times of crisis. They mainly intervene in financial markets through market operations. Above all, they lend money to banks and lower interest rates to increase money supply as part of their ordinary operations. In addition, they also use quantitative easing and qualitative easing when their conventional monetary policies are insufficient to address liquidity problems. Quantitative easing refers to a massive provision of liquidity, for instance by outright purchases of securities or other financial instruments. Qualitative easing refers to the acceptance of securities of lower quality in view of extending facilities even further. This includes central banks' policy to accept below-investment-grades bonds as collateral.[986] In this respect, market participants may consider that the ECB implemented qualitative easing when it accepted junk bonds as collateral.

Nevertheless, another interpretation is more likely to explain the new trends in the financial markets: central banks no longer want to depend on certified CRAs. The trend toward decreasing reliance on credit ratings has been initiated. In this regard, the decision of the ECB to accept below-investment-grade bonds not only amounts to qualitative easing but also reflects the fact that central banks are willing to cease relying excessively on credit ratings in their collateral policies.[987] It is indeed better that central banks reach their own credit judgements on the financial instruments they accept as collateral.[988]

2. Behavioral Reliance on Credit Ratings

Apart from the regulatory use of credit ratings, financial markets have incorporated credit ratings into many investment decisions. Over-reliance on credit ratings probably derives from decades of regulatory dependence on credit ratings, yet it has become a more widespread, behavioral phenomenon.[989] Credit ratings have become hard-wired into the financial infrastructure because of their importance not only in regulations but also in private contracts.[990] This results in mechanistic reliance on credit ratings by market participants.[991]

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986 *See id.*(stating that the ECB joined the international rescue of Greece by accepting the country's debt as collateral for a central bank loan regardless of its credit rating).

987 THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 (reporting that while deciding what asset constitutes eligible collateral, the ECB will no longer be strictly guided by leading CRAs' credit ratings).

988 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 3.

989 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis*, at 10.

990 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 151.

991 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 1-2.

a. "Rating Triggers" in Contracting

Many private agreements include "rating triggers", under which a credit rating downgrade below a specified level has contractual effects.[992] There are two main types of "rating triggers". First, companies may have "rating triggers" in their financing documents.[993] In this case, investors will be able to take action against such companies if their debt ratings fall below a specified level.[994] Potential action may include acceleration of debt, calling a technical default or raising the debt's interest rate.[995] These types of "rating triggers" can appear for instance in the form of OTC swap agreements including rating-based termination provisions.[996] Investors tend to include these types of "rating triggers" in debt covenants with a view to mitigating counterparty risk. If their counterparty is downgraded, they are interested in relinquishing their engagements. Their objective is to act before the company's failure. They trust credit ratings as an early signal of a deteriorating financial situation. However, the problem posed by these "rating triggers" is derived from the homogenous behavior of market participants in the aftermath of a rating announcement. Market participants will suddenly move away from the company. As a consequence, a credit rating downgrade will deteriorate the financial situation of the company, which may cause a further downgrade, which may cause a further deterioration.[997] This, in turn, may eventually drive the company into bankruptcy. Therefore, if market reliance on credit ratings is excessive, credit rating downgrades may easily trigger downward financial spirals.[998]

Second, companies may be subject to internal "rating triggers". Their internal investment restrictions or policies may force them to hold securities above a specified rating grade.[999] If the securities in their portfolios are downgraded below the prescribed line, charter-constrained companies have to sell the downgraded securities. Investors tend to include these types of "rating triggers" if they are concerned about how money managers deal with their funds. They cannot control every investment decision, yet they can internally impose investment restrictions on money managers. However,

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992 *Id.*

993 HILL, *Regulating the Rating Agencies*, at 67.

994 *Id.* at 67-68.

995 ROUTIER, *De nouvelles pistes pour la gouvernance?,* at 611ss; HILL, *Regulating the Rating Agencies,* at 68; *see also* MOLONEY, *EC Securities Regulation,* at 690.

996 *Assessing the Current Oversight and Operation of Credit Rating Agencies: Hearing Before the Senate Committee on Banking, Housing and Urban Affairs* (statement of GLENN L. REYNOLDS, Chief Executive Officer, CreditSights), at 38.

997 HILL, *Regulating the Rating Agencies*, at 68.

998 *Id*.

999 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 7.

such types of "rating triggers" may have unintended effects. They may force investment funds to liquidate assets at the worst possible time.[1000] A credit rating downgrade by a leading CRA causes asset prices to fall. If funds are required to sell assets, asset prices will fall further. Market participants have a tendency to sell homogeneously after a downgrade due to their reliance on the credit ratings of the few leading CRAs. The market suddenly becomes illiquid. Therefore, "rating triggers" may potentially have devastating effects on financial markets.

Overall, "rating triggers" are usually not publicly disclosed since they are private agreements. Therefore, it is challenging to assess what impact credit rating downgrades have on financial markets. It is also difficult to determine to what extent market reactions to credit rating downgrades can be attributed to "rating triggers". What is certain is that if the existence of a "rating trigger" is not publicly known, financial crises can be more sudden and unexpected.[1001] "Rating triggers" are sharply criticized for their cascading effects.[1002] Following Enron's bankruptcy, voices have been heard to the effect that CRAs should take into account how a company can survive a credit rating downgrade prior to taking their decision to downgrade.[1003] Because of the presence of "rating triggers", leading CRAs may become more reluctant to downgrade and hence partly lose independent judgment.

b. Rating-Dependent "Collateral Triggers" in Contracting

Market participants may require their counterparty to post more or less collateral depending on the credit rating of the borrower or of the purchased debt instrument. For instance, they may request sellers of CDS to post more collateral in order to mitigate counterparty risk.[1004] When engaging in financial transactions, market participants may require collateral only to the extent that they are concerned about counterparty risk. Further, "downgrade triggers" may contractually require the downgraded counterparty to post more collateral.[1005] In fact, the market did not require collateral when buy-

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1000 *See further* CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 24 (giving another reason why money market funds sell their holdings when they are downgraded: in order to retain their triple-A credit ratings, money market funds are restricted from investing in low-rated securities).

1001 THE ECONOMIST, *Exclusion zone, Regulators Promise a Belated Review of the Ratings Oligopoly*, at 65-66.

1002 LYNCH, *Deeply and Persistently Conflicted: Credit Rating Agencies in the Current Regulatory Environment*, at 246.

1003 REASON, *Not Trigger Happy.*

1004 QUINN, *The Failure of Private Ordering and the Financial Crisis of* 2008, at 585.

1005 BCBS, *Consultative Document, International Framework for Liquidity Risk Measurement, Standards and Monitoring,* at 15 (discussing how financial institutions can mitigate liquidity risk with respect to these "downgrade triggers").

ing CDS from triple-A-rated insurance companies such as A.I.G. The market considered triple-A rated companies to be creditworthy, thereby making collateral requirements unnecessary. In this sense, A.I.G.'s high credit rating became the only security against counterparty risk.[1006] In the case of A.I.G., collateral calls were triggered by the reduction in the fair value of the underlying CDOs and the credit rating downgrades of A.I.G.[1007] Therefore, the use of credit ratings to assess counterparty risk causes instability in the financial system.

Further, creditors may require investment-grade securities as collateral. Credit ratings play a role in determining the quality of the posted collateral. Borrowers may have to post more or less collateral of a certain quality. If the quality of the posted collateral decreases, for instance when CRAs downgrade the collateral in question, borrowers may have to post additional collateral as guarantees. In distress times, borrowers are generally required to tie up more capital or other assets as collateral.

In the A.I.G. case, the aforementioned elements simultaneously played a role in aggravating the insurance company's financial troubles at the height of the financial crisis. Before the subprime mortgage debacle, A.I.G. could sell CDS – i.e. credit protection – to investors without collateral or margin requirements by reason of its high credit rating.[1008] As the subprime mortgage collapsed, A.I.G. became subject to the downside effects of "collateral triggers".[1009] When A.I.G.'s CDS positions were downgraded by the leading CRAs, CDS buyers could ask for collateral because the value of A.I.G.'s assets had dropped significantly. Moreover, A.I.G. was about to be dramatically downgraded, which would have enhanced counterparty risk from the point of view of CDS buyers. If A.I.G. had been downgraded to a level below the investment grade, A.I.G.'s swap counterparties would have asked for more collateral because of the insurance company's declining creditworthiness. A.I.G.'s bailout was necessary to avoid this chain of events driving the insurance company into a death spiral. Moreover, A.I.G. was "too interconnected to fail" and its failure would have produced a "domino effect", thereby endangering other financial institutions.[1010] A bailout of

1006 QUINN, *The Failure of Private Ordering and the Financial Crisis of 2008*, at 585.

1007 CORKERY, *Joe Cassano's Testimony: AIG CDS Worked Just Fine* (quoting JOE CASSANO).

1008 In addition, before the subprime mortgage crisis A.I.G. could be highly leveraged given that CDS markets were not regulated and simultaneously enjoyed a triple-A rating from leading CRAs. As a consequence, A.I.G. was highly exposed to the subprime mortgage market.

1009 NOCERA, *Propping up a House of Cards* (quoting SEAMUS P. MCMAHON, banking expert, Booz & Company).

1010 *Id.* (quoting SEAMUS P. MCMAHON, banking expert, Booz & Company).

A.I.G. – being a systemically relevant insurance company – was actually a bailout of its trading partners.[1011]

§ 13. Homogenous Market Reactions to Credit Rating Downgrades

Due to the over-reliance on a concentrated credit rating industry market, participants tend to react homogeneously to rating announcements. This homogenization of market behavior is especially acute in the face of extreme events. Massive credit downgrades often occur as a cause or as an immediate trigger of financial turmoil.

First, market participants tend to rely on credit ratings as a homogenous source of financial information. Various factors have homogenized the market for credit information: CRAs have become a preferred source of credit information as opposed to other gatekeepers. The high concentration in the credit rating industry gives a privilege to information stemming from the leading CRAs as compared with smaller CRAs. The three leading CRAs issue a significant percentage of the totality of the credit ratings.[1012] The issuer-pays business model incentivizes the leading CRAs to attribute investment-grade credit ratings to most debt instruments. Under a issuer-pays business model, information is further made easily available to a wide range of investors.

Second, the very fact that a credit rating downgrade has occurred not only reflects information but is autonomous information.[1013] Even when no additional information about the present financial situation of the company is conveyed, investors will react to the rating announcement.[1014] Many market participants react to credit rating downgrades not because they think that the downgrades convey new information, but because they know that the financial markets will react negatively to them.

Third, as a consequence, homogenous information and the signaling effects of credit rating downgrades tend to homogenize market behavior. Market participants pay attention to rating announcements even when they are skeptical of the function of CRAs as information intermediaries. Market participants are – to some extent – forced to adapt their investment strate-

1011 *Id.*

1012 SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 3 (arguing that the three leading CRAs issue 98 percent of all credit ratings).

1013 HILL, *Regulating the Rating Agencies*, at 68.

1014 *Id.*

gies to rating changes. These findings illustrate the prevailing market over-reliance on leading CRAs.

I. Homogenization of Information in the Financial Markets

1. Amount of Available Information and Selection of Relevant Information

"We have all had the sensation of drowning in a sea of information – the challenge we face is to learn to swim in that sea, rather than drown in it."[1015]

There is no doubt that information is very powerful in modern financial markets. We most definitely live in the Information Age.[1016] The well-functioning of financial markets depends on the collection and the diffusion of an optimal amount of information. Market participants access different sources of information and take investment decisions accordingly. To a certain extent they may even be overwhelmed by the amount of information at their disposal.[1017] Since the modern world is surrounded by an unprecedented amount of information, the most successful market participants are those who can capture and select valuable information, or manage and process information, or organize and synthesize information, or diffuse information and reach targeted people, or keep the information to themselves and act on the basis of what is useful.

With respect to the credit rating industry, CRAs are important producers of financial market information.[1018] As information intermediaries, their role has significantly evolved since their inception. First, their main task – at the beginning of the twentieth century – was to collect a sufficient amount of information. Gathering information was the most important issue in the fi-

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1015 LYMAN & VARIAN, *How Big is the Information Explosion?*.

1016 BIRCHLER & BÜTLER, *Information Economics,* at 1 (quoting HAL R. VARIAN). To some extent, we may even have reached the Over-Information Age.

1017 *See generally* FOLEY, *New tools can help tame an ocean of data* (statement of PAUL SAFFO, Institute for the Future) (stating, however, that information overload is not a function of the volume of information; rather, it's a gap between the volume of information and the tools we have to turn that information into useful knowledge); *see also* WEBER, *Kassandra oder Wissensbroker – Dilemma im "Global Village"*, at 407; *see also* CASSAD, *Confirmation Bias,* at 162 ("Humans are bombarded with information […] and cannot possibly take the time to carefully process each piece of information to form an unbiased conclusion"); *see also* HILL, *Why Did Anyone Listen to the Rating Agencies after Enron?*, at 287-288 (quoting BETTINA J. CASSAD).

1018 BIRCHLER & BÜTLER, *Information Economics*, at 105.

nancial markets then as it was not easy to obtain relevant information. If CRAs were created to provide investors with information, today access to information is no longer the most challenging issue. Rather, new problems are faced in modern financial markets due to the quantity of information at the disposal of market participants. CRAs are used to screen valuable information and distill the complexity of the financial world into simple rankings;[1019] in selecting, analyzing and summarizing information CRAs play their most crucial role in the modern world.

2. Credit Ratings of the Leading Credit Rating Agencies as a Homogenizing Factor

"It is noteworthy that while structured finance initially offered the potential of tailored and diverse solutions, the rating process [...] developed in the name of transparency and standardization [...] is an important force of homogenization in the selection and valuation of portfolios."[1020]

The credit ratings of the leading CRAs tend to homogenize the financial information that market participants use to take their decisions despite the complexity of the modern world. Ideally, the market for financial information reflects a wide range of perspectives. In particular, the credit rating market is competitive if it is characterized by the presence of various CRAs issuing a great variety of credit ratings. Financial markets should reflect a diversity of opinions that enable market participants to trade according to their individual perceptions.[1021] However, concern has been raised about the homogenization of financial information in the credit rating industry. This problem arises out of the wide diffusion of credit ratings issued by a heavily concentrated industry. Three factors contribute to this phenomenon:

(i) First, credit ratings represent a privileged source of financial information. There are many sources of financial information other than credit ratings in the financial markets. For instance, financial analysts are, under certain circumstances, in direct competition with CRAs as providers of financial information.[1022] Nevertheless, credit ratings enjoy a specific status among the

1019 COFFEE JR., *Gatekeepers: The Professions and Corporate Governance*, at 283.

1020 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 18.

1021 In this regard, financial markets exist because market participants interpret uncertainty in many different ways. According to this view, investors end up having different preferences. *See* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 4 (stating that to some extent investors behave differently due to their access to different financial information).

1022 Above all, sophisticated investors have their own financial analysts that undertake research on their behalf.

investing community. CRAs take advantage of their favored status as opposed to other information providers.

Above all, CRAs often have access to information that other market participants such as gatekeepers and investors do not have. Especially under the issuer-pays business model, CRAs obtain relevant information that other market participants do not possess. If CRAs are hired by issuers, issuers provide them with valuable information. However, the fact that the US Dodd-Frank Act of 2010 has eliminated CRAs' exemption from SEC Regulation FD will change the situation.[1023] At any rate, CRAs can only obtain the information that issuers are willing to give, as can especially be observed in structured finance. Only enhanced disclosure requirements can force issuers to inform the public better.

Broadly speaking, the lack of transparency in the financial markets may increase the importance credit ratings when investors have no alternatives to assess the value of debt instruments. In this sense, information asymmetry can explain the emergence of systemic crises.[1024] This was the case in the subprime mortgage crisis when investors realized that the credit ratings went wrong, and that they were left with no other independent means of valuing the complex securities they were buying.[1025]

(ii) Second, a too concentrated credit rating industry enjoying excessive market reliance can lead to a homogenization of opinions in the financial markets. Due to rating-based regulations, certified CRAs are privileged compared to non-certified CRAs. Moreover, the leading CRAs have advantages over smaller CRAs. Market recognition makes sure that the most powerful CRAs easily reach investors through their credit rating announcements. The situation results in market over-reliance on the leading CRAs – namely Moody's, Standard & Poor's and Fitch. Such a concentrated credit rating industry provides an increasingly homogenized source of information to market participants.

(iii) Third, a factor that tends to homogenize information even more is derived from the public availability of credit ratings. The wide and rapid diffusion of credit ratings implies that financial information reaches a wide

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1023 US Dodd-Frank Act of 2010, Sec. 939B; SEC, Removal from Regulation FD of the Exemption for Credit Rating Agencies (implementing the US Dodd-Frank Act of 2010). SEC Regulation FD privileged CRAs as opposed to other gatekeepers. The effects of the removal of the CRAs' exemption from SEC Regulation FD are still uncertain.

1024 KUHNER, *Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Systemic Risk*, at 5.

1025 *See* FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37-38; *see also* IOSCO, *Report of the Task Force on the Subprime Crisis*, at 23.

range of market participants at the same time.[1026] Broad rating disclosures contribute to homogenizing financial information. Under the issuer-pays business model, credit ratings are typically made publicly available.[1027] This differs to the investor-pays business model where supposedly only the subscribers have access to the credit ratings.[1028] Apart from that, there were also regulatory requirements to publicly disclose credit ratings in prospectuses or regulatory filings.[1029] These requirements significantly enhanced the availability and importance of credit ratings.

II. Signaling Effects of Credit Rating Downgrades

In modern financial markets, rating announcements do not only reflect available information but also convey autonomous information to market participants. For instance, the very fact of a credit rating downgrade has an effect in the financial markets.[1030] Even where no additional information about the present financial situation of the company is conveyed, investors will react to the rating announcement.[1031] Disclosing information sends a signal to the financial markets. Investors interpret a credit rating downgrade as a negative signal of the company's creditworthiness; even if they do not rely on credit ratings, they pay attention to the downgrade because they consider that other market participants may react negatively to the downgrade. Investors will react to the credit rating downgrade independently of any additional information reflected in the credit ratings. As a result, a credit rating downgrade will automatically worsen the company's financial situation.[1032]

The financial markets have assimilated the fact that the leading CRAs are slow to downgrade. Credit rating downgrades are typically disclosed when it is too late. Moreover, belated rating action amplifies the effects of credit rating downgrades since an extremely negative signal is sent out. Market participants tend to interpret downgrades as revealing the default of bor-

1026 The mere fact that rumors circulate may cause disruption to financial markets. Consequently, it is not surprising that credit rating downgrades have tremendous impact on financial markets when they rapidly reach a wide range of investors.

1027 ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?* (mentioning the public availability of credit ratings as an advantage of the issuer-pays business model as opposed to the investor-pays business model).

1028 FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 473 (also referring to investor-paid ratings as undisclosed or confidential ratings).

1029 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 9.

1030 HILL, *Regulating the Rating Agencies*, at 68.

1031 *Id.*

1032 *Id.*

rowers or debt instruments, especially as regards downgrades to a level below the investment grade.

In fact, leading CRAs have acquired a reputation for downgrading big companies only a few days before those companies filed for bankruptcy. Some famous examples are WorldCom, Enron and Lehman Brothers.[1033] Market participants have heavily criticized the leading CRAs because their downgrades were not timely. They have also reproached the leading CRAs for precipitating the collapse of distressed companies because of the devastating effects of credit rating downgrades in financial markets. The important lesson is that the financial markets have – in the aftermath of these big bankruptcies – learned that credit rating downgrades by the leading CRAs only occur at a late stage. As a consequence, common interpretation of a credit rating downgrade in the financial markets is that it is too late to rescue the company. If the leading CRAs believe that a distressed company may return to financial health, they would refrain from downgrading the company in the first place.[1034]

III. Homogenization of Market Behavior

"Because so many funds are required to hold highly rated assets, a downgrade can set off a financial collapse by forcing investors to sell."[1035]

Leading CRAs contribute to the phenomenon of homogenous market behavior to a great extent. The danger is that due to over-reliance on credit ratings, market behavior is homogenized so that a confidence crisis in credit ratings or massive credit rating downgrades may totally destabilize the financial markets. Rating changes do literally move markets, particularly if a certified CRA downgrades a security from above investment grade to below investment grade, thereby prompting a sell-off by institutional investors.[1036] With respect to the subprime mortgage crisis, there is evidence that the ho-

1033 SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 3 (reporting that firms such as the energy company Enron and the telecommunications company WorldCom retained their high credit ratings until a few days prior to filing for bankruptcy).

1034 *See* HILL, *Regulating the Rating Agencies*, at 69 (explaining that leading CRAs first prefer to think that the financial deterioration is only short term. If they do not downgrade, they hope that the company will return to financial health. If they downgrade they might accelerate the distressed company's bankruptcy. Therefore, the leading CRAs tend to downgrade only if the bankruptcy is imminent).

1035 CASEY & PARTNOY, *Downgrade the Ratings Agencies* (referring to rating-based regulations as a cause of the homogenization of market behavior).

1036 ABDELAL, CAPITAL RULES, THE CONSTRUCTION OF GLOBAL FINANCE, at 171.

mogenization of market participants' behavior worsened the 2007-2009 financial crisis.[1037]

In fact, credit rating downgrades by leading CRAs have extremely negative impacts on a company's access to capital markets. When a company is downgraded by a system-relevant CRA it will be unable to attract the credit needed to finance its operations, and may even collapse; therefore, leading CRAs are extremely reluctant to downgrade a company's debt.[1038]

Given the comprehensive effects of credit rating downgrades, not only market participants that directly rely on credit ratings will keep up to date with rating announcements. Even other market participants have an interest in paying close attention to credit ratings. Many market participants react to credit rating downgrades not because they think the downgrades convey new information, but because they know that the financial markets will react negatively to those downgrades. Expectations about the actions of other market participants imply strong market reactions. Investment decisions by market participants may thus be influenced by the market reactions of other market participants.[1039] If there is a tendency toward strong market reliance on credit ratings, even market participants that do not personally trust CRAs have no other choice but to care about rating announcements. Therefore, these issues tend to homogenize market behavior even more.

1037 *See generally* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 20 (arguing that regulatory-prescribed risk models – such as those embedded in the EU Capital Requirement Directive of 2006 – contributed to homogenizing market participants' behavior, thereby significantly worsening the financial crisis). It is worth mentioning that regulatory-prescribed risk models tended to require financial institutions to use credit ratings in order to measure their capital ratios. These regulations significantly increased reliance on credit ratings by regulated market participants.

1038 MACEY, *Efficient Capital Markets, Corporate Disclosure, and Enron*, at 406.

1039 *See further* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 19 (stating that – in the market for securitized assets – many investors do similar things at the same time with the same set of assets as a result of the homogenizing effect of credit ratings).

§ 14. Consequences

I. Procyclicality

"Once credit rating agencies started to revise their credit ratings for CDOs downwards, banks were required to adjust their risk-weighted capital requirements upwards."[1040]

Procyclicality refers to the exacerbation of market trends in financial markets. Credit ratings are often criticized as being procyclical, i.e. they are able to aggravate the negative consequences of a financial crisis.[1041] In fact, CRAs tend to upgrade borrowers and debt instruments in good times and to downgrade them in bad times.[1042] In this regard, over-reliance on credit ratings may highten the impact of rating announcements by leading CRAs. According to the FSB, credit rating downgrades can amplify procyclicality and cause systemic disruption through "cliff effects" such as experienced in the 2007-2009 financial crisis.[1043]

All episodes of financial distress of a systemic nature – with potentially significant implications for the real economy – have at their root an expansion of risk taking and an overextension of bank balance sheets in good times.[1044] With respect to the recent financial crisis, two structural factors in particular contributed to enhancing procyclicality in the financial markets.

First, modern bank capital requirement regulations lead market participants to use procyclical risk models.[1045] On the global scale, Basel II has had procyclical tendencies, reinforcing market trends rather than counterbalancing them.[1046] The most frequent criticism of the Basel II framework is that it

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1040 DE LAROSIÈRE Report, at 12.

1041 *See, e.g.,* SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 3; *see also* BLUNDELL-WIGNALL & ATKINSON, *Thinking Beyond Basel III: Necessary Solutions for Capital and Liquidity* at 5-6.

1042 JACKSON, *The Role of Credit Rating Agencies in the Establishment of Capital Standards for Financial Institutions in a Global Economy,* at 317 (relating to good times); *see also* SYLLA, *An Historical Primer on the Business of Credit Rating*, at 29 (relating to good times); BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 16 (relating to good times); KUHNER, *Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Systemic Risk,* at 4, 20 (relating to bad times).

1043 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 1.

1044 BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 12; *see also* BCBS, *Consultative Document, Countercyclical Capital Buffer Proposal*, at 2.

1045 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 25.

1046 *See, e.g.,* WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 9.

increases procyclicality with negative consequences for firm's financing since credit is scarce in economic slowdown phases.[1047] The regulatory use of credit ratings to measure bank capital ratios accentuated the recent financial crisis. Broadly speaking, it is inevitable that a regulatory system based on risk-sensivity has – to some extent – procyclical effects.[1048] Nevertheless, macroprudential measures can be taken to mitigate the procyclical effects of risk-based capital requirements. For instance, Basel III reform measures include a proposal for countercyclical capital buffers.[1049]

Second, another aspect that contributes to enhancing procyclicality in the financial markets is fair value accounting. It is a widespread view that international standards on fair value accounting exacerbated the subprime mortgage crisis.[1050] Mark-to-market valuation of assets meant that when credit prices fell sharply and asset values were written down, banks were forced to sell assets and pull back credit lines to raise capital, which lowered asset prices further, causing more write downs and more capital losses. Fair value accounting enhanced the procyclical behavior of financial institutions, forcing them to sell assets at the worst moment and accelerating the falls in prices.

With respect to credit ratings, procyclicality refers to rating inflation in good times and massive credit rating downgrades when financial turmoil is triggered.

On the one hand, CRAs are often accused of inflating credit ratings in an upturn. CRAs tend to upgrade borrowers and debt instruments while the economy is rising.[1051] In the years preceding the subprime mortgage crisis, the tendency of leading CRAs to inflate credit ratings was actually primarily caused by conflicts of interest in the credit rating industry.[1052] The is-

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1047 LAMY, *The Treatment of Credit Risk in the Basel Accord and Financial Stability,* at 162.

1048 DE LAROSIÈRE Report, at 17.

1049 BCBS, *Consultative Document, Countercyclical Capital Buffer Proposal*, at 1.

1050 *See, e.g.,* DE LAROSIÈRE Report, at 17 (stating that the procyclical effects of the regulatory framework stem in particular from the interaction of risk-sensitive capital requirements and the application of the mark-to-market principle in distressed market conditions); *but see* MUNDSTOCK, *The Trouble with FASB, and also* MUNDSTOCK, *GAAP Did Their Job During the Economic Meltdown.*

1051 Jackson, *The Role of Credit Rating Agencies in the Establishment of Capital Standards for Financial Institutions in a Global Economy,* at 317; *see also* SYLLA, *An Historical Primer on the Business of Credit Rating*, at 29; BORIO, *The Financial Turmoil of 2007-?: A Preliminary Assessment and Some Policy Considerations,* at 16.

1052 *Credit Rating Agencies and the Financial Crisis: Hearing Before the House Committee on Oversight and Government Reform*, at 161 (quoting RAYMOND W. MCDANIEL, Chairman and Chief Executive Officer, Moody's) ("Now, it was a slippery slope, what happened in 2004 and 2005 with respect to subordinated tranches is that our competition, Fitch and S&P, went nuts. Everything was investment grade. It didn't really matter. We tried to alert the market. We said

suer-pays business model has widely been recognized as creating wrong incentives in the credit rating industry. The leading CRAs did not compete on rating quality but rather on lowering their standards in order to gain market share.

On the other hand, CRAs tend to downgrade their credit ratings in bad times.[1053] Massive downgrades can even trigger a financial crisis. In July 2007, the fact that the housing bubble burst could partly be attributed to sudden and massive credit rating downgrades by the leading CRAs. To a great extent, the wide and rapid distribution of information relating to rating changes contributes to homogenizing market reactions. Credit rating downgrades have devastating effects when the financial markets receive the same signal simultaneously. Further, rating-based regulations typically have procyclical effects that exacerbate market reactions to rating announcements.[1054] The subprime mortgage debacle illustrated this trend. Due to the use of credit ratings in bank capital requirements, once certified CRAs started to revise their credit ratings for mortgage-related assets downwards, banks were required to adjust their risk-weighted capital requirements upwards.[1055]

In addition, rating-based investment restrictions force a wide range of investors to follow rating changes, and because so many funds are required to hold highly rated assets, a credit rating downgrade can rapidly trigger financial collapse by forcing those investors to sell.[1056]

At any rate, financial market regulations have a role to play as far as procyclicality is concerned.[1057] Macroprudential regulations should reduce the potential procyclicality and systemic risk stemming from CRAs.[1058] Financial market regulations are ill-designed if they encourage risk taking at the height of the boom and discourage lending when the boom bursts.[1059] Regulatory intervention should break the cycle instead of accentuating market

we're not rating it. This stuff isn't investment grade. No one cared because the machine just kept going").

1053 KUHNER, *Financial Rating Agencies: Are They Credible? – Insights into the Reporting Incentives of Rating Agencies in Times of Enhanced Systemic Risk,* at 4, 20.

1054 *See, e.g.,* DE LAROSIÈRE Report, at 17 (referring to credit ratings used in risk-sensitive bank capital requirements).

1055 DE LAROSIÈRE Report, at 12.

1056 CASEY & PARTNOY, *Downgrade the Ratings Agencies.*

1057 BCBS, *Consultative Document, Countercyclical Capital Buffer Proposal*, at 2 (discussing a countercyclical capital buffer proposal that is a consistent instrument in the suite of macroprudential tools at the disposal of national regulators).

1058 SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 3.

1059 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 25 (discussing the negative effects of placing procyclical risk models at the heart of capital adequacy requirements).

trends. Indeed, regulatory frameworks should give the right incentives to financial institutions with a view to accumulating the necessary reserves during economic booms in order to be able to overcome financial crises.[1060] Procyclical risk models enhance systemic risk by generating systemic selling or buying instead of tempering market behavior.[1061] Procyclicality reinforces market instability hence regulators should focus on financial stability and macroprudential regulations.

II. Spillover Effects of Credit Rating Downgrades by the Leading Credit Rating Agencies

"We were preparing for a rainstorm and it was a tsunami."[1062]

Leading CRAs' announcements may have cascading effects. Credit rating downgrades can imply a downward spiral of asset prices that may – in turn – imply further credit rating downgrades.[1063] Broadly speaking, even a relatively small event can trigger a rush for liquidity and produce a market gridlock in very large markets.[1064] Downgraded companies that initially have a liquidity problem may end up having a solvency problem due to the spillover effects caused by the credit rating downgrades.[1065]

With respect to credit rating downgrades, their system-wide effects depend on two components. First, the CRA that announces the downgrade has to have a certain importance in the financial markets: it has to be a system-relevant CRA. The three leading CRAs typically fulfill this criterion. Second, system-wide effects can arise only if the credit rating downgrade attains a certain magnitude. The importance of the downgraded borrower or debt instrument plays a crucial role.

1060 ALTMAN & SAUNDERS, *An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings,* at 5 (explaining that a well-designed regulatory system should see capital rising during periods of high profitability and falling during recessions as unexpected losses are written off against capital); WEBER & DARBELLAY, *The regulatory use of credit ratings in bank capital requirement regulations,* at 9 (referring to the procyclicality concern with respect to bank capital requirement regulations).

1061 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 25.

1062 JONES, *When Junk was Gold* (quoting BRIAN CLARKSON, former President and Chief Operating Officer, Moody's) (suggesting that CRAs were aware of the market repercussions of their credit rating downgrades; however, they did not expect such a devastating turmoil).

1063 BAKER & MANSI, *Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors,* at 1388 (stating that the magnitude of downgrading effects increases dramatically as the credit rating moves from a level above the investment grade to a level below the investment grade).

1064 ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 2.

1065 DE LAROSIÈRE Report, at 12.

With respect to the subprime mortgage crisis, massive credit downgrades by the leading CRAs in July 2007 immediately triggered the financial meltdown.[1066] The leading CRAs caused a downward spiral of asset price falls, thereby exacerbating market trends. The valuation of securitized assets was closely linked to credit ratings. As leading CRAs downgraded massively, asset prices fell sharply. More sellers in the subprime mortgage market implied further falls in asset prices that implied further credit rating downgrades. And downgrades depressed prices even further.

Even financial institutions such as investment banks were surprised by the fact that the entire market collapsed so suddenly. In particular, not only the lowest securitized tranches were downgraded but also the "safest" tranches. Asset securitization failed to spread credit risk among investors even though it was its driving purpose. Credit risk ended up being concentrated in the hands of financial institutions and market participants that were unable to bear the risk. Moreover, diversification theories failed to account for the high correlations between different CDO tranches.[1067] Investors had mistakenly sought a diversification of their portfolios by buying different securitized assets. Yet securitization could not meet the purpose of diversification when the market collapsed as a whole. Furthermore, the collapse of the subprime mortgage market had been widely considered to be a low-probability event. Under such circumstances, financial markets were predisposed to underestimate the likelihood of dramatic change.[1068] These shortcomings were partly attributable to the excessive reliance on credit ratings in structured finance. Market participants were dependent on credit ratings as a quasi unique source of information. And given that the credit rating market was in the hands of a concentrated industry, market participants were relying on a very homogenous source of information.

In addition, the credit ratings related to insurers can play a systemic role in the financial markets. Concern has been raised about counterparty risk and its systemic repercussions. The declining creditworthiness of insurers poses systemic risk. For instance, if A.I.G. is downgraded, the assets that it has insured must be downgraded as well. This market contagion accentuates the effects of credit rating downgrades. Another example derives from the linkage between the credit rating of a monoline insurer and the credit rating of

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1066 *See* HILL, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?,* at 1 (stating that the leading CRAs downgraded a significant portion of the subprime mortgage-related securities that were rated too generously in the years preceding the financial meltdown).

1067 *See generally* ASHCRAFT & SCHUERMANN*, Understanding the Securitization of Subprime Mortgage Credit,* at 43. Default was viewed as borrower-specific; however, correlated losses should have been taken into account.

1068 LEWIS, *The Big Short, Inside the Doomsday Machine,* at 108.

the structured finance products it has wrapped.[1069] If leading CRAs downgrade a monoline insurer, there are further declines in the interconnected markets. From a systemic point of view, the issue is that when a monoline insurer is downgraded, all the debt instruments it has insured must be downgraded too.[1070] It is worth mentioning that in US municipal bond insurance industry, monoline insurers provide – with their own capital at risk – a certification of creditworthiness in the sense of additional credibility over a credit rating; however, their economic rationale in structured finance is less clear than their role in US municipal finance.[1071] Nevertheless, since the mid-1990s, an increasing share of monoline insurers' business has come from guarantees of structured finance assets.[1072]

III. Leading Credit Rating Agencies' Reluctance to Downgrade

"A rating agency can't ignore how markets will react to the ratings change itself, and not just to the information that the rating change is intended to reflect."[1073]

CRAs lack independence in their decisions to downgrade. The system-relevance of the leading CRAs partly explains why leading CRAs are slow to downgrade. Sudden and massive credit rating downgrades jeopardize the efforts made by central banks, regulators and governments to contain a financial crisis. As a result, leading CRAs tend to be slow to downgrade.

Indeed, a macroeconomic explanation of belated actions to downgrade results from the system-wide effects of rating announcements. Downgrades cause financial deteriorations that may drive a distressed company or a distressed country into bankruptcy. Under such circumstances, CRAs cannot predict financial shocks. They are automatically slow to downgrade, because they downgrade only when it is too late. Market over-reliance on credit ratings prevents the leading CRAs from being timely in their credit

1069 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 6. Monoline insurers are financial guarantors.

1070 CROUHY, JARROW & TURNBULL, *The Subprime Credit Crisis of 07*, at 15.

1071 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 25.

1072 *Id.* (also reporting that, at any rate, public finance still account for a majority of monoline insurers' books).

1073 HILL, *Regulating the Rating Agencies*, at 70.

rating downgrades.[1074] The last CRAs that downgrade borrowers and debt instruments are typically the system-relevant CRAs.[1075]

Upon downgrading, leading CRAs effectively restrict companies' and countries' access to capital markets. Credit rating downgrades have direct impacts on the financial markets due to market reactions to rating announcements. With respect to corporate ratings, leading CRAs are reluctant to downgrade companies if the targeted company cannot survive a credit rating downgrade. For instance, the leading CRAs had been aware of problems at Enron a relatively long time prior to downgrading its debt to junk status. Nevertheless, they did not downgrade Enron's debt timely as compared with other smaller CRAs such as Egan-Jones.[1076] Leading CRAs had incentives to believe that the financial deterioration was only short term, and that if they did not downgrade, Enron would return to financial health.[1077] The issue was that a timely downgrade would have automatically driven Enron into bankruptcy even if a climb back up had potentially been possible.[1078]

1. Rating Stability

"From a regulatory perspective, rating stability is desirable to prevent procyclicality effects".[1079]

Leading CRAs are aware that their credit rating downgrades have – under specific circumstances – systemic effects, and they are consequently reluctant to downgrade. They aim to avoid jeopardizing financial stability. Accordingly, they adopt prudent and conservative behavior.[1080] Their tardiness

1074 Historically, credit ratings only provided a guidance for investors. Things got more complicated when market reliance on credit ratings increased significantly and credit ratings acquired a powerful position in the financial markets.

1075 *See further* MORRISSEY, *Disillusioned Advisers Eye Smaller Rating Firms; Interest in Subscriber-Based Raters Grows at the Expense of the Big Three Agencies* (stating that smaller CRAs such as Egan-Jones gain prominence in the financial markets thanks to more timely credit ratings).

1076 *See further* JOHNSON, *An Examination of Rating Agencies' Actions Around the Investment-Grade Boundary*, at 3 (showing empirical evidence that Egan-Jones systemically downgraded companies 21 to 70 days before its competitor Standard & Poor's).

1077 HILL, *Regulating the Rating Agencies*, at 70.

1078 *See id.* at 69 ("On November 8, 2001, Moody's was asked not to downgrade Enron's debt below investment grade because Enron would go bankrupt and markets would be disrupted").

1079 ALTMAN & RIJKEN, *The Effects of Rating Through the Cycle on Rating Stability, Rating Timeliness and Default Prediction Performance*, at 3.

1080 *See further* FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 475 (arguing that rating stability is needed given the use of credit ratings in regulation and contracting).

in downgrading securities reflects this trend. Belated decisions to downgrade are frequent among the leading CRAs.

Technically, rating stability is, for instance, achieved by "through-the-cycle" methodologies and by CRAs' migration policies. First, "through-the-cycle" methodologies are defined as opposed to "point-in-time" perspectives.[1081] CRAs strive to suppress the influence of short-term fluctuations in credit quality.[1082] The rationale is that leading CRAs may also think that the deterioration is only short term, and that if they do not downgrade immediately, the issuer will return to financial health.[1083] CRAs typically prefer to incorporate only changes with long-term implications into their credit ratings.[1084] Second, CRAs' migration policy implies delay and spread over time with respect to the necessary changes.[1085] For instance, Moody's came to the conclusion that investors want rating stability but do not favor aggressive credit ratings.[1086]

Above all, the combination of regulatory and behavioral reliance on credit ratings has prevented the leading CRAs from being accurate. Instead of providing timely information, the leading CRAs are conservative in the sense that they are slow to downgrade. This phenomenon is due to the system-wide effects of credit rating downgrades. Indeed, rating-based regulations imply the need for stability more than timeliness.[1087] As a result, leading CRAs automatically fail to provide an early warning signal of declining creditworthiness.

At any rate, the leading CRAs are aware of the devastating effects of their credit rating downgrades. As a result, they are reluctant to downgrade borrowers and debt instruments. After Enron's bankruptcy, they asserted that prior to downgrading they always have to assess whether the targeted company can survive a credit rating downgrade.[1088]

1081 ALTMAN & RIJKEN, *How Rating Agencies Achieve Rating Stability,* at 2681-2682; FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 475.

1082 ALTMAN & RIJKEN, *How Rating Agencies Achieve Rating Stability,* at 2681.

1083 HILL, *Regulating the Rating Agencies*, at 69 (adding that if the leading CRAs downgrade, the downgraded company may be thrown into bankruptcy even when the deterioration would have only been short term; this happens due to the spillover effects of credit rating downgrades).

1084 BAKER & MANSI, *Assessing Credit Rating Agencies by Bond Issuers and Institutional Investors,* at 1388 (analyzing the results of a survey asking investors and issuers about rating accuracy. The survey found that a majority of investors and issuers prefer up-to-date credit ratings in contradistinction to CRAs which prefer conservative credit ratings).

1085 ALTMAN & RIJKEN, *How Rating Agencies Achieve Rating Stability,* at 2682.

1086 *Id.*

1087 ALTMAN & RIJKEN, *The Effects of Rating Through the Cycle on Rating Stability, Rating Timeliness and Default Prediction Performance*, at 3.

1088 REASON, *Not Trigger Happy.*

The finding is that as soon as CRAs become system-relevant, they no longer have predictive power. This fact is not necessarily derived from conflicts of interest in the credit rating industry but simply from market over-reliance on the leading CRAs. If too many regulators and market participants rely on the same CRAs, credit rating downgrades by these system-relevant CRAs will have spillover effects in the financial markets.

2. "Too Big to Downgrade"

The main reason for the leading CRAs to be reluctant to downgrade may be their systemic relevance. If their credit rating downgrades cause disruptions to the financial markets, CRAs may refrain from downgrading in a timely fashion. They are aware of the devastating impacts their credit rating downgrades can have. Even when there is serious reason to doubt the financial strength of a borrower or a debt instrument, they have to assess the potential effect of a credit rating downgrade on the financial system prior to taking their decision.[1089]

Evidence shows that only smaller CRAs can afford to be more timely in their credit rating downgrades. For instance, smaller CRAs such as Egan-Jones and Rapid Ratings have gained prominence as numerous investors consider them to be more accurate than the leading CRAs.[1090] Egan-Jones downgraded Lehman Brothers about six months before it went bankrupt while the three leading CRAs maintained their high credit ratings until a few days prior to the collapse.[1091] Egan-Jones and its smaller competitors were also more accurate than the three leading CRAs with respect to other companies that experienced financial problems, such as A.I.G.[1092] This trend may be explained by the fact that smaller CRAs – as opposed to systemic-relevant CRAs – can afford timely downgrades; smaller CRAs are never accused of disrupting the financial markets. In other words, the leading CRAs are "too big to downgrade". Therefore, it is not surprising that

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1089 *See id.*

1090 SHORTER & SEITZINGER, *Credit Rating Agencies and Their Regulation*, at 2; MORRISSEY, *Disillusioned Advisers Eye Smaller Rating Firms; Interest in Subscriber-Based Raters Grows at the Expense of the Big Three Agencies*; BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies. See further* Johnson, *An Examination of Rating Agencies' Actions Around the Investment-Grade Boundary*, at 4 (stating that Egan-Jones is smaller and younger than the three leading CRAs (founded 1995)).

1091 BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies.*

1092 JOHNSON, *An Examination of Rating Agencies' Actions Around the Investment-Grade Boundary*, at 3 (showing empirical evidence that Egan-Jones systemically downgraded companies 21 to 70 days before its competitor Standard & Poor's); BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies.*

system-relevant CRAs downgrade borrowers and debt instruments only when it is too late.

Further, the recent Greek debt crisis illustrates the systemic relevance of the leading CRAs. At the height of the Greek debt crisis, Moody's contented itself with conducting a review of Greece.[1093] At the time of the Greek rescue, Moody's did not downgrade Greek bonds.[1094] Moody's was not able to act independently of the repercussions of its credit rating downgrades on the European debt crisis.

In a time of crisis, financial market regulators need to reassure investors in order to prevent the problem from escalating. It does not take much to stir up the financial markets.[1095] The mere threat of downgrading coming from a leading CRA may put financial markets under intense pressure. For this reason, the three leading CRAs may sometimes refrain from downgrading so that they do not jeopardize the stability of the financial markets.

3. "Too Big to Be Downgraded"

The leading CRAs may trigger a financial crisis by downgrading a system-relevant company, the sovereign debt of a country or numerous debt instruments. Indeed, the financial situation of the downgraded company or country may significantly deteriorate as a result of the rating announcement. Moreover, if the leading CRAs massively downgrade debt instruments, such as structured finance ratings, asset price declines may trigger further declines that may result in market contagion.[1096] In this respect, borrowers or debt instruments may be considered "too big to be downgraded".

For instance, the three leading CRAs did not downgrade Enron and Lehman Brothers early enough.[1097] Nevertheless, when they eventually downgraded these big companies a few days prior to bankruptcy they were accused of disrupting the financial markets. Apart from that, the three leading CRAs immediately triggered the 2007-2009 financial crisis by massively downgrading mortgage-related securities in July 2007.[1098] The leading CRAs are

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1093 CARRIGAN, *Greece May Have Rating Lowered to Junk, Moody's Says* (reporting that, in May 2010, Moody's was conducting a review of Greek debt, but had not yet downgraded it).

1094 *Id.*

1095 *See* KRÖGER, *Rampant Skepticism, Aid for Greece Hasn't Stopped Euro's Slide.*

1096 *See further* ALEXANDER ET AL., *Financial Supervision and Crisis Management in the EU*, at 6.

1097 *See* HILL, *Why Did Anyone Listen to the Rating Agencies after Enron?*, at 292 (relating to Enron); *see* BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating Agencies* (relating to Lehman Brothers).

1098 *Wall Street and the Financial Crisis: The Role of Credit Rating Agencies, Hearing Before the Permanent Subcommittee on Investigations of the Senate Committee on Homeland Security and Governmental Affairs* (opening statement of Senator CARL LEVIN), at 4.

accused of having deliberately delayed their decision to downgrade mortgage-related securities even though they already knew that the market was about to slump.[1099] At any rate, the massive credit rating downgrades by the leading CRAs in 2007 did harm the financial markets. For this reason, investors and regulators cannot expect the leading CRAs to be accurate and timely when rating decisions have the potential to create instability in the financial markets and trigger a financial crisis. The reluctance to downgrade is thus closely linked to over-reliance on credit ratings. Such a situation could only change if regulators and market participants moved away from systemically relevant uses of credit ratings.

§ 15. Preliminary Conclusion

Over-reliance on credit ratings results in spillover effects following rating downgrades. For instance, the systemic relevance of the leading CRAs caused adverse consequences in relation to the European debt crisis.

The devastating effects of rating downgrades jeopardize the independence of system-relevant CRAs as financial information providers. Prior to downgrading, CRAs have no choice but to assess the repercussions of a downgrade on the financial markets. Accordingly, the leading CRAs tend to be reluctant to downgrade. This situation is detrimental to the credit rating market because financial information cannot be released freely. In other words, the systemic importance of credit ratings is a source of disruption in the market for financial information.

In order to understand the root of the problem, it is worth describing the factors contributing to the systemic relevance of CRAs. First and foremost, regulatory and behavioral reliance on credit ratings have increased the importance of the leading CRAs. Furthermore, high concentration in the credit rating industry ensures that only a few leading CRAs enjoy significant market power. Last, the public availability of credit ratings allows rating announcements to spread rapidly among market participants. In the aftermath of rating announcements, market behavior tends to be homogenous. Market participants generally react to rating information following the same pattern. This phenomenon is regrettable because financial markets should rather reflect a diversity of opinions and approaches rather than homogenous reactions.

[1099] *See, e.g.,* MATHIS, *Réformons les agences de notation.*

It is therefore not surprising that the ongoing monitoring of credit ratings gives rise to the most significant concerns in the industry. CRAs are not in a position to provide investors with valuable information if they have to consider the effects of their rating actions prior to downgrading. If initial credit ratings are not subject to these issues, the timeliness and the accuracy of rating reviews are seriously affected by the systemic effects of rating announcements.

As a consequence, credit ratings are procyclical and are able to exacerbate a financial crisis. This situation is particularly threatening when regulatory requirements are based on credit ratings. Moreover, the leading CRAs are reluctant to downgrade and do not provide investors with valuable information. For instance, the leading CRAs may be regarded as "too big to downgrade" when they do not act given the systemic repercussions that their downgrades would have on the financial markets.

Finally, more competition in the credit rating industry is expected to improve the current situation. Moving away from regulatory reliance on credit ratings may restore competitive incentives in the credit rating industry. Excessive market power of the leading CRAs should be reduced in proportion to the informational value of their credit ratings. Smaller CRAs and alternatives to credit ratings should be able to compete with the leading CRAs so that the market for information reflects the diversity of opinions in financial markets. The systemic importance of credit ratings would not be an issue if market forces worked properly in the credit rating industry.

PART 5: Trends and Outlook

§ 16. Restoring Competition in the Credit Rating Industry

I. General Approach

This study highlights the fact that a wide range of elements effect on the competitive environment of the credit rating industry. Regulatory intervention is considered to be the most significant catalyst for competition among CRAs. But an analysis of the level of competition among leading CRAs concludes that the credit rating industry is currently characterized by an insufficient level of competition. Restoring competition requires the alignment of incentives. The objective of the US Dodd-Frank Act of 2010 is to remove certified CRAs' quasi-governmental function and to reconsider them as exclusively private-sector entities. Although it does not explicitly state competition as an objective, a core aim of the Act is to affirm that the credit rating market should be a competitive market. Market forces should play their disciplinary role with respect to the leading CRAs. Efforts on the part of legislators to reduce the power of the rating oligopoly could give alternative solutions more of a chance.[1100] The role of the leading CRAs in the financial system will be newly defined pursuant to the implementation of CRA reforms.

Currently market forces do not discipline the leading CRAs.[1101] The presence of a rating oligopoly implies that the three leading CRAs – Moody's, Standard & Poor's and Fitch – have been able to gain and maintain their market power. Furthermore, the lack of competition in the credit rating industry is a result of market over-reliance on credit ratings. Market participants depend on the few CRAs that have succeeded in widely diffusing their credit ratings. Moreover, the leading CRAs cannot issue independent credit ratings since they are paid by the issuers they rate. These conflicts of interest further undermine competition given this lack of independence. Issuers' fees do not incentivize the leading CRAs to rate more accurately but instead encourage them to inflate their credit ratings in order to gain market share.

1100 VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (quoting JULES KROLL).

1101 *See generally supra* Part 2.

As a consequence, CRAs have issued inaccurate credit ratings that have harmed the financial markets. CRAs generally respond to criticism by downplaying the importance of the credit ratings they issue, pretending that they are merely opinions.[1102] Yet CRAs will – in the future – be liable for their negligent rating practices.

Now the question arises as to whether regulators and market participants will eventually downplay the importance of credit ratings. Market over-reliance on leading CRAs has to be reduced. In the aftermath of the sub-prime mortgage crisis, a trend has been initiated toward decreasing reliance on credit ratings. Some facts suggest that market sentiment has partly moved away from the leading CRAs.[1103] Nevertheless, regulators and market participants seem to be in a difficult situation as regards finding substitutes for credit ratings. Other findings suggest that the market continues to rely on credit ratings despite the leading CRAs' recent poor performance.[1104] Specialists have to help regulators and market participants eliminate the rating trap.

Restoring competition in the credit rating industry calls for a variety of measures. Overall, the key objective of a competitive credit rating market is to decrease market over-reliance on CRAs. Reducing reliance on credit ratings includes moving away from regulatory and behavioral reliance on the leading CRAs. Some aspects are part of new legislation and have already been described in this academic work, especially in Part 2; some other aspects are treated in Chapter 13, Section II.

First and foremost, the removal of regulatory references to credit ratings is necessary due to the incompatibility of competition and rating-based regulations.[1105] If credit ratings are widely used in financial market regulations, competition among certified CRAs is automatically counterproductive. In fact, rating-based regulations create wrong incentives such as the "race to the bottom" and "rating shopping". The US Dodd-Frank Act of 2010 requires regulators to move away from regulatory reliance on credit ratings.[1106] Regulatory changes should seek to encourage new entrants and

1102 ELLIS, *Different Sides of the Same Story: Investors' and Issuers' views of Rating Agencies,* at 37.

1103 *See, e.g.,* NZZ, *Oberwasser für "Rating-Rebellen", Unternehmen profitieren von der derzeitigen Beliebtheit der "Corporate Bonds",* at 21 (stating that investors increasingly tend to disregard credit ratings and mentioning a trend toward "rating-rebellion").

1104 *See, e.g.,* ZIMMERMANN & HAFNER, *Trotz Kritik kein Verzicht auf Rating-Agenturen, Ungebrochene Nachfrage nach Bonitätsbewertungen in unsicheren Zeiten,* at 26.

1105 *See supra* Part 2, Chapter 4(II).

1106 US Dodd-Frank Act of 2010, Sec. 939-939A.

also smaller CRAs to expand their market share.[1107] Yet implementation of the CRA reform will be a very challenging task. The question arises as to what will happen when rating-based regulations are completely removed from legal and regulatory frameworks. The most appropriate solution would be to replace the certification process for CRAs by mere registration.

Second, a competitive credit rating market requires CRAs to be accountable for their credit ratings. The regulatory structure must impose on CRAs a cost for issuing wrong credit rating. In this regard, the US Dodd-Frank Act of 2010 has established a liability regime for CRAs.[1108] The presence of litigation costs is deemed to encourage CRAs to provide more accurate credit ratings. Litigation following the financial crisis in the US will without doubt bring clarity with respect to the new CRA liability rules. In any case, CRA liability will be limited to cases in which CRAs knowingly or recklessly failed to conduct a reasonable investigation or to obtain reasonable verification of factual elements relied upon by their methodology.[1109] For instance, cases in which synthetic CDOs were involved may have the most chance of success before the courts. In these cases, evidence can most likely be shown that CRAs deliberately inflated their credit ratings.[1110]

It is worth mentioning that competition relates to the existence of reputational constraints. The situation is especially relevant in structured finance ratings. While confronting the opportunity to rate a novel product that they are not able to rate with high quality, CRAs should perceive that waiting to enter the new segment will result in greater profits than entering immediately.[1111] However, evidence has not yet emerged of CRAs waiting to issue credit ratings on novel products pending methodological improvements.[1112] This has not been the case firstly because the leading CRAs may have acted as gatekeepers in the development of the structured finance market.[1113] Secondly, the lack of accountability was particularly stringent in novel segments. To some extent, CRA liability is advanced as the best response to this problem.[1114]

1107 VAN DUYN, *Reform of Rating Agencies Poses Dilemma* (also quoting DANIEL CURRY of the Toronto-based CRA DBRS, who suggests that investors' enhanced interest in looking for other opinions gives to smaller CRAs a chance to sell themselves).

1108 US Dodd-Frank Act of 2010, Sec. 933 and Sec. 939G.

1109 *Id.* Sec. 933(b)(2) (codified as amended at 15 U.S.C. 78u-4(b)(2)(B)).

1110 *See, e.g.,* GRIFFIN & TANG, *Did Subjectivity Play a Role in CDO Credit Ratings?*, at 28-29.

1111 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 175-176.

1112 *Id.* at 176.

1113 *Id.*

1114 *See supra* Part 2, Chapter 4(IV).

Third, Chapter 13, Section II of this study presents a range of measures that can have an effect on the level of competition in the credit rating industry. Investors' own due diligence is a clear objective. Investors should not rely blindly on credit ratings but should be able to assess the risks associated with their investments. Moreover, disclosure requirements enhance transparency and, for instance, affect the level of financial information available to CRAs, other gatekeepers and investors. Further, finding substitutes for credit ratings provides an alternative to rating-based regulations and decreases behavioral reliance on credit ratings as well. Finally, certain regulatory measures may result in decreasing the systemic importance of credit ratings.

From another perspective, Chapter 13, Section III of this study presents the competitive issues with respect to the structural aspects relevant for the credit rating industry. On the one hand, antitrust laws are considered to be a response to market failure. On the other hand, incentive-based regulations can help solve a regulatory failure. These findings show how to incorporate competitive incentives into the legal and regulatory frameworks for CRAs.

Finally, Chapter 14 sets forth a concrete proposal for a new revenue model in the credit rating industry that aims to create appropriate incentives among leading CRAs. The proposal seeks to solve the conflicts of interest problem in the credit rating industry and aims to enhance CRA accountability. The key point proposes moving away from the issuer-pays business model and going back to an investor-pays business model which may well restore the independence of leading CRAs with respect to issuers.

II. Moving Away from Market Over-Reliance on Credit Ratings

The importance of CRAs in the international financial architecture is expected to decrease as soon as the market ceases over-relying on credit ratings. The crucial step to restore competition among leading CRAs consists of moving away from regulatory and behavioral over-reliance on their credit ratings. This endeavor would simultaneously enable market participants to end the rating oligopoly of Moody's, Standard & Poor's and Fitch, and eventually enhance the performance of the leading CRAs. Doing away with over-reliance on the leading CRAs may be a lengthy process. Market over-reliance started with regulatory reliance. Regulatory reliance has driven to

behavioral reliance.[1115] Accordingly, market over-reliance on credit ratings is deeply anchored in the financial system.

This, in turn, ensures that regulators cannot simply move away from credit ratings. A transition period has been initiated especially since the US Dodd-Frank Act of 2010 was adopted. Nevertheless, the system is currently quasi-gridlocked in the sense that although the leading CRAs perform poorly, regulators cannot afford to sanction them. For instance, if regulators – in a worst case scenario – decided to withdraw Moody's regulatory status as a certified CRA, this would cause far-reaching disruption in the financial system.[1116] Once lawmakers have adopted a stringent regulatory and supervisory framework for CRAs, it would regrettably become ineffective if competent regulators were not able to enforce its provisions given the systemic relevance of the leading CRAs. At any rate, the current situation is unsustainable and the market power of CRAs needs to decrease in the future.

1. Incentivizing Investors' Own Due Diligence

Investors' own due diligence plays a key role in combating market over-reliance on credit ratings. With respect to the subprime mortgage crisis, the problem partly arose out of market participants' lack of due diligence.[1117]

Even when credit ratings are available, it is still vital for every market participant to understand the risks and make independent credit judgments.[1118] Credit ratings can be used to guide investment decisions, yet credit ratings should never be considered as a sufficient basis for decision-making.

Above all, rating-based regulations are said to discourage investors from performing their own due diligence.[1119] The removal of rating-based regulations is a key element of the agency reform puzzle.[1120] Moreover, the lack of investors' own due diligence contributed to enhancing behavioral reliance on credit ratings. This, in turn, exacerbated market over-reliance on

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1115 PARTNOY, *Overdependence on Credit Ratings was a Primary Cause of the Crisis,* at 10.

1116 *See further* EU Regulation (EC) No. 1060/2009 of the European Parliament and of the Council on Credit Rating Agencies, preamble (58) (suggesting this hypothesis by stating that competent regulators should have due regard to market stability before taking supervisory measures against certified CRAs that breach their obligations; supervisory measures include the withdrawal of registration or the suspension of the regulatory use of credit ratings).

1117 WEHINGER, *Lessons from the Financial Market Turmoil: Challenges ahead for the Financial Industry and Policy Makers*, at 5.

1118 COUNTERPARTY RISK MANAGEMENT POLICY GROUP III (CRMPG III), *Containing Systemic Risk: The Road to Reform,* at 53.

1119 FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 37-38; *see also* IOSCO, *Report of the Task Force on the Subprime Crisis*, at 39.

1120 *See supra* Part 2, Chapter 4(II).

credit ratings. Further, an aspect key to enabling investors to perform their own due diligence relates to the disclosure of relevant information. Broad disclosure allows investors to conduct their own analyses more easily.[1121] The reputational constraint can only be effective in disciplining CRAs only if investors perform their own due diligence. In a competitive and transparent market for credit ratings, CRAs make money because investors value the ratings' information content.[1122] According to the reputational model, CRAs that inflate ratings to satisfy issuers will – eventually – lose investor confidence.[1123]

More concretely, the necessary changes in risk management are not limited to relatively unsophisticated investors but also include relatively sophisticated risk managers.[1124] Banks are legally not entitled to outsource their risk management to CRAs and they should by no means try to escape from their legal obligations. The subprime mortgage crisis revealed the weaknesses of partly outsourcing risk management to CRAs.[1125]

2. Appropriate Disclosure Requirements of Financial Information

"Warning: this rating was paid for by the issuer of this security."[1126]

The availability of financial information has a direct impact on the competitive environment in the credit rating industry. Lawmakers and regulators should aim to require the optimal level of disclosure.

On the one hand, every CRA should have access to a certain level of financial information regardless of any contractual relationship with borrowers and issuers. It is unfair that issuer-paid CRAs obtain more information from issuers than investor-paid CRAs. Investor-paid CRAs should no longer have to suffer from an informational disadvantage. Moreover, CRAs should

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1121 ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* at 33.

1122 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 155.

1123 *Id.* at 155-156 (adding, however, that even a well-functioning reputation mechanism is unlikely to constrain CRAs from issuing credit ratings on novel financial instruments they do not know how to rate; therefore, financial innovation – i.e., structured finance in particular – deserves specific treatment).

1124 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 11.

1125 *See* IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 2 (stating that financial institutions effectively outsourced their risk management to CRAs).

1126 BALZLI & HORNIG, *Exacerbating the Crisis, The Power of Rating* Agencies (adding that critics of the issuer-pays business model call for full disclosure or would even prefer to see the establishment of a new business model for the leading CRAs).

not have privileged access to information as opposed to other market participants. In the US, the removal of CRAs' exemption from SEC Regulation FD seeks to address this problem.[1127]

On the other hand, market participants are able to sanction CRAs that issue inaccurate credit ratings only if they have access to relevant information.[1128] In this regard, transparency enhances competition in the credit rating industry.[1129] This aspect relates to disclosure in the light of investor protection. For instance, prior to the financial turmoil, investors based their decisions – with respect to complex financial instruments – almost entirely on credit ratings; they did not even ask for more disclosure.[1130] Therefore, excessive reliance on credit ratings contributed to lack of transparency especially in structured finance. The level of information available to investors must be sufficient so that investors are not forced to rely blindly on CRAs.

Appropriate disclosure requirements include measures to enhance transparency in the market for financial information. A key point relates to full disclosure as regards past performance. The reputational view of credit ratings implies that market participants must be in a position to judge CRAs' performances. CRAs should disclose rating track records. A functioning reputation mechanism presumes that market participants are able to engage in ex-post monitoring of credit rating quality.[1131] Investors should be informed about the performance of the rated instruments over time to assess whether or not credit ratings were of high quality.[1132] For instance, the standardization of performance reports would support the monitoring of CRAs.[1133] Disclosure requirements as regards rating performance must be designed in a way that facilitates comparison between CRAs, i.e. between competitors.

Apart from that, disclosing rating methodologies and critical assumptions underlying credit ratings allows investors to check whether credit ratings are accurate.[1134] Moreover, rating scales should enable investors to distinguish between plain vanilla corporate bonds and structured finance pro-

1127 US Dodd-Frank Act of 2010, Sec. 939B; SEC, Removal from Regulation FD of the Exemption for Credit Rating Agencies (implementing the US Dodd-Frank Act of 2010).

1128 CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 3.

1129 *Id.*

1130 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 28.

1131 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, at 114.

1132 *Id.* at 138, 141-142.

1133 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 13.

1134 CINQUEGRANA, *The Reform of the Credit Rating Agencies: A Comparative Perspective,* at 3.

ducts.[1135] If the rating scales are the same, it may easily mislead certain groups of investors, especially unsophisticated investors. Further, for the sake of transparency, it would make sense to compel CRAs to disclose who paid how much for which credit ratings.

In particular, disclosure requirements are a crucial issue in structured finance. Reform initiatives to enhance competition in the credit rating industry seek to address the relative absence of information on complex securities.[1136]

In the past, the problem was that CRAs depended to a great extent on information that the issuers disclosed to them and had to get financial information from issuers in order to be able to rate novel instruments. The leading CRAs used to engage in a dialogue with issuers to gain access to certain non-public information.[1137] Investor-paid CRAs had an information disadvantage as compared with issuer-paid CRAs. Moreover, there was no gatekeeper in structured finance because unsolicited rating was quite impossible in this field.[1138] From a competitive point of view, it is problematic if the issuer-pays model is the only one possible given the lack of publicly available information in structured finance. Nevertheless, the question arises as to how this situation will evolve in the aftermath of the removal of CRAs' exemption from SEC Regulation FD. At any rate, general disclosure requirements should be enhanced – particularly relating to OTC-derivatives. Issuers' ongoing disclosure obligations become crucial to the rating process.[1139] This trend reflects the importance of not excluding investor-paid CRAs and CRAs that seek to provide unsolicited credit ratings. Issuers of structured finance products should disclose relevant information in a format which CRAs and sufficiently sophisticated investors can analyze.[1140]

It is worth mentioning that there is a difference between public offerings and private offerings. Generally, regulators have disclosure requirements for public offerings of structured finance products.[1141] By contrast, in private offerings the degree of disclosure is individually negotiated by investors and originators and issuers because of the contractual basis of the

1135 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 14.
1136 ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* at 33.
1137 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 12.
1138 *See* IOSCO, *The Role of Credit Rating Agencies in Structured Finance Markets*, at 8.
1139 IOSCO, *Report on the Activities of Credit Rating Agencies*, at 12.
1140 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 11.
1141 *Id.* at 7.

transaction.[1142] To create incentives for market participants to trade on exchanges may be the best way to enhance transparency in structured finance markets.[1143] Accordingly, concern has been raised about developing a secondary market trade reporting system in the market for structured finance products.[1144] Such a system would provide buyers and sellers with more information regarding the frequency with which a given security trades and the most recent bid and ask prices.[1145] Such a system could also be designed to capture secondary market structured finance transactions even if the transactions are entirely private.[1146]

Further, the key issue is to enhance transparency and give investors the information that they need to assess risk and calculate where the losses may be.[1147] CRAs should present information in a way that facilitates comparisons of risk within and across classes of different structured finance products.[1148] For instance, users have to know whether the characteristics of underlying assets have changed significantly.[1149] Users should be able to analyze the credit ratings and assess whether or not they should trust CRAs. In this regard, critics suggest that CRAs should regularly disclose to investors the economic assumptions underlying their structured finance ratings, and document the type of scenario which could lead to a severe impairment of a tranche.[1150] Accordingly, a more user-friendly access to CRA structured finance models should be in the hands of market participants.[1151] However, if disclosure requirements are too extensive, issuers will be able to circumvent rating models. Therefore, it is worth mentioning that the main purpose of broader disclosure requirements is to help investors understand the credit ratings, but not to provide issuers with information allowing them to game rating models in order to obtain higher credit ratings.

1142 *Id.*

1143 *See* ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts,* at 13.

1144 IOSCO, *Report of the Task Force on the Subprime Crisis*, at 10.

1145 *Id.*

1146 *Id.*

1147 WHALEN, *No True Sale: Interview with Joseph Mason* (quoting JOSEPH MASON).

1148 CGFS, *Ratings in Structured Finance: What Went Wrong and What Can Be Done to Address Shortcomings*, at 13 (also arguing that "CRAs should document the sensitivity of SF tranche ratings to changes in their central assumptions regarding default rates, recovery rates and correlations").

1149 *Id*.

1150 *Id.* at 14.

1151 *Id.* at 13.

3. Finding Substitutes for Credit Ratings

In the aftermath of the withdrawal of rating-based regulations, the most challenging task of regulators and market participants consists of finding alternatives to the use of credit ratings. Decreasing market over-reliance on credit ratings is automatically associated with finding substitutes for credit ratings. Above all, the withdrawal of rating-based regulations implies that regulators need alternatives to credit ratings in their financial market regulations.

Credit ratings are so deeply anchored in the financial markets that finding substitutes will take time.[1152] The US Dodd-Frank Act of 2010 has merely taking the lead by imposing the removal of regulatory reliance on regulators and market participants; nevertheless, they are free to decide what to replace the use of credit ratings with.

At any rate, it makes sense for regulators and market participants to adopt a variety of solutions rather than homogenous practices. The systemic relevance of credit ratings was partly caused by the homogenization of market behavior as a consequence of regulatory reliance on credit ratings.[1153] The key point is that regulators and market participants will have to find an alternative to credit ratings that best suits their own needs.

The question arises as to what mechanisms could potentially be used as substitutes for credit ratings.[1154] The US Dodd-Frank Act of 2010 simply leaves the door open to market-based measures, which seems to have been the most popular solution among scholars. For instance, critics of rating-based regulations already proposed the use of credit spreads as a substitute for credit ratings a long time before the adoption of the Dodd-Frank Act.[1155]

Moreover, scholars have recently turned to CDS as a viable alternative to credit ratings.[1156] However, some scholars are skeptical of the use of CDS and contend that they could have greater shortcomings than credit ratings;

1152 DARBELLAY & PARTNOY, *Credit Rating Agencies and Regulatory Reform*. *See further* DE LAROSIÈRE Report, at 20 (recognizing the negative effects of rating-based regulations, yet stating that the regulatory use of credit ratings is unavoidable at this stage given the lack of alternatives).

1153 *See supra,* Part 4.

1154 SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets*, at 15.

1155 PARTNOY, *The Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, at 705; ALTMAN & SAUNDERS, *An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings*, at 5 (referring to credit spreads as a commonly used barometer of risk in financial systems and for economic cycles by both the government and banks).

1156 FLANNERY, HOUSTON & PARTNOY, *Credit Default Swap Spreads As Viable Substitutes for Credit Ratings.*

in their opinion, the risk of mispricing credit risk would remain.[1157] At any rate, finding alternatives to credit ratings presents a very challenging agenda for future research.

4. Reducing the Systemic Importance of Credit Ratings

Lawmakers and regulators around the world have acknowledged the major problems arising from the systemic risks posed by credit ratings, yet they have not directly taken regulatory measures to address the problem.[1158] In the EU, policymakers and regulators heavily criticized the leading CRAs' decisions to downgrade Greek bonds at the height of the debt crisis.[1159] To some extent, they were referring to the system-relevance of the three leading CRAs. Major market disruptions are caused by the devastating effects of credit rating downgrades of system-relevant CRAs. Accordingly, the EU suggests that a home-grown CRA should be created in Europe as a counterweight to the US trio.[1160] In this regard, the EU recognizes the necessity of enhancing competition in the credit rating industry in order to decrease the market dominance of the three leading CRAs. The recent market turmoil has highlighted that regulators should increasingly deal with the systemic risks generated by market over-reliance on the leading CRAs.

From a regulatory perspective, the systemic relevance of credit ratings highlights the importance of macroprudential supervision in the credit rating industry.[1161] The 2007-2009 financial crisis has demonstrated that the changing nature of financial markets and systemic risks necessitates broader macroprudential controls and oversight of the financial system.[1162] As macroprudential regulators, the FSB and the new European Systemic Risk Board (ESRB) have broad mandates to strengthen the financial system. Both bodies are designed to operate without legally-binding powers.[1163] Within the scope of their broad mandates they could take into account the systemic risks posed by the use of credit ratings. Both the FSB and ESRB could help national regulators coordinate their approaches to combat the systemic use of credit ratings. Because CRAs have become part of the in-

1157 ROSNER, *Toward an Understanding: NRSRO Failings in Structured Ratings and Discreet Recommendations to Address Agency Conflicts* , at 12.

1158 *See, e.g.,* US Dodd-Frank Act of 2010, Sec. 931(1).

1159 THE ECONOMIST, *The Other Vampires, Pressure Mounts on an Oligopoly*, at 83-84 (emphasizing that credit rating downgrades of Greek bonds to junk status occurred just as officials were about to unveil a support plan).

1160 *Id.*

1161 *See, e.g.,* SY, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, at 8.

1162 FERRAN & ALEXANDER, *Can Soft Law Bodies Be Effective? Soft Systemic Risk Oversight Bodies and the Special Case of the European Systemic Risk Board*, at 3.

1163 *Id.*

ternational financial architecture, it makes sense to incorporate the systemic risks posed by credit ratings into the mandates of the FSB and the ESRB.

Accordingly, the FSB took a step in the right direction when it published its Principles for Reducing Reliance on Credit Ratings in October 2010.[1164] The FSB suggested that systemic reliance on credit ratings has its roots in regulatory and behavioral reliance.[1165] Reducing over-reliance on credit ratings necessarily comes along with moving away from credit ratings in regulations.[1166] Market participants are also required to exercise their own due diligence when making investment decisions.[1167]

Further, it is worth mentioning that several measures potentially taken to combat the systemic use of credit ratings do not directly target CRAs, but have an indirect influence on the use of credit ratings by market participants.

For instance, the most important measure taken by regulators to prevent banks from expanding their balance sheets was the introduction of a leverage ratio. Leading up to the subprime mortgage crisis, the rating-based approach of Basel II allowed banks to build up excessive leverage while still reporting strong risk-based capital ratios.[1168] It is widely recognized that the primary cause was its Standardized Approach, i.e. the regulatory reliance on credit ratings. Therefore, under the Basel III reform measures the BCBS recommends introducing a leverage ratio as a supplement to the risk-weighted ratio.[1169] The introduction of a leverage ratio is likely to be the single most important regulatory reform to combat the causes of the financial crisis.[1170]

Accordingly, Switzerland introduced a leverage ratio during the financial crisis as a supplement to the risk-weighted capital ratio under Basel II.[1171] This action was one of the core measures that Swiss regulators took in the aftermath of the subprime mortgage debacle. The major cause of the regulatory concerns was that the Swiss universal bank UBS was highly leveraged as a result of the implementation of the risk-sensitive approach of

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1164 FSB, *Principles for Reducing Reliance on CRA Ratings,* at 1-7.

1165 *Id*. *See supra* Part 4, Chapter 12(II).

1166 *Id.*, at 1.

1167 *Id.*, at 5-6.

1168 BCBS, *Consultative Document, Strengthening the Resilience of the Banking Sector*, at 60.

1169 *Id.*; BLUNDELL-WIGNALL & ATKINSON, *Thinking Beyond Basel III: Necessary Solutions for Capital and Liquidity* at 9; WELLINK, *The New Framework for Banking Supervision,* at 2. *See also* NOBEL, *Schweizerisches Finanzmarktrecht und internationale Standards,* at 207.

1170 *Id.* at 10.

1171 FINMA, *Finanzmarktkrise und Finanzmarktaufsicht*, at 39; *see* ZAKI, *UBS, Les dessous d'un scandale, Comment l'empire aux trois clés a perdu son pari*, at 187-190; *see also* KAUFMANN & GÖTZE, *Geld- und Währungsordnung,* at 118.

Basel II.[1172] UBS obviously took advantage of the rating-based approach of the Basel II framework.[1173] The high leverage in the years preceding the subprime mortgage crisis partly explains how UBS became so excessively exposed to the US subprime mortgage market. Therefore, the introduction of a leverage ratio was the most efficient measure to take to prevent UBS from expanding its balance sheet.

A further example of regulatory measures indirectly playing a role against the systemic use of credit ratings relates to the trading of individual assets. Collateral and margin requirements in the financing of trading positions contribute to a move away from over-reliance on credit ratings. Instead of contenting themselves with the credit ratings of the leading CRAs, regulators and market participants have to make sure that counterparty risk is properly mitigated through collateral and margin requirements. Such a measure contributes to deterring the over-leveraging of assets in the financial markets.

III. Theoretical Approach to Competition in the Credit Rating Industry

The idea of implementing antitrust laws to the credit rating industry has barely been explored by lawmakers and regulators.[1174] Traditionally, antitrust laws served the key purpose of preventing price fixing. Especially since the 1970s, economics thinking has influenced the interpretation of antitrust policies and broadened their scope.[1175] This study strives to analyze the credit rating industry pursuant to a modern view of antitrust legislation. In this regard, the European view of competition law is of particular interest.

Broadly speaking, there is a need to overhaul antitrust legislation to take into account the evolving structure of the financial system. If antitrust laws created more than a century ago were designed to combat industrial monopolies that could influence prices, in modern financial markets antitrust

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1172 BLUNDELL-WIGNALL & ATKINSON, *Thinking Beyond Basel III: Necessary Solutions for Capital and Liquidity* at 16 (arguing that UBS had a leverage of 64 in 2007, which portrays the Swiss banks as one of the most leveraged banks worldwide in the run-up to the subprime mortgage crisis); *see also* ZAKI, *UBS, Les dessous d'un scandale, Comment l'empire aux trois clés a perdu son pari*, at 187.

1173 It is worth mentioning that UBS had already partly implemented Basel II on a voluntary basis before the Swiss Capital Adequacy Ordinance of 2006 came into force.

1174 *See* PARTNOY, *The Paradox of Credit Ratings,* at 79.

1175 *See further* WHITE, *The Growing Influence of Economics and Economists on Antitrust: An Extended Discussion*, at 21.

laws should serve to reduce systemic risks in the financial system.[1176] A competition framework for CRAs may be established through regulatory intervention.

The key objective relates to the alignment of incentives in the credit rating industry.[1177] It is important to determine the beneficiaries of competition in order to understand how competition laws are designed.[1178] On the one hand, the US approach to antitrust laws focuses on consumers as the main interest group. Economic welfare is the target.[1179] Competition should allow consumers to get the best deal in the sense of the lowest possible price. Big companies are appreciated when they do not charge monopoly prices but produce cheaply due to economies of scale for instance. On the other hand, the EU approach to competition law focuses not only on consumers, but on small companies as well, i.e. disadvantaged competitors. Preventing big companies from abusing their dominant position is an essential pillar of the European competition landscape. Big companies should not be able to drive competitors out of business; for this purpose, competition law can help protect smaller companies. In general, US antitrust laws are currently more permissive than EU competition laws.

1. Antitrust Laws as a Response to Market Failure

Antitrust laws intervene to remedy market failure. If private market forces do not work properly, competition laws are enacted to rectify the situation. However, antitrust lawsuits against CRAs have not gone forward.[1180] Even though the credit rating industry is highly concentrated and not subject to an adequate level of competition, existent antitrust laws seem incapable of providing solutions to restore competition in the credit rating industry.

1176 JOHNSON, *The Quiet Coup,* at 10 (discussing systemic risks with respect to the "too big to fail" problem: "too big to fail" is "too big to exist" in the sense that financial markets cannot tolerate the presence of firms that could bring down the economy if they failed).

1177 *See further* GERBER, *Competition Law and the Institutional Embeddedness of Economics*, at 38 (stating that a key issue relating to the role of economics in competition law involves the control over data). Moreover, CRAs are private-sector entities involved in the market for financial information. Competition laws can play a role as far as controlling the information flow is concerned and making sure that appropriate incentives are created with respect to information gathering and diffusion.

1178 MONTI, *EC Competition Law*, at 23-25.

1179 LUGARD, *Chilling Effects of Antitrust Law, Better Safe than Sorry?*, at 437.

1180 PARTNOY, *The Paradox of Credit Ratings,* at 79; FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 480-482.

Broadly speaking, since the 1970s economists have become significantly involved in antitrust cases.[1181] It is recognized that oligopolistic sellers are implicitly able to coordinate their behavior, charge higher prices and make higher profits.[1182] As a consequence, seller concentration is the structural attribute that is measured the most often and the most easily.[1183] The task of public authorities is to make sure that private companies respect antitrust laws. For instance, if the problem arises from the anticompetitive practices of private entities such as CRAs, the legal system should provide for an efficient enforcement of antitrust laws. Due to the fact that antitrust laws are currently not enforced with respect to the credit rating industry, the question arises as to whether they could play an increasing role in the future.

In the US and the EU, seller concentration plays a central role as a determinant of industry conduct and performance.[1184] This fact is very relevant in the credit rating industry since it is a highly concentrated industry. Accordingly, a new dimension for competition law could potentially be envisaged in order to reduce the likelihood of anticompetitive practices in the credit rating industry.

There are two pillars of competition law that may be taken into account. First, the interdiction of vertical agreements could be extended to cases in which issuers and CRAs excessively interfere with each other. CRAs can be accused of accepting loss of their independence in favor of issuers' fees. As a result, they harm investors by issuing credit ratings that are inflated and misleading. Antitrust laws may force CRAs to preserve their independence. Second, the European model of competition law gives particular weight to the question of the abuse of dominant position. The leading CRAs may misuse their market power and take advantage of their strong position in the financial markets. In this regard, proposals for new antitrust laws could be based on the European approach to competition law since Europe is well-advanced as far as implementing competition law is concerned.

The scope of antitrust enforcement in the credit rating industry is derived from the interpretation that competition law does not refer to price competition alone. Even though antitrust laws traditionally focused on making sure that market participants do not charge monopoly prices, it is now widely recognized that other competitive issues may arise.[1185] Relating to the credit

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1181 WHITE, *The Growing Influence of Economics and Economists on Antitrust: An Extended Discussion*, at 11.

1182 *See further id.* at 14.

1183 *See further id.*

1184 *See id.* at 5.

1185 *See* KAUPER, *Oligopoly: Falicitating Practices and Plus Factors*, at 751-756.

rating industry, competitive issues put emphasis on the quality of credit ratings instead of the lowest price. Competition on prices may – under certain circumstances – be counterproductive in the credit rating industry. For instance, the regulatory use of credit ratings may imply a "race to the bottom" if certified CRAs compete in helping issuers obtain a regulatory privilege at the lowest cost.[1186]

The reasoning behind the very limited scope for antitrust enforcement in the credit rating industry may be that the concentrated market structure results from economies of scale and rating-based regulations, not primarily from CRAs' anticompetitive behavior. As the interpretation of antitrust laws has evolved, emphasis has increasingly been put on the context. The regulatory context plays such a crucial role that lack of competition in the industry cannot solely be purported to the CRAs' market conduct. In an antitrust case it would be extremely difficult to prove that the lack of competition was a result of CRAs' anticompetitive practices.[1187] The two areas where general competition policies can play a role are (i) unsolicited ratings and (ii) notching.[1188] Therefore, little can be expected from antitrust liability in order to reform the credit rating industry; rather, structural change should be initiated by redesigning financial market regulations. As long as credit ratings are used in financial market regulations, competition may not be enhanced successfully in the credit rating industry.

Rating scandals have highlighted the fact that the market for credit ratings suffers from market failures that are probably not self-correcting.[1189] Given the fact that antitrust laws offer a limited response to rating failures, lawmakers should focus on sector-specific regulation.[1190]

2. Revisited Incentive-Based Financial Market Regulations as a Response to Regulatory Failure

The key to a successful overhaul of the credit rating industry is to remove structural impediments to competition. Financial market regulations should be designed to create appropriate incentives among market participants.

1186 According to this view, the US Credit Rating Agency Reform Act of 2006 – while seeking to raise competition among NRSROs – did not take into account the full picture of competition concerns.

1187 FROST, *Credit Rating Agencies in Capital Markets: A Review of Research Evidence on Selected Criticisms of the Agencies*, at 480-481 (stating that providing empirical evidence of unfair practices would be extremely difficult).

1188 *Id.*, at 481-482.

1189 MCVEA, *Credit Rating Agencies, the Subprime Mortgage Debacle and Global Governance: the EU Strikes Back,* at 715.

1190 *See supra* Part 2, Chapter 5(I)(3).

They have to be established in the light of economic principles. The economic approach to competition law can serve as a model. Market forces are considered. Inappropriate financial market regulations can suppress competition in the credit rating industry.

Not only individual firms but the regulatory framework as a whole had negative effects on the competitive environment in the credit rating industry. The presence of an excessively concentrated industry may be due to a failure of the regulatory system more than the behavior of individual firms. For instance, the need to scrutinize systemic risk with respect to CRAs highlights how macroprudential regulations can play a role. To move away from market over-reliance on credit ratings is a concern of regulators. They have to take into account the place of the leading CRAs in the international financial architecture.

Financial market regulations are responsible for structural change in the financial industry, and enhancing the level of competition in the credit rating industry requires structural change. Indeed, CRAs' market conduct is primarily considered as a consequence of the regulatory environment, and behavioral change at the leading CRAs will only occur in the aftermath of the new financial regulatory reforms.

Focus is put on determining which regulatory interventions are beneficial to competition. Under certain circumstances, necessary amendments may mean the withdrawal of regulations such as rating-based regulations. In other cases, regulatory reforms are needed and must be analyzed with respect to their effect on competitive issues. Indeed, competitive concerns imply that regulators should not only sanction CRAs' anticompetitive practices but also judge their own financial market regulations with regard to their effect on competition. The absence of competition in the credit rating industry can partially result from a regulatory failure. Therefore, while redesigning regulations, regulators should anticipate the impact new regulations would have on competition in the credit rating industry.

Over the last three decades we have lived in an era of deregulation – especially in the US.[1191] The level of financial market regulations has decreased. However, the subprime mortgage crisis may have marked a turning point in the history of the financial markets, thereby probably triggering an era of re-regulation. This gives rise to concerns about the post-Chicago view of economics and its repercussions on the place that antitrust laws will find in the financial system. With reference to free markets, the mistake was to be-

[1191] According to the conclusions drawn by the Chicago school, antitrust laws have barely been enforced in the US during this period.

lieve that efficient and competitive markets could be reached merely by the absence of rules or by deregulation. Nevertheless, there is a need to establish the rules of the game in the financial markets, i.e. to define what is fair competition. Regulatory policies that establish fair markets are beneficial to competition.

Regulators must always be aware of the incentives that they create in the financial system. For this purpose, they have to measure the repercussions of their frameworks on the financial system as a whole. They cannot concentrate their efforts on a single institution without considering the effects on other institutions.

Incentive-based regulations are based on the belief that efficient regulatory policies adequately structure the financial markets. According to this view, market participants would automatically adapt their behavior and adopt competitive practices. Regulatory intervention should focus on precluding CRAs from committing an abuse of their power. Regulatory structures bringing a sufficient level of competition into the system would discipline the credit rating industry more than regulations imposing organizational and governance rules on CRAs.

For instance, with a view to restoring the independence of CRAs, regulatory intervention could create an incentive to move away from the issuer-pays business model and shift to the investor-pays business model.[1192] Such proceedings would address conflicts of interest in the credit rating industry more efficiently than governance rules merely requiring that CRAs avoid conflicts of interest by implementing a code of conduct. Furthermore, if regulators are concerned about enhancing the quality of credit ratings, they cannot content themselves with inviting CRAs to allocate more resources to improve their credit ratings; however, structural change has to occur with respect to restoring reputational constraints in the credit rating industry. Finally, as regards concentration in the credit rating industry, regulators should try not to raise barriers to entry in a way that is inconsistent with a competitive market for credit ratings.

[1192] HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 41 (suggesting a legally imposed change from an issuer-pays to an investor-pays business model).

§ 17. Proposal for a New Revenue Model in the Credit Rating Industry

I. Description

1. Context and Objectives

"In the recent financial crisis, the ratings on structured financial products have proven to be inaccurate. This inaccuracy contributed significantly to the mismanagement of risks by financial institutions and investors, which in turn adversely impacted the health of the economy in the United States and around the world. Such inaccuracy necessitates increased accountability on the part of credit rating agencies."[1193]

US financial reform recognizes the need to reexamine the compensation structures of certified CRAs.[1194] The US Senate had approved an amendment aimed at preventing conflicts of interest between CRAs and investment banks.[1195] However, the leading CRAs lobbied hard against the agency reform and succeeded in defeating the proposed amendment.[1196] The US House of Representatives did not accept the proposal.[1197] Therefore, the US Dodd-Frank Act of 2010 has merely called for the SEC to undertake studies to analyze how to address conflicts of interest in the credit rating industry.[1198]

The credit rating industry needs a new revenue model that creates competitive incentives instead of strengthening the rating oligopoly.[1199] In particular,

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1193 US Dodd-Frank Act of 2010, Sec. 931(5).

1194 *Id.* Sec. 939D (requiring that the Comptroller General of the US conducts a study on alternative means for compensating NRSROs).

1195 SORKIN, *Congress Drops Changes for Credit-Rating Agencies* (explaining that Senator AL FRANKEN had championed a proposal that would end the practice of issuers choosing the CRAs; the FRANKEN amendment would have created a board – overseen by the SEC – that would have assigned CRAs to provide credit ratings in order to eliminate conflicts of interest).

1196 *See* MATHIS, *Réformons les agences de notation* (suggesting more than 2.7 million US dollars in 2009). Altogether, the leading CRAs reported spending 5 million US dollars in order to defeat the FRANKEN amendment.

1197 SORKIN, *Congress Drops Changes for Credit-Rating Agencies* (reporting that the House of Representatives did not accept the FRANKEN proposal of a central platform for credit ratings and that Congress had to strip it out of the financial regulatory reform).

1198 US Dodd-Frank Act of 2010, Sec. 939C. and 939D (referring to the two SEC studies that will play a role in finding solutions to address conflicts of interest in the credit rating industry: the SEC study on strengthening credit rating agency independence and the SEC study and rule-making on assigned credit ratings).

1199 MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 669.

a competitive revenue model would require CRAs to deal with three issues as follows: first, the leading CRAs need to solve conflicts of interest. It is imperative that they acquire independence with respect to issuers. Second, competition involves imposing on CRAs a cost for issuing inaccurate credit ratings. CRAs should pay the price for providing erroneous credit ratings, not only through reputational constraints but also by financial penalties. Third, CRAs should compete on rating quality rather than on lowering rating standards in order to gain market share. The appropriate mechanism should ensure that CRAs gain market shares only if they provide investors with additional information.

2. Characteristics

The underlying idea is to create incentives for CRAs to improve their rating performance. They would directly depend on investors' fees to obtain revenues. Moreover, they would have to partly compensate investors if their credit ratings have been proven to be inaccurate. The compensation could be as much as several times the subscription fee. Details would be fixed in a contract between CRAs and investors paying for the credit ratings. These two main characteristics of the proposed revenue model would help enhance competition in the credit rating industry as follows.

On the one hand, the appropriate revenue mechanism involves creating incentives to shift from the issuer-pays to an investor-pays business model. It is challenging to make investors willing to pay for credit ratings. The recommended solution consists of requiring CRAs to commit to compensating investors that were misled by inaccurate credit ratings. The proposed model would entitle investors to the compensation in question only if they paid for the credit ratings in the first place.[1200]

On the other hand, the proposed model strives to enhance the accountability of CRAs. This objective is best reached in two ways. First, given the fact that investors pay for credit ratings, CRAs would owe a fiduciary duty to them. Such fiduciary duties would include the prevention of conflicts of interest. Second, the compensation attributed to investors in the event of rating failure would impose on CRAs a financial cost if they issued inaccurate credit ratings.

Overall, there is a need to align CRAs' revenues with the informational value of their credit ratings. Market participants should be willing to pay

[1200] As opposed to the proposed model, under a liability regime investors would be indemnified even if they did not pay for credit ratings in the first place.

for credit ratings only if CRAs are able to provide valuable information. Moreover, the costs of issuing inaccurate credit ratings should be higher than the benefits from rating recklessly.[1201] Competitive incentives imply linking subscribers' fees to rating performance.

The two main characteristics of the proposed revenue model are described as follows.

a. Shifting from Issuer-Pays to Investor-Pays Business Model

"What they don't do, and I think they should do, is find a way where we can avoid this inherent conflict of interest where the rating companies are paid by the people they are rating.[...] We've got to either find a way – or direct the regulatory bodies to find a way – to end that inherent conflict of interest."[1202]

It is widely recognized that conflicts of interest are embedded in the issuer-pays business model.[1203] Accordingly, a possible solution to the problem consists of shifting from the issuer-pays to the investor-pays business model.[1204] This endeavor would restore CRAs' independence vis-à-vis the issuers. An independent rating process is indispensable to the creation of a competitive environment in the credit rating industry. Furthermore, conflicts of interest have contributed to rating inflation by the leading CRAs. Especially in the subprime mortgage market, mortgage-related securities enjoyed four years of inflated credit ratings before the entire market collapsed in 2007. Therefore, solving conflicts of interest in the credit rating industry would decrease the problem of rating inflation.

The issuer-pays business model has been heavily criticized especially over the few last years. However, it is challenging to make investors willing to pay for credit ratings. The case for restoring an investor-pays business model is considered as especially fragile because of the inherent difficulties of limiting the accessibility of credit ratings to subscribers only.[1205]

1201 PARTNOY, *Two Thumbs Down for the Credit Rating Agencies,* at 633 (explaining that under the "reputational capital" view of credit ratings the loss in reputational capital must exceed the gain possible from false certification).

1202 CHAN, *Documents Show Internal Qualms at Rating Agencies* (quoting Senator CARL LEVIN).

1203 *See, e.g.,* MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 669 (insisting on the importance of eliminating conflicts of interest, though adding that it may be impossible to shift back to an investor-pays business model due to free-riding incentives).

1204 HOUSE OF LORDS, *Banking Supervision and Regulation Report*, at 41.

1205 ROUSSEAU, *Regulating Credit Rating Agencies after the Financial Crisis: The Long and Winding Road Toward Accountability,* at 45-46 (explaining that the reason is that credit ratings are a public good).

Hitherto, effective solutions to address conflicts of interest in the credit rating industry have not been successfully put forward. A number of scholars advocate the shift to an investor-pays business model without suggesting how to proceed in practice. Others argue that the issuer-pays business model can be maintained if regulators or CRAs take measures to deal with conflicts of interest.[1206] Such measures would improve corporate governance in the credit rating industry. Nevertheless, as far as conflicts of interest are concerned, the issuer-pays business model seems to be the primary source of trouble. This study contends that it is better to cure the disease rather than merely heal the symptoms.

Other scholars suggest that it is practically impossible to get investors to pay for credit ratings.[1207] Each recipient of a credit rating could secretly sell the information to other investors for a somewhat lower price until the price for the rating information fell to zero.[1208] Therefore, information economics theory suggests that the equilibrium selling price for rating information is zero.[1209]

Nevertheless, there are examples of CRAs that are paid by investors. For instance, Egan-Jones and Rapid Ratings have successfully implemented an investor-pays business model.[1210] These CRAs have gained prominence over the last few years. In order to be paid by investors, CRAs have to be innovative. They have to meet the expectations of investors disappointed by the leading CRAs' performance. They succeed only if they are able to pro-

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1206 *See, e.g.,* MATHIS, MCANDREWS & ROCHET, *Rating the raters: Are reputation concerns powerful enough to discipline rating agencies?*, at 669 (suggesting that a central platform could organize the rating process while acting as an independent intermediary between CRAs and issuers); *see also* MATHIS, *Réformons les agences de notation*; *see also* ALTMAN, ONCU, SCHMEITS & WHITE, *What Should Be Done about the Credit Rating Agencies?* (also suggesting the establishment of a "clearinghouse" in order to eliminate conflicts of interest in the credit rating industry and simultaneously keep the information advantages of the issuer-pays business model).

1207 *See, e.g.,* SCHWARCZ, *The Role of Rating Agencies in Global Market Regulation*, at 304 (arguing that there is little alternative to the issuer-pays model because of the collective action problem in coordinating potential investors' fees); *see also* WHITE, *A New Law for the Bond Rating Industry*, at 49, *and* SEC, *Report on the Role and Function of Credit Rating Agencies in the Operation of the Securities Markets,* at 41 (since the 1970s low-cost photocopying explains why investors are not willing to pay for information that can easily be spread).

1208 BIRCHLER & BÜTLER, *Information Economics,* at 105-106.

1209 *Id.*

1210 Egan-Jones is a well-established CRA that is gaining market share as leading CRAs have been losing investor confidence. Egan-Jones has distinguished itself in being exclusively paid by investors. Its revenue model is characterized by a strict refusal to accept issuers' fees and by a low subscription fee chargeable to investors (*see* http://www.egan-jones.com/trial). In this regard, Egan-Jones stands out due to its policy that minimizes conflicts of interest. *See* JOHNSON, *An Examination of Rating Agencies' Actions Around the Investment-Grade Boundary* (stating that Egan-Jones receives all its revenues from subscribers, i.e. investors).

vide the financial markets with additional information. In this regard, competitive incentives may work better in an investor-pays business model.

b. Increasing Credit Rating Agencies' Accountability

CRAs have to face the consequences of issuing inaccurate credit ratings. Traditionally, they have only been subject to reputational constraints. Accordingly, they should lose reputational capital if they perform poorly.[1211] However, in modern financial markets, CRAs' fear of losing their reputation has not been a sufficient incentive to prevent them from rating recklessly. Leading CRAs have continued to rate complex financial products even though they cannot assess their value in a way beneficial to investors. Instead, they have been attracted by the significant revenues paid by issuers. Therefore, there is a need to impose a penalty on CRAs that provide the investors with erroneous credit ratings.

Among scholars liability has frequently been advanced as a means of holding CRAs accountable; indeed they have increasingly proposed CRA liability as a way to reform the credit rating industry. Accordingly, the US Dodd-Frank Act of 2010 established a new liability regime for CRAs.[1212] The Dodd-Frank liability regime introduces a penalty for providing inaccurate credit ratings with the aim of increasing the quality of these ratings. Clearly, CRAs cannot be fully protected under the First Amendment of the US Constitution. They cannot be immune from liability if they issue inaccurate credit ratings in order to obtain issuers' fees. By this means, the financial regulatory reform seeks to highlight the basic conditions that need to be set in order to establish CRA liability.

However, even though CRA liability is a step in the right direction, it does not solve the macroprudential problems in the credit rating industry and may even perpetuate over-reliance on credit ratings. The liability regime has already contributed to an improvement of the CRA regulatory structure; yet it is not capable of entirely addressing conflicts of interest in the credit rating industry. Investors may trust CRAs blindly if CRAs are forced to repair the full damage resulting from inaccurate credit ratings. In any case, CRA liability is limited to particular cases in which CRAs have exceeded any acceptable limits.[1213] Under the new legislation introduced by the US

1211 PARTNOY, *Two Thumbs Down for the Credit Rating Agencies,* at 633.

1212 US Dodd-Frank Act of 2010, Sec. 933 and Sec. 939G.

1213 For instance, the behavior of the leading CRAs in the subprime mortgage market was alarming especially as far as the rating of complex synthetic CDO structures was concerned. Through litigation, judges should hold the leading CRAs responsible for their role in the subprime mortgage crisis. Specific cases with respect to synthetic CDOs may give courts the opportunity to develop case law concerning CRA liability.

Dodd-Frank Act of 2010, liability is limited to cases in which CRAs knowingly or recklessly failed to conduct a reasonable investigation or to obtain reasonable verification of the factual elements underlying the rating process.[1214] Rating inaccuracy alone is insufficient to prove the liability of CRAs.

CRA liability will not be sufficient to solve the systemic problems caused by CRAs in the financial markets. CRAs cause damage to the financial markets not only when they knowingly or recklessly fail to conduct a thorough rating process but also in broader-case scenarios. Their inaccurate credit ratings can mislead market participants even when it is not possible to prove their liability.

In order to balance the diverging interests, an appropriate mechanism should impose on CRAs a penalty for issuing erroneous credit ratings and simultaneously decrease artificial reliance on credit ratings. In the event of poor rating performance, CRAs should not automatically be forced to repair the entire damage, because this would not incentivize investors to undertake their own due diligence.

A solution has been suggested by Professor HUNT. He proposes a "disclose or disgorge" approach to novel product rating.[1215] If credit ratings turn out to be inaccurate, CRAs should be forced to disgorge the undeserved profits derived from their rating fees.[1216] As opposed to a liability regime, this innovative approach does not focus on indemnifying investors but on creating incentives for CRAs to generate higher-quality ratings.[1217]

Based on the same reasoning, this study also proposes a new model to enhance CRAs' accountability: CRAs would have to partly compensate investors that were misled by inaccurate credit ratings. As opposed to the liability regime, this partial compensation would be correlated with rating fees not with investors' losses. In comparison to Professor HUNT's approach, in this proposed model emphasis is put on investors' fees rather than on

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1214 US Dodd-Frank Act of 2010, Sec. 933(b)(2) (codified as amended at 15 U.S.C. 78u-4(b)(2)(B)).

1215 HUNT, *Credit Rating Agencies and the "Worldwide Credit Crisis": The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement,* at 182 (arguing that a mechanism to deter CRAs from issuing low-quality ratings is especially needed for novel product rating; reputational constraints fail to work in the novel segment; CRAs are attracted by significant profits, yet they have no reputation to lose; therefore, the "disclose and disgorge" approach is deemed to repair CRAs' lack of accountability in novel product rating).

1216 *Id.*

1217 However, critics suggest that merely requiring the disgorgement of profits would not be an adequate deterrent to bad behavior; rather, this process would merely add another cost to business.

CRAs' profits. CRAs and subscribing investors would fix the details concerning the compensation contractually.

However, this model would not function as a liability instrument. Loss would not be compensated in its entirety, but restitution would relate to the fees paid by investors.

Such a compensation scheme would not operate like an insurance product. If it did and if CRAs agreed to fully indemnify the losses suffered by investors, they might closely resemble insurers: CRAs' high credit ratings would be regarded as validating the quality of a borrower or a debt instrument. Investors would be incentivized to rely too heavily on CRAs instead of exercising their own due diligence. In the event of a rating failure, CRAs would have to pay out substantial sums to stricken investors. If such a model were to be implemented on a large scale, leading CRAs might even become systemically important institutions. In the face of extreme events, massive lawsuits could drive them into bankruptcy. Given such an outcome, full compensation of any damage suffered would not be beneficial to the system as a whole.

The advantages of the new model being proposed here however, derive from the way in which (i) it incentivizes CRAs to provide higher-quality ratings, and (ii) incentivizes investors to pay for credit ratings without exclusively relying on those credit ratings. As far as CRAs are concerned, reputational constraints are enhanced given the cost of providing erroneous credit ratings. Rating revenues would be directly linked to CRAs' performances. Because misled investors would not get any compensation unless they were subscribers, they might pay more often for credit ratings. Finally, credit ratings could not be regarded as a recommendation to buy or sell a financial product because CRAs would not be fully liable for the losses suffered by erroneous credit ratings. This last aspect would contribute to discouraging market over-reliance on credit ratings.

II. Creation of Appropriate Incentives

There are three categories of market participants that may share responsibility for incorrect dealings with credit ratings. Especially as far as the subprime mortgage crisis is concerned, blame should be apportioned between issuers, CRAs and investors.[1218] Issuers massively underwrote mortgage-related securities without paying sufficient heed to the quality of the underlying assets. CRAs rated the securities recklessly. Investors failed to exer-

[1218] COHAN, *Credit ratings agencies might end up paying for role in financial crisis.*

cise their own due diligence. Appropriate incentives have to be created to enhance the accountability of all three categories of market participants.

1. Lessening Issuers' Interest in Paying for Credit Ratings

As long as issuers are willing to pay for credit ratings, the leading CRAs have no incentive to look for alternative economic models because issuers generate sufficient sources of revenue. Under the issuer-pays business model however, the independence of CRAs is jeopardized. Especially in structured finance issuers' revenues have significantly contributed to CRAs' profits.[1219] Under such circumstances the first step consists of lessening the advantages that issuers take from paying for credit ratings. If issuers were not willing to pay for credit ratings, CRAs would have to innovate and make their credit ratings marketable to investors. CRAs would have to look for other sources of revenue and competition among CRAs would be based on finding those new sources of revenue.

The first step consists of a transition toward lessening reliance on credit ratings. Currently, high credit ratings significantly enhance the marketability of financial instruments. This is especially due to excessive market reliance on credit ratings. If market over-reliance on a few CRAs declines, issuers will have less incentive to pay for credit ratings.

Market over-reliance on credit ratings traces its roots to financial market regulations based on credit ratings. Therefore, reducing market over-reliance on credit ratings starts with the withdrawal of rating-based regulations.[1220] The use of credit ratings in financial market regulation has generally been viewed as the primary cause of artificial market reliance on credit ratings. If regulators cease using credit ratings in regulations, market participants' behavioral reliance on credit ratings will decrease.

Further, a mechanism is needed to make issuers more accountable for credit ratings which they have paid for. The key objective is to stop issuers hiring CRAs to obtain high credit ratings with which to mislead investors. If credit ratings are revealed to be erroneous, issuers may, under specific circumstances, share part of the responsibility with CRAs. Criteria must be defined to determine under what circumstances issuers, along with CRAs, can be held liable for misleading investors.

1219 *See supra* Part 3, Chapter 9(I)(1).

1220 In the US there has been a trend toward withdrawing rating-based regulations. The most significant move arises out of the financial reform which has removed many regulatory rules dependent on credit ratings; US Dodd-Frank Act of 2010, Sec. 939. *See supra* Part 2, Chapter 4(II)(4).

Issuers' responsibility would depend to a great extent on how significantly they are involved in the rating process. The closer they are involved with CRAs, the more they may be held responsible for the quality of the information embedded in credit ratings. The more information they give to CRAs, the more they should be concerned that credit ratings are not based on misstatements.[1221] CRAs' independence further depends on the magnitude of issuers' fees. It is a matter of fact that approximately 90 percent of the leading CRAs' revenues are currently derived from issuers' fees.[1222] However, the leading CRAs do not depend on any particular issuer.[1223] Therefore, CRAs' independence is not jeopardized by the fact that they are paid by any specific issuer but by the fact that they are paid by issuers in general.

Issuers would be liable for the misleading information. If issuers pay for credit ratings, they have to share responsibility with CRAs for rating inaccuracy. Legislation could move the law in this direction. In any case, issuers should have to disclose how much they pay for credit ratings. Regulators and market participants need to be able to assess to what extent CRAs' independence may have been jeopardized.

2. Increasing Credit Rating Agencies' Interest in Marketing their Credit Ratings to Investors

CRAs should have to innovate and improve their rating practices in order to gain or maintain their market share. If they want to attract investors, they should have to compete on enhancing the quality of their credit ratings. CRAs should work to improve their products in two directions as follows: competition should be based on developing better rating techniques, and on marketing the rating products to investors. The credit rating industry should be a dynamic industry subject to market forces. CRAs must be attentive to specific investors' needs and know the preferences of their contract parties.

The situation will advance in this direction as soon as regulators cease using credit ratings in their regulations. Less artificial reliance on credit ratings would force CRAs to innovate in order to find new sources of revenue. Further, if issuers stop contributing such a significant amount to CRAs' revenues, the credit rating industry would be incentivized to innovate in

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1221 Issuers should make the relevant information available. It is important that issuers are incentivized to disclose financial information to a great extent. However, they take responsibility if their involvement with CRAs misleads CRAs and impairs rating quality.

1222 PARTNOY, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers,* at 68-69.

1223 *Id*.

order to attract investors. As a consequence, CRAs would automatically move closer to the interests of the investing community.

3. Incentivizing Investors to Hire Credit Rating Agencies and Perform their Own Due Diligence

Investors should (i) be willing to pay for credit ratings and (ii) simultaneously exercise their own due diligence. Two features of the proposal help achieve these goals: first, under the proposed model, if misled by credit ratings, investors would not receive any compensation unless they had paid subscription fees in the first place; second, the compensation would not cover the entire loss. Instead, it would relate to restitution of the investors' fees.

The compensation paid to investors in the event of rating inaccuracies must be sufficient to make investors willing to pay for the credit ratings in the first place.[1224] The agreement between CRAs and investors would fix the details of the compensation. The amount may depend on several factors such as CRAs' recklessness, investors' lack of due diligence, and the magnitude of investors' losses. Such a system would have significant advantages if the amount of the compensation were sufficient to solve the public-good challenge: investors might be willing to pay for credit ratings despite the quasi-impossibility of excluding non-subscribers from access to the purchased credit ratings.

The compensation could be up to several times the investors' fees. For instance, the upper limit could be fixed at three or even five times the investors' fees. It could depend on the amount of investors' fees in proportion to the loss sustained by the investors. If the investors' fees were very low compared with the loss, compensation could be raised higher to a certain percentage of the loss. If no loss was sustained, the restitution could merely correspond to the investors' fees or, for instance, twice the investors' fees. In any case, in the absence of loss compensation should not be disproportionate to the subscription fee. Otherwise, market participants might take advantage of paying for credit ratings while hoping that CRAs are inaccurate so as to be awarded compensation. Some market participants could invest in credit ratings in order to bet against them. To a limited extent, such speculative activities would be beneficial if they incentivized CRAs to allocate more resources to the rating process. CRAs would receive revenue in cases where their credit ratings needed to be reviewed. However, if the

[1224] This feature of the proposed model helps overcome the challenges in making investors willing to pay for credit ratings.

principle of compensation without damage was applied to a great extent, problems would arise in the financial markets. Under certain circumstances, CRAs would have to pay large sums to market participants that were actually betting against their credit ratings, which would be detrimental to the system.[1225]

A balance should be found between incentivizing investors to pay for credit ratings without encouraging investors to rely too heavily on CRAs. Emphasis is put on designing a model creating the right incentives. On the one hand, compensation should be sufficient so that CRAs are under pressure to improve their rating performance. On the other hand, compensation should not go too far, because there is a need to minimize market over-reliance on credit ratings. Under no circumstances should credit ratings be considered as a recommendation to buy or to sell. If investors were fully indemnified in the case of rating failure, they would tend to rely excessively on credit ratings.

At any rate, investors should not have blind confidence in credit ratings. Over-reliance on CRAs must be combated given its negative effects on financial markets as a whole. Prior to using the financial information embedded in credit ratings, investors should assess whether they are satisfied with the CRAs in the particular case. Investors should exercise their own due diligence. In this sense, they should monitor CRAs and put pressure on them to provide valuable credit ratings. Without valuable information, investors would not agree to pay for credit ratings. If CRAs depend on investors' fees, they would need to meet investors' needs to survive.

III. Implementation

„And then of course notwithstanding the fact that the regulators have egg [on] their face, CRAs do not want to make any changes because, for them at least, this world is working just fine."[1226]

The greatest challenge is to implement the model. Currently leading CRAs have little incentive to amend their revenue models. They are satisfied with the significant issuers' fees they obtain under present practice. On the one hand, the task of regulators includes encouraging CRAs to be innovative.

[1225] To purchase insurance, the buyer should be required to have an insurable interest. For instance, with respect to the subprime mortgage crisis the fact that CDS buyers did not have an insurable interest fueled the CDO market and worsened the economic meltdown.

[1226] WHALEN, *No True Sale: Interview with Joseph Mason* (quoting JOSEPH MASON) (discussing how CRAs were the only companies that did not have to complain about their situation at the height of the financial crisis).

Regulators should make sure that the shift from the issuer-pays to the investor-pays business model occurs. To this end, it is crucial that issuers be less willing to pay for credit ratings. Regulators have to create the appropriate incentives in the credit rating industry. On the other hand, CRAs should be forced to find innovative ways to generate revenue from investors and to increase their market share. If forced to do so, CRAs will look for opportunities to gain a larger part of their revenues from investors. As a consequence, CRAs would compete on marketing their credit ratings to a wider range of investors.

1. Legal Framework

To some extent, regulatory intervention is necessary in order to create appropriate incentives in the credit rating industry. Policy proposals have to suggest how to amend the regulatory framework. Regulatory activity should push the credit rating industry in a certain direction, and leading CRAs should be expected to amend their rating practices to advance the regulators' policy.

Regulators have to provide oversight of CRAs and to establish principles to guide the industry. The necessary changes may require the interaction of various regulators having specific competences in the ordering of the respective financial markets. These efforts have to be coordinated.

The regulators' most obvious task is to withdraw rating-based regulations. Financial reform has been moving in this direction.[1227] It may take time before this move fully materializes, and effects may only be seen in the long term.

Further, regulators may decide to move away from the issuer-pays business model. They may make the issuers partly liable if they hire CRAs to diffuse financial information that misleads investors. The regulatory framework may also impose disclosure requirements on CRAs as far as their revenues are concerned. CRAs should disclose how much revenue they obtained from which issuers with respect to any particular debt issuance.

More importantly, regulators have a role to play in establishing a regulatory environment that leads CRAs to develop an investor-pays revenue model. Regulators should define principles with respect to the contracts binding CRAs and investors. The minimum loss that CRAs should have to compensate in a case of rating inaccuracy would be an amount equal to the investors' fees. Regulators could also consider the possibility of fixing an upper

[1227] US Dodd-Frank Act of 2010, Sec. 939.

limit in agreements between CRAs and investors. The upper limit would amount to several times the investors' fees or a certain percentage of the loss sustained by investors. Furthermore, regulators could prevent CRAs from engaging in over-compensating market participants that sustained no losses as a result of the rating inaccuracy. Such market participants could have their subscription fee refunded, or receive any amount up to twice the subscription fee but no more.

In order to implement the proposed model, regulators should track rating performance. Disclosure requirements would force the credit rating industry to publish historic track records with respect to their rating performance. Regulators and market participants could use this information to make informed decisions.

Regulators should establish conditions that make the investor-pays revenue model attractive to the leading CRAs. At the same time, regulators should fix the limits in the compensation mechanism embedded in the investor-pays revenue model.

2. Contractual Terms

The successful launch of a new revenue model also requires voluntary efforts by the CRAs. It is up to CRAs to adopt a new revenue model according to regulators' guidelines. It is likely that the shift would not arise initially from the leading CRAs, but from smaller CRAs that want to compete with them.[1228] If CRAs gain market share while marketing their products in an innovative way, leading CRAs will eventually be subject to competitive pressure. This situation would materialize only if issuers curtail the fees that they pay for credit ratings.

Contractually, compensation would function in much the same way as liquidated damages clauses which also operate to compensate the injured party for a specific breach. A liquidated damages clause is a clause in an agreement by which the parties assess in advance what damages will be paid. The proposed revenue model predetermines what sum would be paid if CRAs fail to perform as expected by investors. In this regard, inaccurate credit ratings would be treated similarly to a breach of contract.

[1228] For instance, Egan-Jones has already developed a revenue model that fully relies on investors' fees instead of issuers' fees. Egan-Jones is successful in marketing its credit ratings to investors, claiming that its revenue model is exempt from conflicts of interest. The idea is that other CRAs could make a difference by implementing revenue models that do not only remove conflicts of interest but also enhance accountability. A CRA that contractually agrees to refund investors' fees or more in the event of rating failure may attract a broader range of investors.

For instance, the stipulated compensation could be up to several times the subscription fee. The amount could possibly be three times the subscription fee or could be a certain percentage of the loss sustained by the misled investors. CRAs that contractually agree to be legally bound by higher compensatory obligations in the event of rating inaccuracy could attract and justify higher investors' fees. Investors would have an interest in paying for their credit ratings. Moreover, CRAs that agree to pay compensation in the event of rating inaccuracy would be incentivized to rate carefully. They would take a disproportionate risk if they rated recklessly, so that, under this regime, the benefits from investors' fees would not be worth the ultimate cost.

Further details must be set forth in contracts between CRAs and investors. For example, a distinction would have to be made between subscribers that have suffered losses and subscribers that have only lost their subscription fee. Another question that may arise relates to the treatment of investors after credit rating downgrades. If the rated borrower or debt instrument collapses immediately after a credit rating downgrade, CRAs may be subject to the compensation promised to investors in cases of rating failure. A certain timing could be contractually fixed to prevent CRAs misleading investors and then escaping from their compensatory obligations by downgrading their credit ratings.

IV. Screening the Possible Consequences of the Model

Some unintended consequences may arise. Hence there is a need to anticipate the possible shortcomings of the proposed model.

1. Is There a Risk of Artificially Deflated or Inflated Credit Ratings?

Under the proposed model, the question arises as to whether CRAs would tend to deflate credit ratings. If CRAs issued high credit ratings, they might fear being obligated to compensate investors in the event of rating failure. In other words, CRAs might have an incentive to conservatively review their credit ratings when numerous investors pay for them. CRAs might adopt overly prudent behavior when issuing high credit ratings. They might become pessimistic rather than optimistic due to the risks they take.

From another perspective, investors would prefer to pay for high credit ratings. In any case, they would not be willing to pay for artificially deflated credit ratings. Only high credit ratings would ensure protection in the event

of rating failure. Competing on gaining market share would drive CRAs to issue higher credit ratings if they were confident enough in the quality of the borrower or debt instrument.

The challenge is to counterbalance the diverging tendencies so that CRAs are incentivized to rate as accurately as possible. Competition between CRAs should be based on the accuracy of their respective credit ratings.

Further, there is a need to make sure that there is no interference between CRAs and investors. Investors should be required to pay for credit ratings independently of the outcome of the rating process. If they hire CRAs, they should not be allowed to break away from the contract if they are not satisfied with the credit rating obtained.

2. Would the Price for Credit Ratings be Extremely Low?

Two factors may contribute to incentivize CRAs to charge a low investors' fee. First, if CRAs depend on investors to be paid, they would need to meet investors' needs. They would compete by decreasing the price for credit ratings in order to attract more investors. Competition between CRAs is always based on increasing market share.[1229] In this regard, low investors' fees may be beneficial to the financial markets. Investors would pay more readily for credit ratings. Competition would presumably create good incentives in the credit rating industry.

Second, under the proposed model CRAs take the risk of having to compensate investors in the event of rating failure. High investors' fees would be associated with an accordingly high potential investor compensation. There is the risk that CRAs accept very low investors' fees in order to be quasi-immune from liability. If credit ratings prove to be erroneous, the compensation established in relation to the investors' fees may be disproportionately low as compared with the loss sustained by misled investors.

To avoid this situation, regulators could, under such circumstances, force CRAs to compensate at least a certain percentage of the damage caused to investors.

Therefore, it is true that credit ratings may tend to be less expensive under the proposed model. Overall, this fact is positive because it reflects competitive forces among CRAs. However, it might be necessary to adjust the

[1229] Market share contributes to enhancing the profitability of CRAs. In the long term, lower rating fees increase profitability only if CRAs are able to maintain or gain market share. Therefore, the relationship between market share and profitability is an important feature of the competitive environment in the credit rating industry.

compensation allowed to injured investors if investors' fees are disproportionately low as compared with the damage suffered.

3. Would Investors Pay Poorly Performing Credit Rating Agencies?

The compensation model gives rise to concern about the selection of CRAs by investors. Investors may be willing to pay for inflated credit ratings given the protection accorded to them in the event of rating failure. However, market forces would not discipline CRAs if investors had little interest in picking the best CRAs. The system would not work well without a mechanism counterbalancing this potential outcome. There are two measures that could restrain investors from blindly hiring poorly performing CRAs.

First, the compensation awarded to investors in the event of rating failure should be limited to up to several times the investors' fees or a certain percentage of the losses sustained. Regulators must cap the maximum so that investors do not use credit ratings as an insurance-like instrument.

Second, subscribers that did not sustain damage should not receive the same compensation as those that suffered losses due to inaccurate credit ratings. If subscribers cannot prove that they sustained damage, regulators should strictly limit the compensation that CRAs must pay. The upper limit may for instance be set at an amount corresponding to twice the investors' fees. Alternatively, CRAs may contractually agree to merely refund the investors' fees. By this means, there is no incentive for market participants to select badly performing CRAs. Subscribers would not be able to buy credit ratings solely with the aim of speculating on inaccurate ratings.

§ 18. Concluding Remarks

Apart from the Big Three – Moody's, Standard & Poor's and Fitch – no other leading CRA has appeared since the emergence of the credit rating industry at the beginning of the twentieth century. Before the 1970s, the credit rating industry was still subject to private market forces. CRAs were neither significantly used in financial market regulations nor regulated. From the 1970s onwards, regulators increasingly incorporated regulatory references to credit ratings in their financial market regulations. Yet the credit rating industry itself remained unregulated. At present, 2010 seems to be marking a turning point in the credit rating industry. Regulators have been removing the rating-based regulations they developed over the last four decades. Moreover, lawmakers have decided to regulate CRAs similarly to other fi-

nancial gatekeepers such as securities analysts and auditors. While tending to reduce over-reliance on certified credit ratings, lawmakers and regulators have nevertheless acknowledged the crucial role played by the leading CRAs in modern financial markets.

After a century of existence, the credit rating industry currently faces its most significant regulatory overhaul. The role of the leading CRAs in modern financial markets is a fascinating and challenging topic given their relevance on the global stage. With regard to the adoption of the US Dodd-Frank Act of 2010 and the EU Regulation on Credit Rating Agencies, a new era has begun where CRAs will be highly regulated in keeping with the crucial role they play in the financial system.

Over the twentieth century, the use of credit ratings has significantly expanded given the regulatory environment in which they operate. From the 1970s onwards, the leading CRAs have acted as gatekeepers in the growth of novel financial instruments. The shift from the investor-pays business model to the issuer-pays business model is primarily attributed to regulatory incentives. Private market forces would have never placed CRAs at the core of the international financial architecture if regulatory intervention had not artificially increased the role of certified CRAs.

It is undoubtedly impossible to return to the system prevailing before the 1970s given the structural changes in modern financial markets – especially financial innovation. Regulators have no other choice but to supervise the credit rating industry taking into account its importance in the financial system as a whole. However, criticism has been voiced about the new regulatory and supervisory framework for CRAs. If regulators inadvertently elevated CRAs to a crucial position by using their credit ratings in financial market regulations, regulators will now keep CRAs at the center of the international financial architecture by regulating them similarly to other important market players. The regulatory barrier arising out of the regulatory recognition of certified CRAs may be replaced by a new regulatory barrier based on the costs of compliance with enhanced CRA oversight.

At any rate, lawmakers and regulators are responsible for creating the appropriate incentives in the credit rating industry. Competition should eventually be restored in order to discipline the three leading CRAs – Moody's, Standard & Poor's and Fitch. Even though competition relating to CRAs is not very popular in the aftermath of the US Credit Rating Agencies Reform Act of 2006, competition among CRAs is needed and should gain prominence in the future. This study finds that competition among CRAs can only be effectively enhanced if regulators remove rating-based regulations

from their financial market regulations. As long as credit ratings are excessively used for regulatory purposes, competitive pressures have detrimental effects on the financial markets. Accordingly, the focus of the US Credit Rating Agencies Reform Act of 2006 with competition as its key objective was premature.

Therefore, competition will gain prominence as soon as regulators successfully remove the excessive regulatory reliance on credit ratings. In this regard, the first step toward the creation of appropriate incentives in the credit rating industry consists of lessening over-reliance on the leading CRAs. Moreover, CRAs will be forced to innovate as soon as they can no longer count on regulatory-driven services. A key objective of an appropriate market structure in the credit rating industry lies in the creation of incentive-based competition. Appropriate incentives are created if CRAs compete on improving the quality of their credit ratings. Performance should count above all in the credit rating industry, even if it means that CRAs will eventually be less profitable than they were in the 2000s.

In addition, this study sets forth a concrete proposal for change that takes into account the key aspects of incentive-based competition among CRAs. The proposed revenue model addresses conflicts of interest by moving from an issuer-pays to an investor-pays business model. Further, it seeks to enhance accountability by imposing on CRAs penalties for issuing erroneous credit ratings. Finally, it aims to make investors willing to pay for credit ratings despite the public-good problem.

Since the creation of the credit rating industry, CRAs have played an evolving role in the financial system. While this study focused on analyzing the competitive environment in the credit rating industry with respect to regulatory intervention, two other approaches will gain momentum in the near future. First, post-crisis litigation will probably end the long practice of regarding credit ratings as mere opinions protected under the First Amendment of the US Constitution. Leading CRAs will have to take into account litigation costs in their future rating decisions. Courts will undoubtedly limit CRA liability to specific cases in which evidence shows that CRAs excessively inflated credit ratings in order to obtain issuers' fees and to increase their own market share. Second, regulators and market participants will start to use market-based mechanisms as substitutes for credit ratings. This trend should reduce market over-reliance on the leading CRAs. As a result CRAs will be subject to competitive forces emanating from the market for financial information in a broader sense.

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