The first global financial crisis of the 21st century: Introduction

Reinhart, Carmen

University of Maryland, College Park, Department of Economics

July 2008

The First Global Financial Crisis of the 21st Century: Introduction

(London: CEPR-VoxEU Publication, July 2008)

Andrew Felton and Carmen M. Reinhart, eds.

Introduction

Global financial markets are showing strains on a scale and scope not witnessed in the past three-quarters of a century. What started with elevated losses on U.S.-subprime mortgages has spread beyond the borders of the United States and the confines of the mortgage market. Many risk spreads have ballooned, liquidity in some market segments has dried up, and large complex financial institutions have admitted significant losses. And bank runs are no longer the subject exclusively of history.

These events have challenged policymakers, and the responses have varied across region. The European Central Bank has injected reserves in unprecedented volumes. The Bank of England participated in the bail-out and, ultimately, the nationalization of a depository, Northern Rock. The U.S. Federal Reserve has introduced a variety of new facilities and extended its support beyond the depository sector.

These events have also challenged economists to explain why the crisis developed, how it is unfolding, and what can be done. This volume compiles contributions by leading economists in VoxEU over the past year that attempt to answer these questions. We have grouped these contributions into three sections corresponding to those three critical questions.

1. Why did the crisis happen?

Although it is tempting to complain that the crisis was inevitable, some articles emphasize the inherent uncertainty in predicting the future. Dell'Ariccia, Igan, and Laeven discuss the role of uncertainty in the subprime lending boom. Persaud and Danielsson both discuss the overreliance on standardized quantitative risk models. Lastly, Wyplosz counsels caution when analyzing the crisis and its causes in the face of high uncertainty.

Several articles search for the roots of the crisis in public policy—either monetary or regulatory. On the monetary side, Cecchetti argues that monetary policy did not unduly increase risk-taking before the crisis. Boeri and Guiso believe the opposite. Ioannidou et al. avoid directly blaming the Federal Reserve for the crisis but do present empirical evidence that low interest rates—like those present in the U.S. in 2003 and 2004—encourage ex-ante risk-taking. Baldwin discusses the view of Martin Feldstein that the low U.S. saving rate and overinvestment in housing must inevitably lead to a fall in the value of the dollar. Cardarelli et al. argue that financial innovation has led to the business cycle becoming more sensitive to changes in house prices, and that monetary policy did not sufficiently take this into account.

Other articles focus on the regulatory system. Tabellini blames some of the problem on the fragmented nature of the U.S. regulatory system. Spaventa focuses on the growth of off-balance sheet banking activity and argues that regulators both missed the explosive growth of financing mechanisms like Structured Investment Vehicles and failed to see the hidden risks to the banking system that these unconventional instruments created.

Several authors reach beyond the recent past to understand the present. Wolf compares current conditions to that of 1930s Europe and its exit from the gold standard. Bordo and Reinhart both put the current crisis into historical perspective.

2. How is the crisis unfolding?

As the crisis opened in late summer 2007, economists disagreed on its likely magnitude. It initially appeared to be a simple liquidity problem. Monacelli thought that the problems were extensive but benign. Calomiris thought that "there is little reason to believe that a substantial decline in credit supply under the current circumstances will magnify the shocks and turn them into a recession." Buiter thought that the Federal Reserve's first rate cut in September 2007 was unnecessary owing to the fiscal policy response.

Buiter also cautioned everyone to remember the difference between "inside assets," which are a zero-sum game that just transfer money between parties, and "outside assets," which are real assets that lack an offsetting liability. Vives suggested that the problems in modern markets such as asset-backed commercial paper, auction-rate securities, etc., directly parallel, and require the same response as an old-fashioned banking crisis: Bagehot's wisdom to lend freely against good collateral at penalty rates.

However, Ubide presciently spelled out a variety of reasons why what appeared at first to be a simple liquidity problem masked far deeper credit pathologies. Cristadoro and Veronese wrote about the difficulty of tracking economic growth in real-time, which was an extra source of confusion.

Some authors tried to anticipate possible paths by which the crisis could spread. Gros wondered if European house prices—which in some countries had risen even more quickly than U.S. prices—are vulnerable to a similar slump. Snower tried to anticipate some of the possible international spillover effects from the U.S. problems. In another article, Snower outlined four “mega-dangers” to the financial system and suggested that our surprise at continued crises is more surprising than the crises themselves.

Cecchetti continued his FAQ series with updates on the unprecedented Federal Reserve responses to the freeze in the money and credit markets. These included the largest single cut in the federal funds target rate since the earl 1980s, currency swaps with foreign central banks, and three new lending mechanisms: the Term Auction Facility, the Term Securities Lending Facility, and the Primary Dealer Credit Facility.

Monacelli published two articles critical of the European Central Bank’s decision to cut interest rates, saying that they lacked transparency and increased inflation risk. However, Widgrén argued that the ECB was too slow to react, and institutional differences with the Fed made the ECB less able to respond quickly during a crisis. Wyplosz agreed that the Fed was more innovative than the ECB and quicker to react.

Several articles deal with currency movements. Corsetti argues that the U.S. trade deficit will be more responsive than in the past, helping restrain the dollar’s fall. However, Baldwin summarized a Krugman article predicting a “pretty far and pretty fast” dollar decline.

3. What can be done?

VoxEU has published several articles with policy suggestions to prevent this kind of crisis from happening again. Information dissemination was a key theme. In August, Onado focused on three aspects that later commentators would return to: credit ratings, evaluations of asset marketability, and transparency in the retail market for financial assets. Giovannini and Spaventa urge greater dissemination of information and rethinking of the Basel II accord on bank capital requirements.

Buiter wrote a series of articles on the policy lessons from the U.K.'s Northern Rock debacle. He blamed both policies and institutional arrangements, including an ineffective deposit insurance scheme, poor regulatory coordination and division of responsibilities, and weaknesses of the supervisory standards embodied in Basel II.

Portes wrote on regulatory reform, covering ratings agencies, sovereign wealth funds, and financial institutions. Hildebrand also wrote about sovereign wealth funds, advocating that they adopt a voluntary code of conduct. De la Dehesa urged more regulation of mortgage brokers, greater transparency, and methods to overcome banks' principal-agent problems. Persaud said that regulators need to accept that the commoditization of lending means that instability is built into the financial system and regulators need to proactively pursue counter-cyclical policies.

The future of monetary policy and central banking was also a recurring theme. Leijonhufvud argued against inflation-rate targeting on the basis that the central bank could still find itself diverging from the Wicksellian 'natural rate' of interest that should be the central bank's goal. De Grauwe contended that inflation targeting restricts banks' ability to restrain asset bubbles, while Assenmacher-Wesche and Gerlach warned against trying to use central bank policy to stabilize asset prices.

Buiter and Sibert advocated the expanded use of liquidity policies rather than monetary easing. They think that central banks should act as the "market maker of last resort." Spaventa also proposes that the government should purchase illiquid securities, likening his proposal to the Brady Plan that unfroze the Latin American debt markets in 1989.

Finally, thinking about currency arrangements has never been far from hand. Frankel wrote that the euro could surpass the dollar as the world's reserve currency within a decade, while Eichengreen warned that a breakup of the euro system would "trigger the mother of all financial crises."

References

Ahearne, Alan G., John Ammer, Brian M. Doyle, Linda S. Kole, and Robert F. Martin, "House Prices and Monetary Policy: A Cross-Country Study," Board of Governors of the Federal Reserve System, International Finance Discussion Papers, no. 841 (2005).

Anskar and Belke (2006): The Allocation of Power in the Enlarged ECB Governiong Counciul: An Assessment of the ECB Rotation Model, Journal of Common Market Studies 44, 865-897.

Assenmacher-Wesche, Katrin, and Stefan Gerlach, "Can monetary policy really be used to stabilise asset prices?" VoxEU.org (March 12, 2008, http://www.voxeu.org/index.php?q=node/983.

Avinash Persaud. "Sending the herd off the cliff edge: the disturbing interaction between herding and market-sensitive risk management models," Jacques de Larosiere Prize Essay, Institute of International Finance (2000).

Bagehot, Walter, *Lombard Streeet: A Description of the Money Market* (Henry S. Kin & Co., 1873).

Baker, Tom, "On the Genealogy of Moral Hazard," *Texas Law Review* 75(2) (December 1996): 237-292.

Baldwin, Berglöf, Giavazzi and Widgrén (2001): Nice Try – Should the Treaty of Nice be Ratified, Monitoring European Integration 11, CEPR, London,

Baldwin, Berglöf, Giavazzi and Widgrén (2001): Preparing the ECB for Enlargement, CEPR Policy Paper, no. 6

Baldwin, Berglöf, Giavazzi and Widgrén: Preparing the ECB for Enlargement, CEPR Policy Paper, no. 6 (2001).

Baldwin, R., Berglöf, E., Giavazzi, F. & Widgrén, M. (2001): Eastern enlargement and ECB reform, Swedish Economic Policy Review Vol. 8, 17-49.

Baldwin, Richard, "Feldstein's view on the dollar," VoxEU.org (November 20, 2007), http://www.voxeu.org/index.php?q=node/728.

Baldwin, Richard, "Is the United States headed for double bubble trouble?" VoxEU.org (October 2, 2007), http://www.voxeu.org/index.php?q=node/587.

Bank for International Settlements, "The Recent Behaviour of Financial Market Volatility," BIS Paper, no. 29, Bank for International Settlements, August 2006, http://www.bis.org/publ/bppdf/bispap29.htm.

Bank of England, "Special Liquidity Scheme, Information, Market Notice" (2008), http://www.bankofengland.co.uk/publications/news/2008/029.htm.

Bank of International Settlements, *BIS Quarterly Review* (September 2007).

Barajas, Adolfo, Giovanni Dell'Ariccia, and Andrei Levchenko, 2007, "Credit Booms: The Good, the Bad, and the Ugly," unpublished manuscript, International Monetary Fund.

Barron, James, "Chinatown Bank Endures Run as Fear Trumps Reassurances," *New York Times*, (April 23, 2003).

Bean, Charles, "Asset Prices and Monetary Policy," Federal Reserve Bank of Australia (November 2003).

Bean, Charles, "Asset Prices, Monetary Policy and Financial Stability: A Central Banker's View," speech given at the American Economic Association Annual Meeting, San Diego, 2004.

Ben Bernanke, "Nonmonetary effects of the Financial Crisis in the Propagation of the Great Depression," *American Economic Review*, 73 (1983): 257-276.

Bernanke, B.S., and A.S. Blinder, "The Federal Funds Rate and the Channels of Monetary Transmission," *American Economic Review* 82 (1992).

Bernanke, B.S., and M. Gertler, "Inside the Black Box: The Credit Channel of Monetary Policy Transmission," *Journal of Economic Perspectives* 9 (1995).

Bernanke, Ben S., "Asset-Price 'Bubbles' and Monetary Policy," speech given at the New York Chapter of the National Association for Business Economics (2002).

Bernanke, Ben S., "Central Banking and Bank Supervision in the United States," speech delivered at the Allied Social Science Association Annual Meeting, Chicago, Illinois (January 5, 2007), www.federalreserve.gov/newsevents/speech/bernanke20070105a.htm.

Bernanke, Ben S., "Federal Reserve Communications," speech given at the Cato Institute 25th Annual Monetary Conference, Washington, D.C. (November 14, 2007).

Bernanke, Ben S., "Housing, Housing Finance, and Monetary Policy," speech at the Federal Reserve Bank of Kansas City's Economic Symposium, Jackson Hole, Wyoming (2007), http://www.kc.frb.org/Publicat/Sympos/2007/PDF/OpeningRemarks_0415.pdf.

Bernanke, Ben S., "Housing, Housing Finance, and Monetary Policy," speech at the Federal Reserve Bank of Kansas City's Economic Symposium, Jackson Hole, Wyoming (2007), http://www.kc.frb.org/Publicat/Sympos/2007/PDF/OpeningRemarks_0415.pdf.

Bernanke, Ben S., "The Financial Accelerator and the Credit Channel," speech given at The Credit Channel of Monetary Policy in the Twenty-first Century Conference, Federal Reserve Bank of Atlanta (June 15, 2007), http://www.federalreserve.gov/boardDocs/speeches/2007/20070615/default.htm.

Bernanke, Ben S., "The Recent Financial Turmoil and its Economic and Policy Consequences," speech before the Economic Club of New York, October 15, 2007.

Bernanke, Ben S., and Mark Gertler, "Agency Costs, Net Worth, and Business Fluctuations," *The American Economic Review* 79(1) (March 1989).

Bernanke, Ben S., and Mark Gertler, Should Central Banks Respond to Movements in Asset Prices? *American Economic Review* (May 2001): 253-57.

Bernanke, Ben S., *Essays on the Great Depression* (Princeton University Press, 2004).

Bernanke, Ben S., Thomas Laubach, Frederic S. Mishkin, and Adam S. Posen, *Inflation Targeting: Lessons from the International Experience* (Princeton University Press, 1999).

Bernanke, Benjamin S. 2006, "Global Economic Integration: What's New and What's Not?" speech held at the Federal Reserve Bank of Kansas City's Thirtieth Annual Economic Symposium, Jackson Hole, Wyoming, August.

Biais, Bruno, Fany Declerck, James Dow, Richard Portes, and Ernst-Ludwig von Thadden, *European Corporate Bond Markets: Transparency, Liquidity, Efficiency* (CEPR, 2006).

Boeri T. and L. Guiso, "Subprime Crisis: Greenspan's Legacy," (2007).

Boeri, Tito, and Luigi Guiso, "Subprime crisis: Greenspan's legacy.," VoxEU.org (August 23, 2007), http://www.voxeu.org/index.php?q=node/488.

Bordo, Michael D., "The Crisis of 2007: Some Lessons from History," VoxEU.org, December 17, 2007, http://www.voxeu.org/index.php?q=node/816.

Bordo, Michael D., "The Crisis of 2007: The Same Old Story Only the Players have Changed," mimeo (2007), http://michael.bordo.googlepages.com/The_same_old_story.pdf.

Borio, C., and P. Lowe, "Asset Prices, Financial and Monetary Stability: Exploring the Nexus," BIS Working Paper, no. 114 (2002).

Borio, Claudio and Philip Lowe, "Asset Prices, Financial and Monetary Stability: Exploring the Nexus," BIS Working Paper, no. 114 (2002).

Buchanan, Mike and Themistoklis Fiotakis, "House Prices: A Threat to Global Recovery or Part of the Necessary Rebalancing?" Goldman Sachs Global Economics Paper no. 114 (July 15, 2004).

Buiter, Willem, "A B & B future for subprime borrowers?" VoxEU.org, September 3, 2007, http://www.voxeu.org/index.php?q=node/522.

Buiter, Willem, "Double counting 101: the useful distinction between inside and outside assets," VoxEU.org, March 13, 2008), http://www.voxeu.org/index.php?q=node/986.

Buiter, Willem, "Lessons from Northern Rock: Banking and shadow banking," VoxEU.org (March 4, 2008), http://www.voxeu.org/index.php?q=node/960.

Buiter, Willem, "Lessons from Northern Rock: How to handle failure," VoxEU.org (March 5, 2008), http://www.voxeu.org/index.php?q=node/964.

Buiter, Willem, "Lessons from the 2007 Financial Crisis," CEPR Policy Insight no. 18 (December 2007),

http://www.cepr.org/pubs/PolicyInsights/CEPR_Policy_Insight_018.asp.

Buiter, Willem, "Lessons from the North Atlantic financial crisis," VoxEU.org (December 19, 2007. http://www.voxeu.org/index.php?q=node/830.

Buiter, Willem, and Anne Sibert, "A missed opportunity for the Fed," VoxEU.org (August 18, 2007), http://www.voxeu.org/index.php?q=node/481.

Buiter, Willem, and Anne Sibert, "The Central Bank as the Market Maker of last resort: From lender of last resort to market maker of last resort," VoxEU.org (August 13, 2007), http://www.voxeu.org/index.php?q=node/459.

Calomiris, Charles W, "Not (yet) a `Minsky Moment'," VoxEU.org (November 23, 2007), http://www.voxeu.org/index.php?q=node/739.

Calomiris, Charles W., and Joseph R. Mason. "Credit Card Securitization and Regulatory Arbitrage," *Journal of Financial Services Research*, 26 (2004): 5-27.

Calomiris, Charles W., and Stanley D. Longhofer. "Why the Housing Market Crisis Isn't," Working Paper (2007).

Cardarelli, Roberto, Tommaso Monacelli, Alessandro Rebucci, and Luca Sala, "The changing housing cycle and its implications for monetary policy," VoxEU.org (April 26, 2008), http://www.voxeu.org/index.php?q=node/1089.

Cecchetti, S., H. Genberg, J. Lipsky and S. Wadhwani, "Asset Prices and Central Bank Policy," Geneva Report on the World Economy, no. 2 (2000).

Cecchetti, Stephen G. "Monetary Policy and the Financial Crisis of 2007-2008," CEPR Policy Insight, no. 21 (April 2008), http://www.cepr.org/pubs/PolicyInsights/CEPR_Policy_Insight_018.asp.

Cecchetti, Stephen G., "A Better Way to Organize Securities Markets" *Financial Times* (October 4, 2007)

Cecchetti, Stephen G., "Does well-designed monetary policy encourage risk taking? VoxEU.org (December 3, 2007), http://www.voxeu.org/index.php?q=node/758.

Cecchetti, Stephen G., "Federal Reserve policy actions in August 2007: answers to more questions," VoxEU.org (August 27, 2007), http://www.voxeu.org/index.php?q=node/505.

Cecchetti, Stephen G., "Federal Reserve policy actions in August 2007: frequently asked questions (updated)," VoxEU.org (August 15, 2007), http://www.voxeu.org/index.php?q=node/466.

Cecchetti, Stephen G., “Federal Reserve policy responses to the crisis of 2007-08: A summary,” VoxEU.org (April 10, 2008), http://www.voxeu.org/index.php?q=node/1048.

Cecchetti, Stephen G., “Financial crises are not going away,” VoxEU.org (November 26, 2007), http://www.voxeu.org/index.php?q=node/747.

Cecchetti, Stephen G., “Market Liquidity and Short Term Credit: The Financial Crisis of August 2007,” http://www.ifk-cfs.de/fileadmin/downloads/events/ecbwatchers/20070907ecb_cecchetti_document.pdf.

Cecchetti, Stephen G., “Preparing for the next financial crisis,” VoxEU.org (November 18, 2007), http://www.voxeu.org/index.php?q=node/730.

Cecchetti, Stephen G., “Subprime Series, part 2: Deposit insurance and the lender of last resort,” VoxEU.org (November 28, 2007), http://www.voxeu.org/index.php?q=node/748.

Cecchetti, Stephen G., “Subprime Series, part 3: Why central banks should be financial supervisors,” VoxEU.org (November 30, 2007), http://www.voxeu.org/index.php?q=node/755.

Cecchetti, Stephen G., “The Art of Crisis Management: Auctions and Swaps,” VoxEU.org (December 16, 2007), http://www.voxeu.org/index.php?q=node/814.

Cecchetti, Stephen G., “The Fed’s emergency interest cut: There’s a new sheriff in town,” VoxEU.org (January 23, 2008), http://www.voxeu.org/index.php?q=node/888.

Cecchetti, Stephen G., Hans Genberg, John Lipsky and Sushil Wadhwani, “Asset Prices and Central Bank Policy,” Geneva Report on the World Economy 2, CEPR and ICMB (2000).

Cecchetti, Stephen G., *Money, Banking and Financial Markets* (2nd ed., McGraw-Hill Irwin, 2008).

Chinn, Menzie and Jeffrey Frankel (2008). "The Euro May Over the Next 15 Years Surpass the Dollar as Leading International Currency," http://ksghome.harvard.edu/~jfrankel/EuroVs$-IFdebateFeb2008.pdf.

Coeuré, Benoit, 2007, "Faut-il Avoir Peur Des Fonds Souverains?" forthcoming, Les Cahiers, Le Cercle des économistes.

Corsetti G., P. Martin and P. Pesenti, "Varieties and the transfer problem: the extensive margin of current account adjustment," European University Institute, mimeo (2007).

Corsetti, Giancarlo. The anatomy of dollar depreciation. VoxEU.org (November 6, 2007), http://www.voxeu.org/index.php?q=node/699.

Coval, Joshua D., Jakub W. Jurek, and Erik Stafford, "Economic Catastrophe Bonds," Harvard Business School Working Paper, no. 07-102 (June 2007).

Cox, Christopher, 2007, "The Role of Governments in Markets". speech at Harvard on 24th October 2007, http://www.sec.gov/news/speech/2007/spch102407cc.htm.

Danielsson, Jon, "Blame the models," VoxEU.org (May 8, 2008), http://www.voxeu.org/index.php?q=node/1118.

Danielsson, Jon, "The Emperor has no Clothes: Limits to Risk Modelling," *Journal of Banking and Finance*, 26(7) (2002), 1273-96.

Day, Stephen, and Agnes Molnar, "Investment vehicles: The advantages of flexibility," *International Financial Law Review* (November 2006).

De Grauwe, Paul, "There is more to central banking than inflation targeting," VoxEU.org (November 14, 2007), http://www.voxeu.org/index.php?q=node/716.

de la Dehesa, Guillermo A., "How to avoid further credit and liquidity confidence crises," VoxEU.org (October 19, 2007), http://www.voxeu.org/index.php?q=node/657.

Dell'ariccia, G., and R. Marquez, "Lending Booms and Lending Standards," *Journal of Finance* 61 (2006).

Dell'Ariccia, Giovanni, Deniz Igan, and Luc Laeven, "Credit Booms and Lending Standards: Evidence From The Subprime Mortgage Market," CEPR Discussion Paper, no. 6683, (February 2008), http://www.cepr.org/pubs/new-dps/dplist.asp?dpno=6683.asp.

Dell'Ariccia, Giovanni, Deniz Igan, and Luc Laeven, "The relationship between the recent boom and the current delinquencies in subprime mortgages," VoxEU.org (February 4, 2008), http://www.voxeu.org/index.php?q=node/914.

Dell'Ariccia, Giovanni, Deniz Igan, and Luc Laeven, "The US subprime mortgage crisis: A credit boom gone bad?" VoxEU.org (February 4, 2008), http://www.voxeu.org/index.php?q=node/905.

Dell'Ariccia, Giovanni, Deniz Igan, and Luc Laeven, 2008, "Credit Booms and Lending Standards: Evidence from the Subprime Mortgage Market," CEPR Discussion Paper, no. 6683, London, UK: CEPR.

Demirgüç-Kunt, Asli, and Edward Kane "Deposit insurance around the globe: where does it work?" *Journal of Economic Perspectives* 16(2) (Spring 2002): 175–95.

Dizard, John, *The Financial Times* (January 14, 2008).

Draghi, Mario, "Monetary Policy and New Financial Instruments," speech given at the Central Bank of Argentina Money and Banking Conference (2007).

Dynan, Karen E., Douglas W. Elmendorf, and Daniel E. Sichel, "Can Financial Innovation Help to Explain the Reduced Volatility of Economic Activity?" *Journal of Monetary Economics* 53 (January 2006): 123–50.

Eichengreen, Barry, "The Breakup of the Euro Area," NBER Working Paper, no. 13393 (2007).

Eichengreen, Barry, "The euro: love it or leave it? VoxEU.org (November 19, 2007), http://www.voxeu.org/index.php?q=node/729.

Eichengreen, Barry, The Breakup of the Euro Area, NBER Working Paper, no. 13393.

Eisenbeis, Robert A., and George G. Kaufman, “Cross-Border Banking: Challenges for Deposit Insurance and Financial Stability in the European Union,” Federal Reserve Bank of Atlanta Working Paper, no. 2006-15 (October 2006).

Enoch, Charles and Inci Ötker-Robe (Editors), 2007, Rapid Credit Growth in Central and Eastern Europe: Endless Boom or Early Warning?, International Monetary Fund and Palgrave MacMillan, New York.

European Central Bank, “Eurosystem Staff Macroeconomic Projections for the Euro Area” (December 6 2007), http://www.ecb.int/pub/pdf/other/eurosystemstaffprojections200712en.pdf.

European Central Bank, *Monthly Bulletin* (April 2005).

F. Partnoy, 2006, ‘How and why credit rating agencies are not like other gatekeepers’, Legal Studies Research Paper, no. 07-46, University of San Diego School of Law.

Feldstein, Martin, “Why is the dollar so high?” NBER Working Paper, no. 13114 (May 2007).

Financial Stability Forum, Working Group on Market and Institutional Resilience, 15 October 2007

Fracasso, Andrea, Hans Genberg, and Charles Wyplosz, ‘How Do Central Banks Write? An Evaluation of Inflation Targeting Central Banks’, Geneva Reports on the World Economy Special Report 2, (Centre for Economic Policy Research, 2003).

Frankel, Jeffrey A. The euro could surpass the dollar within ten years,” VoxEU.org (March 18, 2008), http://www.voxeu.org/index.php?q=node/989.

G. Jiménez, S. Ongena, J.-L. Peydró and J. Saurina, “Hazardous Times for

Monetary Policy: What Do Twenty-Three Million Bank Loans Say About the Effects of Monetary Policy on Credit Risk?” CEPR Discussion Papers, no. 6514 (2007).

Giovannini, Alberto, and Luigi Spaventa, "Filling the information gap," VoxEU.org (November 5, 2007), http://www.voxeu.org/index.php?q=node/690.

Goodhart, Charles A.E. and Boris Hofmann, "House Prices, Money, Credit, and the Macroeconomy," Financial Markets Group, London School of Economics, mimeo (2007).

Goodhart, Charles and Avinash Persaud. "How to avoid the next crash." *The Financial Times*, (January 30, 2008), http://www.ft.com/cms/s/0/fed495d4-cf4b-11dc-854a-0000779fd2ac.html.

Goodhart, Charles, "The Organizational Structure of Banking Supervision," Financial Stability Institute Occasional Papers, no.1, (November 2000), www.bis.org/fsi/fsipapers.htm.

Gros (2003): Reforming the Composition of the ECB Council in View of Enlargement: an Opportunity Missed! Intereconomics: Review of European Economic Policy, 38, 124-129

Gros, Daniel, "Bubbles in Real Estate, A Longer-Term Comparative Analysis of Housing Prices in Europe and the U.S.," CEPS Working Document, no. 239, 2006.

Gros, Daniel, "House price bubbles made in Europe," VoxEU.org (October 25, 2007), http://www.voxeu.org/index.php?q=node/642.

Gylfason, Thorvaldur, "Events in Iceland: Skating on thin ice?" VoxEU.org (April 7, 2008), http://www.voxeu.org/index.php?q=node/1033.

Hartmann, Philipp, Stefan Straetmans, and Casper G. De Vries, "Banking system stability: A cross Atlantic perspective." NBER Working Paper, no. 11698 (October 2005), http://www.nber.org/papers/w11698.

Hildebrand, Philipp M. The challenge of sovereign wealth funds," VoxEU.org (January 21, 2008), http://www.voxeu.org/index.php?q=node/881.

Ho, Giang and Anthony Pennington-Cross, 2007, "The Varying Effects of Predatory Lending Laws on High-Cost Mortgage Applications," *Federal Reserve Bank of St. Louis Review* 89(1): 39-59.

Institutional Risk Analytics, Comments to the proposals, October 2006.

Ioannidou, V. P., "Does Monetary Policy Affect the Central Bank's Role in Bank Supervision?" *Journal of Financial Intermediation* 14 (2005).

Ioannidou, V.P., S. Ongena, and J.L. Peydró, "Monetary Policy and Subprime Lending: A Tall Tale of Low Federal Funds Rates, Hazardous Loans, and Reduced Loan Spreads," CentER - Tilburg University / European Central Bank, mimeo (2007).

Ioannidou, Vasso P., Steven Ongena, and Jose Luis Peydro, "The impact of short-term interest rates on risk-taking: hard evidence," VoxEU.org (October 17, 2007), http://www.voxeu.org/index.php?q=node/641.

J.R. Mason and J. Rossner, "Where Did the Risk Go? How Misapplied Bond Ratings Cause Mortgage Backed Securities and Collateralized Debt Obligation Market Disruptions," mimeo, May 2007.

Jeffrey A. Frankel, "The Effect of Monetary Policy on Real Commodity Prices," NBER Working Paper, no. 12713 (December 2006), http://www.nber.org/papers/w12713.

Jones, Matthew T. and Maurice Obstfeld, "Saving, Investment, and Gold: A Reassessment of Historical Current Account Data," in Calvo, Guillermo A., Rudiger Dornbusch, and Maurice Obstfeld, eds., *Money, Capital Mobility, and Trade: Essays in Honor of Robert A. Mundell* (MIT Press, 2000).

Kashyap, A.K., and J.C. Stein, "What Do a Million Banks Have to Say about the Transmission of Monetary Policy," *American Economic Review* 90 (2000).

King, Mervyn, "Turmoil in Financial Markets: What Can Central Banks Do?" paper submitted by the Governor of the Bank of England to the Treasury Committee of the U.K. Parliament, (September 12, 2007), http://www.bankofengland.co.uk/publications/other/monetary/treasurycommittee/

Kiyotaki, Nobuhiro, and John Moore, “Credit Cycles,” *Journal of Political Economy* 105 (April 1997): 211–48

Kiyotaki, Nobuhiro, and John Moore, “Credit Cycles,” *The Journal of Political Economy* 105(2) (April 1997).

Kohn, Donald L., “Monetary Policy and Asset Prices,” speech given at “Monetary Policy: A Journey from Theory to Practice,” European Central Bank Colloquium (Frankfurt, 2006).

Krugman and Baldwin, “The Persistence of the US Trade Deficit,” Brookings Papers on Economic Activity, 1:1987, p. 1-43.

Laganá, Marco, Martin Peřina, Isabel von Köppen-Mertes and Avinash Persaud, “Implications for Liquidity from Innovation and Transparency in the European Corporate Bond Market.” ECB Occasional Paper, no. 50, (August 2006), http://www.ecb.int/pub/pdf/scpops/ecbocp50.pdf.

Leijonhufvud, Axel, “Bubble, bubble, toil and trouble,” VoxEU.org (October 26, 2007), http://www.voxeu.org/index.php?q=node/674.

Lombardi, M. E S.Sgherri, “(Un)naturally low? Sequential Monte Carlo tracking of the US Natural Interest Rate,” ECB Working Papers, no.794 (August 2007).

Malpass, David, “Running on Empty?” *The American* (September/October 2007): 72-73.

Matsuyama, K., “Credit Traps and Credit Cycles,” *American Economic Review* 97 (2007).

Mervyn King, speech at the Northern Ireland Chamber of Commerce and Industry, Belfast, 9 October 2007.

Michael D. Bordo, “The Crisis of 2007: The Same Old Story Only the Players have Changed” (2007).

Michael Woodford, "Central-Bank Communication and Policy Effectiveness," in The Greenspan Era: Lessons for the Future, Kansas City: Federal Reserve Bank of Kansas City (2005).

Michael Woodford, "The Case for Forecast Targeting as a Monetary Policy Strategy," *Journal of Economic Perspectives* (Fall 2007): 3-24

Minsky, Hyman P., *John Maynard Keynes* (Columbia University Press: 1975).

Mishkin, Frederic S., "The Federal Reserve's Enhanced Communication Strategy and the Science of Monetary Policy," speech given at The Undergraduate Economics Association, Massachusetts Institute of Technology (November 29, 2007).

Mishkin, Fredric S., "Monetary policy flexibility, risk management and financial disruptions," speech given at Federal Reserve Bank of New York, January 11.

Mishkin, Fredric S., "The Federal Reserve's Tools for Responding to Financial Disruptions," speech given at the Tuck Global Capital Markets Conference, February 15, 2008),

Monacelli, Tommaso, "A decision that lacks transparency," VoxEU.org (December 14, 2007. http://www.voxeu.org/index.php?q=node/813.

Monacelli, Tommaso, "An extensive but benign crisis? VoxEU.org (August 31, 2007), http://www.voxeu.org/index.php?q=node/516.

Monacelli, Tommaso. (At least) Three simple reasons to fear inflation. VoxEU.org (March 20, 2008), http://www.voxeu.org/index.php?q=node/995.

Moody's, "Update" (September 5, 2007).

Nikolaus Wolf, "Scylla and Charybdis: Explaining Europe's Exit from Gold, January 1928-December 1936," CEPR Discussion Paper, no. 6685 (2008).

Nobuyuki Oda and Kazuo Ueda, "The Effects of the Bank of Japan's Zero Interest Rate Commitment and Quantitative Monetary Easing on the Yield Curve: A Macro-Finance Approach," Bank of Japan Working Paper, no. 05-E-6 (April 2005).

Obstfeld, M. and K. Rogoff, "Global Current Account Imbalances and Exchange Rate Adjustments," *Brookings Papers on Economic Activity* 1 (2005): 67-123

Obstfeld, M. and K. Rogoff, "The Unsustainable US Current Account Position Revisited," in Clarida, Richard, ed., *G7 Current Account Imbalances: Sustainability and Adjustment*, (University of Chicago Press, forthcoming).

Obstfeld, Maurice and Alan M. Taylor, "Globalization and Capital Markets," in Michael Bordo, Alan M. Taylor and Jeffrey G. Williamson, eds., *Globalization in Historical Perspective* (The University of Chicago Press, 2003).

Onado, Marco, "Subprime 'crisis:' Who pays and what needs fixing," VoxEU.org (August 19, 2007), http://www.voxeu.org/index.php?q=node/475.

Organisation for Economic Co-operation and Development, *Economic Outlook*, no. 78, Chapter III, "Recent House Price Developments: The Role of Fundamentals," 2005.

Papaioannou, Elias, Richard Portes, and Gregorios Siourounis, "The Asset Composition of International Reserves," mimeo.

Peek, J., E. S. Rosengren, and G. M. Tootell, "Is Bank Supervision Central to Central Banking," *Quarterly Journal of Economics* 124 (1999).

Persaud, Avinash, "Sending the Herd off the Cliff Edge." *World Economics* 1(4) (2000), http://www.world-economics-journal.com/Contents/ArticleOverview.aspx?ID=35.

Persaud, Avinash, "The inappropriateness of financial regulation," VoxEU.org (May 1, 2008), http://www.voxeu.org/index.php?q=node/1102.

Persaud, Avinash, "Why bank risk models failed," VoxEU.org (April 4, 2008), http://www.voxeu.org/index.php?q=node/1029.

Portes, Richard, "Ratings agency reform," VoxEU.org (January 22, 2008), http://www.voxeu.org/index.php?q=node/887.

Portes, Richard, "Regulating the international financial system: towards a more balanced, market-based model," VoxEU.org (November 15, 2007), http://www.voxeu.org/index.php?q=node/719.

Portes, Richard, "Sovereign wealth funds," VoxEU.org (October 17, 2007), http://www.voxeu.org/index.php?q=node/636.

Portes, Richard. Ratings agency reform. VoxEU.org (January 22, 2008), http://www.voxeu.org/index.php?q=node/887.

R. Ferguson, P. Hartmann, F. Panetta and R. Portes, 2007, International Financial Stability, CEPR and ICMB.

R. Levich, G. Majnoni and C. Reinhart, eds., *Ratings, Rating Agencies and the Global Financial System* (Kluwer, 2002).

Rajan, Raghuram, "Has Finance Made the World Riskier?" *European Financial Management* 12 (2006).

Rajan, Raghuram, "Has financial development made the world riskier?" Jackson Hole Symposium (2005).

Reinhart, Carmen M, "Reflections on the International Dimensions and Policy Lessons of the US Subprime Crisis," VoxEU.org (March 15, 2008), http://www.voxeu.org/index.php?q=node/988.

Reinhart, Carmen M., "Sovereign Credit Ratings Before and After Financial Crises," in Richard Levich, Giovanni Majnoni, and Carmen M. Reinhart, eds. *Ratings, Rating Agencies and the Global Financial System* (Kluwer, 2002).

Reinhart, Carmen M., and Kenneth Rogoff. "Is the 2007 US Sub-prime Financial Crisis So Different? An International Historical Comparison," *American Economic Review* 98(2) (May 2008).

Saint-Paul, Gilles, "How the US imbalances can be corrected," VoxEU.org (December 6, 2007), http://www.voxeu.org/index.php?q=node/773.

Shiller, Robert, *Irrational Exuberance* (2nd ed., Princeton University Press, 2005).

Simensen, Ivar, and Ralph Atkins, "'Not Uncritical:' Subprime Exposure Drags Down German Banks," *The Financial Times* (August 22, 2007)

Small, David H., and James A. Clouse, "The Scope of Monetary Policy Actions Authorized under the Federal Reserve Act," Board of Governors of the Federal Reserve System Research Paper Series, FEDS Papers, no. 2004-40 (July 2004), http://federalreserve.gov/pubs/feds/2004/200440/200440abs.html.

Snower, Dennis J. Fallout from the credit crunch. VoxEU.org (October 28, 2007), http://www.voxeu.org/index.php?q=node/586.

Snower, Dennis J. Four mega-dangers international financial markets face. VoxEU.org (April 30, 2008), http://www.voxeu.org/index.php?q=node/1095.

Spaventa, Luigi, "Subprime crisis and credit risk transfer: something amiss," VoxEU.org (September 6, 2007), http://www.voxeu.org/index.php?q=node/534.

Spaventa, Luigi. Avoiding disorderly deleveraging: a reasonable, radical proposal. VoxEU.org (May 8, 2008), http://www.voxeu.org/index.php?q=node/1115.

Stiglitz, J., and A. Weiss, "Credit Rationing in Markets with Imperfect Information," *American Economic Review* 71 (1981).

Suarez, Javier, "The Need for an Emergency Bank Debt Insurance Mechanism," VoxEU.org (March 27, 2008), http://www.voxeu.org/index.php?q=node/1013.

Suarez, Javier, "The Need for an Emergency Bank Debt Insurance Mechanism," CEPR Policy Insight, no. 19 (March 2008), http://www.cepr.org/pubs/PolicyInsights/CEPR_Policy_Insight_019.asp.

Summers, Lawrence, "Moral Hazard Fundamentalists," *Financial Times* (23 September 2007).

Svensson, Lars E.O., "Inflation Targeting," in Larry Blum and Steven Durlauf, eds., *The New Palgrave Dictionary of Economics* (2nd ed., Palgrave, 2008).

Tabellini, Guido, "Why did bank supervision fail?" VoxEU.org (March 19, 2008), http://www.voxeu.org/index.php?q=node/994.

Taleb, Nassim, *Fooled by Randomness: the Hidden Role of Chance in Life and the Markets* (Penguin Books 2007).

The Financial Times (February 13, 1998).

Ubide, Angel, "Financial crisis: why it may last," Telos, October 16, 2007), http://www.voxeu.org/index.php?q=node/637.

Vives, Xavier, "Bagehot, central banking, and the financial crisis," VoxEU.org (March 31, 2008), http://www.voxeu.org/index.php?q=node/1015.

Vives, Xavier, and Jean Charles Rochet "Coordination Failures and the Lender of Last Resort: Was Bagehot Right after all?" Journal of the European Economic Association 2(6) (December 2004).

Wheelock, David C., "What Happens to Banks When House Prices Fall? U.S. Regional Housing Busts of the 1980s and 1990s," *Federal Reserve Bank of St. Louis Review* (September/October 2006): 413-28.

Widgrén, Mika, "No relief for ECB's status quo headache from rotation," VoxEU.org (February 25, 2008, http://www.voxeu.org/index.php?q=node/949.

Wolf, Nikolaus, "Scylla and Charybdis: What Europe's exit from gold in the 1930s says about the euro," VoxEU.org (February 21, 2008), http://www.voxeu.org/index.php?q=node/942.

Woodford, Michael, "Forward guidance for monetary policy: Is it still possible? VoxEU.org (January 17, 2008), http://www.voxeu.org/index.php?q=node/872.

Woodford, Michael, "The Case for Forecast Targeting as a Monetary Policy Strategy," *Journal of Economic Perspectives* (Fall 2007).

Woodford, Michael, "The Fed's enhanced communication strategy: stealth inflation targeting? VoxEU.org (January 8, 2008), http://www.voxeu.org/index.php?q=node/860.

Wyplosz, Charles, “Subprime ‘crisis:’ observations on the emerging debate,” VoxEU.org, August 16, 2007), http://www.voxeu.org/index.php?q=node/471.

Wyplosz, Charles, “While the ECB ponders, the Fed moves, and cleverly at that,” VoxEU.org (August 17, 2007), http://www.voxeu.org/index.php?q=node/479.