Future of Central Banking under Globalization:

Summary of the 2010 International Conference Organized by the Institute for Monetary and Economic Studies of the Bank of Japan

by Shigenori Shiratsuka, Wataru Takahashi, Yuki Teranishi, and Kozo Ueda

I. Introduction

The Institute for Monetary and Economic Studies (IMES) of the Bank of Japan (BOJ) held its 2010 International Conference, entitled "Future of Central Banking under Globalization," on May 26 and 27, 2010, at the Bank of Japan Head Office in Tokyo.[1] The conference sought to shed light on the global linkage between the financial markets, the financial system, and the real economy to explore implications for the future of central banking. The conference involved some 100 distinguished participants from academia, international organizations, and central banks.[2]

The conference began with two opening remarks, delivered by the Governor of the BOJ, **Masaaki Shirakawa**, and by the Chairman of the Board of Governors of the Federal Reserve System (Fed), **Ben S. Bernanke**. The honorary adviser of IMES, **Bennett T. McCallum** (Carnegie Mellon University) delivered the keynote speech. **William R. White** (Organisation for Economic Co-operation and Development) presented the Mayekawa Lecture. Each of the five sessions consisted of a paper presentation and two formal discussions, followed by floor discussions. The conference concluded with a policy panel discussion.

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1. As conference organizers, we express our sincere gratitude to Bennett T. McCallum and Maurice Obstfeld, our honorary advisers; to Kazuo Ueda, our chief councillor; and to all other conference participants for thought-provoking presentations and discussions. Special thanks go to Junko Miyoshi and other staff members of the Institute for Monetary and Economic Studies, who devoted much energy to organizing this conference. The views expressed in this paper do not necessarily reflect the views of the Bank of Japan.

2. See Appendix 1 for the program. See Appendix 2 for a list of participants; their affiliation is as of the time the conference was held.

II. Opening Session

In his opening remarks,[3] **Shirakawa** discussed the future of central banks and central banking. He pointed out that central banks had succeeded in stabilizing inflation and economic activity and now faced new and difficult challenges, such as changes in the manifestation of economic imbalances, the risk of creating new bubbles through policy response after the bursting of a bubble, and the risk of involvement in quasi-fiscal policy through unconventional policy measures. In addressing these challenges, he emphasized the importance of understanding the primary mandate for a central bank, improving financial structures, and adequately considering the international monetary system. Finally, he touched on the importance of institutional culture for central banks, encompassing banking operations, constant learning, integration of wide-ranging knowledge, and cooperation among central banks.

Bernanke discussed central bank independence, transparency, and accountability.[4] Referring to theory and experience, he argued that greater central bank independence contributed to desirable macroeconomic outcomes and financial stability. However, he spoke against unconditional independence, suggesting that the central bank's actions must be accountable to the public, its goals set by the government, and its independence not extended to non-monetary functions without qualification. Finally, he called for clarity regarding the range of central bank activities, addressing the issue of the fiscal/monetary distinction arising from unconventional policy.

From the floor, **Kazuo Ueda** (University of Tokyo) asked about the importance of setting a higher inflation target to produce a wider safety margin against the zero lower bound of nominal interest rates. While **Shirakawa** in his speech had stated that a higher inflation target did not seem to have materially changed the recovery path of the economy, **Bernanke** answered that central banks had established credibility for inflation rates close to 2 percent, and that it would be risky to reset the inflation target. Regarding the inflation target, **Pierpaolo Benigno** (LUISS Guido Carli) inquired about the need for numerical clarification of price stability. **Bernanke** responded that there were different ways to communicate what price stability meant, pointing out that the Fed had no official target, but provided information about inflation projections in a long time horizon.

Benigno asked whether central banks' unconventional policy should be conducted in normal times. **Pierre-Olivier Gourinchas** (University of California at Berkeley) added a question inquiring whether foreign currency swap programs should be made permanent. In his reply, **Bernanke** noted that he valued their backstop role in stabilizing the financial markets under severely stressed circumstances, but believed that such measures should be temporary, serving as incentives for financial institutions to manage currency mismatches. **Shirakawa** added that in the face of systemic crisis, the most important role for central banks became the role of the lender of last resort. Regarding the foreign currency swap program, both **Bernanke** and **Shirakawa** pointed out the importance of infrastructure elements, including cross-border collateral arrangements.

3. For details, see Shirakawa (2010).
4. For details, see Bernanke (2010).

III. Keynote Speech: The Future of Central Banking: A Lesson from United States History[5]

McCallum reviewed an aspect of U.S. monetary history by discussing how the metallic standard had been overturned by the fiat money system, relating the process to the issue of greenbacks during the Civil War and subsequent Supreme Court decisions. He argued that the failure of the Supreme Court to distinguish between monetary and fiscal policy had contributed to decisions that made possible the shift from the metallic standard to a fiat money system. He noted that although the U.S. Constitution was designed to prevent major changes in the purchasing power of the medium of exchange, due to the absence of readily available data on comprehensive price indices, the metallic standard had been the only means of achieving price stability. As for the implications for current monetary policy, he concluded that the availability of comprehensive price indices made possible a clear monetary standard that would be in accordance with the Constitution and emphasized the importance of a clear distinction between monetary and fiscal policy aspects of central bank actions.

IV. Mayekawa Lecture: Some Alternative Perspectives on Macroeconomic Theory and Some Policy Implications[6]

White stressed the need to review workhorse models for monetary policy analysis, such as new classical and New Keynesian models and applied Keynesian models, in addition to a consideration of insights from the Austrian school. He pointed out three shortcomings in the workhorse models: new classical and New Keynesian models assumed a self-stabilizing economy; applied Keynesian models performed poorly in forecasting turning points and tended to ignore expectations; and all of the models paid inadequate attention to credit, balance sheets of financial institutions, and financial imbalances that led to crises and subsequent stagnant economic conditions. In contrast, he stressed, the Austrian theory considered the creation of money and credit in the financial system. Finally, he suggested that monetary policy needed to have a long-term horizon, focusing on avoiding future crises arising from the accumulation of imbalances. He noted that policies directed to lowering the probability and costs of major crises would be more tolerant of minor downturns than previously.

In the general discussion, **Pierre Siklos** (Wilfrid Laurier University) pointed to the difficulty of assessing the magnitude and duration of downturns. **White** replied that downturns over the preceding 20 years had been relatively limited. **Thomas J. Jordan** (Swiss National Bank) asked about policy recommendations during the recent crisis. **White**, pointing out the importance of medium-term policy implications, replied that policy actions taken during the crisis had been appropriate, from the perspectives of both Hayek and Keynes. **Takatoshi Ito** (University of Tokyo) and **Ueda** inquired about how to formulate monetary policy in a leaning-against-the-wind manner. **White**

5. For details, see McCallum (2010).
6. For details, see White (2010).

suggested expanding the Taylor rule to include useful indicators for imbalances, such as the growth rate of credit and a spectrum of asset prices. However, he suggested ignoring these terms until deviations from norms reached a certain magnitude.

V. Paper Presentation Sessions

A. Can Cross-Border Financial Markets Create Good Collateral in a Crisis?[7]

Makoto Saito (Hitotsubashi University) presented a model in which a country-specific catastrophic shock was shared between two countries in the presence of solvency constraints. Using the model, he explored whether markets could create collateral assets (relatively safe bonds) in a crisis endogenously. Due to severe solvency constraints, realized catastrophic shocks could not be covered fully by *ex ante* arrangements of catastrophe insurance. However, most uninsured shocks could be financed *ex post* by the collateral asset created endogenously. As for the underlying mechanism, he explained, a non-damaged country financed risky loans (Lucas tree) by issuing relatively safe bonds to a damaged country. Such safe bonds served as high-quality collateral on the damaged country to finance uncovered losses without violating solvency constraints.

In his comments, **Maurice Obstfeld** (University of California at Berkeley) pointed out the unrealistically small ratio of dividends to labor endowment. He also noted that the international risk-sharing did not occur not just in catastrophic environments, but in normal ones. The second discussant, **Mark M. Spiegel** (Fed San Francisco), pointed to plummeting consumption in Argentina and insolvency issues in Greece as facts inconsistent with the model presented. He then indicated that holding the Lucas tree enabled global risk-sharing and suggested introducing a country-specific Lucas tree.

From the floor, **Gourinchas** asked what would happen if equities were undervalued, not overvalued. **Saito** answered that the overvalued case was more realistic. In reply to Obstfeld, **Saito** noted that since a sufficient Lucas tree was a good risk-sharing device, he had set a very low ratio of dividends to labor endowment. To avoid this aspect, he proposed introducing a Lucas tree-specific shock or a country-specific shock. In response to Spiegel, **Saito** argued that in some developed countries like Japan, despite the major financial shock and the drop in GDP in 2007–09, consumption was relatively stable. Finally, he admitted that insolvent cases fell beyond the scope of the model.

B. Exorbitant Privilege and Exorbitant Duty[8]

Gourinchas coined the term “exorbitant duty” to accompany the existing idea of “exorbitant privilege.” Exorbitant duty represented a deterioration in the U.S. net foreign asset position in times of global stress, while exorbitant privilege represented a higher return on U.S. external assets than payment for its external liabilities. He estimated payments from the United States to the rest of the world to be approximately 19 percent of U.S. GDP during the recent crisis from 2007 to 2009. To explain these observations, he proposed a model for the center country in the international financial system. In this model, the United States had more risk tolerance than the rest of the world, generating

7. For details, see Saito, Suzuki, and Yamada (2010).
8. For details, see Gourinchas, Rey, and Govillot (2010).

cross-country differentials in consumption patterns. Consequently, the United States acted as a provider of insurance against global shocks, collecting insurance premiums in good times while making insurance payments in times of crisis.

The first discussant, **Kosuke Aoki** (London School of Economics), commented that exorbitant duty was potentially inconsistent with two observations. First, the exchange rates of two major U.S. bond holders, Japan and China, had appreciated during the crisis, indicating that these countries had not received transfers from the United States. Second, in terms of consumption smoothing, the cross-country relationship between the U.S. bond holdings and consumption during the crisis had been unclear. The second discussant, **Karolina Ekholm** (Sveriges Riksbank), pointed out that global imbalances did not constitute an issue of concern if the exorbitant privilege hypothesis was correct and called for a deeper quantitative analysis.

From the floor, **Obstfeld** suggested incorporating economic growth and separating intertemporal substitutions and degree of risk aversion in the utility function. **Gourinchas** argued that incorporating economic growth under the current setting of the utility function generated the non-stationarity, but modifying the utility function appeared to resolve the problem. In response to Aoki, **Gourinchas** remarked that the focus of the paper was on the transfer from the United States to the rest of the world, not the receipt of a transfer in a specific country. **Ito** asked about the role of deleveraging of the U.S. financial institutions during the recent crisis.

C. Banking Globalization and International Business Cycles[9]

Kozo Ueda (BOJ) presented a two-country dynamic stochastic general equilibrium model to examine the nature of the recent financial crisis and its immediate spread throughout the world due to the banking globalization. In the model, financial intermediaries (FIs) entered into chained credit contracts at home and abroad, engaging in cross-border lending to entrepreneurs by undertaking cross-border borrowing from investors. The FIs as well as the entrepreneurs in two countries were credit constrained, so their entire net worth mattered. Using the model, he argued that the FIs' globalization, net worth shock, and credit constraints were the keys to understanding the recent crisis. Finally, for policy implications, he pointed out that the FIs' globalization enhanced the spillover effects of domestic monetary and capital injection policy on the world economy.

In his comments, **Christopher J. Waller** (Fed St. Louis) suggested constructing a flexible price model and studying its behavior before extending it to a sticky price model. He pointed out that according to U.S. data, corporate retained earnings exceeded aggregate investment, which was inconsistent with the model's assumption that investment had to be financed by borrowing. Finally, he cast doubts on the shock sustained by FIs as the driving source of the recent crisis, arguing that the main source of shocks was the eruption of severe information frictions.

From the floor, **Kiyohiko G. Nishimura** (BOJ) asked why a bilateral correlation for GDP was negative in the 1990s but positive in the 2000s. **Ueda** answered that the degree of bilateral correlations depended on the sources of the shocks and that the FIs' net

9. For details, see Ueda (2010).

worth shock combined with increasing FIs' globalization in the 2000s yielded the high bilateral correlation. Responding to Waller, **Ueda** remarked that his model was based on asymmetric information, thereby creating endogenous propagation mechanisms arising from information frictions. At the same time, he admitted difficulty in explaining the very nature of the shock sustained by FIs. Regarding the flexible price model, he referred to his previous paper.[10] **Etsuro Shioji** (Hitotsubashi University) inquired about the method for analyzing the foreign currency swap program using the model.

D. Globalization, Pass-Through, and Inflation Dynamic[11]

Benigno presented a model in which globalization influenced inflation dynamics through more intense competition with foreign firms. In this model, domestic and foreign firms competed strategically to increase market share through pricing decisions. He showed that the progress of globalization, interpreted as an increase in the presence of foreign goods in the domestic market, increased the exchange rate pass-through. Moreover, globalization influenced inflation dynamics by changing the pricing strategies of domestic firms, modifying the slope and the position of the Phillips curve. He then presented empirical evidence that increased competition due to newcomers like China had increased the exchange rate pass-through, as the model would predict.

Shioji, the first discussant, began by introducing the long-standing debate in Japan about whether relative price changes, caused by an increase in imports of low priced goods from China, had lowered aggregate prices. In his view, the model provided clues to an explanation for such phenomena. He suggested incorporating intermediate goods in the model and strengthening the analysis in the empirics. The second discussant, **Mark Wynne** (Fed Dallas), cast doubts on the robustness of empirical evidence for the increase in exchange rate pass-through. He then remarked that firms in the model competed on the basis of price, while internationally active firms competed on the basis of innovation.

From the floor, **White** emphasized the effect on unit labor costs rather than on prices. In reply to Shioji and White, **Benigno** answered that both unit labor costs and intermediate goods were missing but important components. He agreed that the empirical evidence was as yet inconclusive. **Aoki** asked whether a permanent change in a foreign share in the model changed the degree of pass-through permanently, and whether the model was applied to Japan to estimate the length and scale of deflation. **Benigno** replied that the permanent change in the foreign share would change the steady state, and that the model made it possible to simulate conditions in Japan using linear approximations around a non-zero inflation steady state. **Siklos** asked about the effects of monetary policy on exchange rates and inflation dynamics; **Obstfeld** called for a general equilibrium model to analyze the effects. **Shigenori Shiratsuka** (BOJ) pointed to adjustments in the economic structure due to international competition as another channel linking relative price changes to general prices.

10. For details, see Hirakata, Sudo, and Ueda (2009).
11. For details, see Benigno and Faia (2010).

E. Financial Regulation Going Forward[12]

Franklin Allen (University of Pennsylvania) argued that the recent crisis was primarily caused by housing price bubbles, and that housing price bubbles were caused by both easy monetary policy and the easy availability of credit. He then related easy credit conditions to global imbalances caused by the build-up of large foreign exchange reserves at Asian central banks. He suggested three reforms: first, financial regulations and government intervention needed to be based on a coherent intellectual framework for correcting market failures. Second, central banks needed to be subject to more checks and balances than currently. Third, the international financial framework needed to be reformed so that Asian countries could rely on it in crisis times, thereby reducing the need for the accumulation of foreign exchange reserves.

The first discussant, **Ito**, argued that regulatory failure was the most important factor of the three raised by Allen. He noted that although the Japanese experience in the late 1990s was similar to the recent U.S. experience, one aspect Japan had handled better than the United States was to quickly introduce a resolution mechanism for failed financial institutions through the Financial Reconstruction Law of 1998. The second discussant, **Ceyla Pazarbasioglu** (International Monetary Fund), pointed out that market failures led to misaligned incentives and, in turn, to unstable economic systems. She then proposed three measures of macroprudential response: countercyclical prudential measures to dampen cyclical swings; structural measures to reduce the probability and cost of financial institutions' failures; and macroeconomic measures to respond to financial and global imbalances.

From the floor, **Enrique Alberola** (Bank of Spain) commented that Spain had not experienced the recent massive housing bubble or the resulting bursting, but that the damage on the real side of the economy had been dramatic and the financial system was poorly regulated and supervised. In reply to Alberola and Ito, **Allen** noted that he focused on the U.S. case, but that it was important to consider cases in other countries. **Pierre Jaillet** (Bank of France) asked about the net economic benefits of financial innovations after accounting for the costs generated by financial crises. **Allen** answered that financial innovations had contributed significantly to the economy. **Wataru Takahashi** (BOJ) pointed to two types of policy responses, *ex ante* and *ex post*, and argued that the latter was important to make use of the market mechanism. With respect to *ex post* actions, **Hiroshi Nakaso** (BOJ) pointed out that liquidation might simply degrade the asset quality of a failed bank over time, yielding large eventual losses.

VI. Policy Panel Discussion

In the panel discussion chaired by Obstfeld, Nakaso, Jordan, and **Mário Mesquita** (Banco Central do Brasil, former Deputy Governor for Economic Policy) stated their views on the future of central banking under globalization, touching on policy measures taken in response to the global financial crisis.

12. For details, see Allen and Carletti (2010).

A. Panelist Speeches

Nakaso discussed global capital flows, financial infrastructures, and implications for the future of central banking. First, regarding global capital flows, he presented evidence that developing countries in the recent crisis had withdrawn funds from European banks. Due to maturity and currency mismatches, European banks had faced severe shortages in their U.S. dollar holdings. Second, with respect to financial infrastructures, he pointed to the need for international coordination, explaining the scheme of the foreign currency swap program and the cross-border collateral arrangements. He asserted that these coordinated actions had functioned well in the recent crisis to ensure financial stability. Third, with respect to implications for the future of central banking, he proposed that central banks needed to assume a macroprudential perspective to continue improving financial infrastructures and to review the wider role in a global context of central banks as the lender of last resort. He concluded by claiming that central banks were best positioned to be aware of liquidity conditions in both domestic and foreign currencies, the solvency conditions of key players in financial system in their jurisdiction, and the microprudential conditions of individual institutions.

Jordan discussed the interactions of monetary policy and macroprudential policy. He began by pointing out that central banks had concentrated on price stability for many years, but that the recent crisis revealed a need for both macroeconomic and financial stability. To this end, he called for a new concept to address system-wide financial risks from a macroprudential policy perspective. He asserted two primary goals for macroprudential policy: to strengthen the resilience of the financial system and to prevent mounting imbalances in credit and/or asset prices. With respect to the instruments of macroprudential policy, he noted that the first goal was achieved mainly by microprudential instruments, whereas the second posed a much greater challenge. He pointed to the importance of a deep understanding of the relationship between microprudential policy, macroprudential policy, and monetary policy. Touching on the risk of undermining monetary policy independence due to an inseparable link between politics and prudential policy, he concluded that a realistic step would be to concentrate on a few instruments to counter pronounced imbalances in credit or asset markets.

Mesquita discussed the future of central banking from the perspective of emerging economies. He noted that central banks in mature economies tended to focus on price stability rather than financial stability, while central banks in emerging economies often had prudential responsibilities as well. He then argued that both monetary policy and prudential policy could play increasingly important roles in handling asset price and credit booms. He noted, however, that using monetary policy to deal with prudential risks was not straightforward. For example, in a policy trade-off, asset prices in Brazil had increased and currency had appreciated after the recent crisis. He then discussed unconventional policies in Brazil. To mitigate the severe liquidity squeeze, Banco Central do Brasil (BCB) had eased reserve requirements for private banks under the condition that they used the proceeds to buy assets from small banks and U.S. dollars from the BCB. The BCB had also sold part of the previously accumulated foreign exchange reserves during the crisis. He argued that reserves were useful because foreign policy measures like the foreign currency swap program would not necessarily have been granted for Brazil. Regarding the supervision activities of central banks, he emphasized the potential conflict between monetary policy goals and prudential policy goals. He, however, noted that knowledge on the state of the financial system, required for the lender of last resort, could be achieved through involvement in direct supervision. He concluded that inflation targeting policy would persist, while emphasizing the need to monitor asset prices and credit conditions based on a consideration of their implications for financial and economic environments.

B. General Discussions

From the international perspective, **Takahashi** argued that as market integration with emerging economies gained pace, central banks were increasingly obligated to improve financial infrastructures and coordinate their policies from the practical and operational aspects, together with emerging economies. In reply, **Nakaso** pointed to the importance in policy coordination and financial stability of a forum like the Bank for International Settlements (BIS). **Alberola** inquired about the consequences of the large-scale supply of credit by public banks in Brazil. **Mesquita** answered that the market share of public banks had increased, but was likely to decline over time due to more aggressive lending by private banks. In response to a question from Obstfeld regarding the effectiveness of capital controls during the crisis, **Mesquita** indicated capital controls had been used frequently in Brazil to deter capital inflows, but had proved less effective than was hoped for by the authorities.

Regarding the relationship between monetary policy and prudential policy, **White** suggested distinguishing between microprudential and macroprudential regulatory authorities. **David Archer** (BIS) asked about the risks of impairing central bank independence through their greater involvement in regulatory and macroprudential policy. **Jaillet** pointed to a certain lack of clarity in the definition of macroprudential policy and suggested distinguishing macroprudential instruments from monetary policy instruments. In response, **Jordan** stated that central banks were inevitably active in certain aspects of macroprudential policy, even in the absence of a clear and unambiguous definition and risks of political intervention. **Ito** commented that the Financial Services Agency (FSA) in Japan handled microprudential regulation, while the BOJ held examination powers, and that these two agents worked well together. **Nakaso** added that Japan's FSA handled microprudential policy, while the BOJ handled on-site examinations from a differing perspective as the lender of last resort. He also pointed out that the Financial Risks Management Committee, chaired by the Prime Minister and in which the Governor of the BOJ participated, played a key role in dealing with systemic risks by taking various extraordinary measures involving taxpayer money.

Regarding the implementation of macroprudential policy, **Charles L. Evans** (Fed Chicago) pointed to a potential new problem for central banks as they sought to achieve financial stability as inelastic risk premiums to risks. He cited the example in which inflation was anchored under an inflation targeting policy, leading to inelastic inflation dynamics to economic disturbances. **Jordan** suggested a need for deeper insights into unintended consequences when central banks sought to achieve financial stability under conditions of incomplete knowledge. **Obstfeld** argued for setting predictable rules to avoid blindsiding market participants. In response to Obstfeld, **White** observed that excessive transparency could be counterproductive, as in the case from 2003 to

2007, when the Fed had been explicit about its intentions, in turn encouraging markets to double up on leverage. **Nakaso** responded that although transparency was a difficult issue, it was less counterproductive than claimed by White, pointing out the role played by the transparent foreign currency swap program during the crisis. **Mesquita** responded that he supported a measure of constructive ambiguity, illustrating the risk of creating moral hazards if the corporate sector knew that the government bailed out the corporate sector in crisis using sufficient foreign exchange reserves, leading to excessive exposure of the corporate sector to foreign exchange risks.

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APPENDIX 1: PROGRAM

Wednesday, May 26, 2010

Morning	**Opening Session**	
	Chairperson:	**Kiyohiko G. Nishimura**, Bank of Japan
	Opening Remarks:	**Masaaki Shirakawa**, Bank of Japan
		Ben S. Bernanke, Board of Governors of the Federal Reserve System
	Keynote Speech: The Future of Central Banking: A Lesson from United States History	
	Chairperson:	**Charles I. Plosser**, Federal Reserve Bank of Philadelphia
	Keynote Speech:	**Bennett T. McCallum**, Carnegie Mellon University
	Session 1: Can Cross-Border Financial Markets Create Good Collateral in a Crisis?	
	Chairperson:	**Charles I. Plosser**, Federal Reserve Bank of Philadelphia
	Paper Presenter:	**Makoto Saito**, Hitotsubashi University
	Discussant:	**Maurice Obstfeld**, University of California at Berkeley
	Discussant:	**Mark M. Spiegel**, Federal Reserve Bank of San Francisco
Afternoon	**Mayekawa Lecture: Some Alternative Perspectives on Macroeconomic Theory and Some Policy Implications**	
	Chairperson:	**Kazuo Ueda**, University of Tokyo
	Lecturer:	**William R. White**, Organisation for Economic Co-operation and Development
	Session 2: Exorbitant Privilege and Exorbitant Duty	
	Chairperson:	**Kazuo Ueda**, University of Tokyo
	Paper Presenter:	**Pierre-Olivier Gourinchas**, University of California at Berkeley
	Discussant:	**Kosuke Aoki**, London School of Economics
	Discussant:	**Karolina Ekholm**, Sveriges Riksbank
	Session 3: Banking Globalization and International Business Cycles	
	Chairperson:	**M. R. Chatu Mongol Sonakul**, Bank of Thailand
	Paper Presenter:	**Kozo Ueda**, Bank of Japan
	Discussant:	**Christopher J. Waller**, Federal Reserve Bank of St. Louis

Thursday, May 27, 2010

Morning

Session 4: Globalization, Pass-Through and Inflation Dynamic

Chairperson:	**Charles L. Evans**, Federal Reserve Bank of Chicago
Paper Presenter:	**Pierpaolo Benigno**, LUISS Guido Carli
Discussant:	**Etsuro Shioji**, Hitotsubashi University
Discussant:	**Mark Wynne**, Federal Reserve Bank of Dallas

Session 5: Financial Regulation Going Forward

Chairperson:	**Charles L. Evans**, Federal Reserve Bank of Chicago
Paper Presenter:	**Franklin Allen**, University of Pennsylvania
Discussant:	**Takatoshi Ito**, University of Tokyo
Discussant:	**Ceyla Pazarbasioglu**, International Monetary Fund

Policy Panel Discussion

Moderator:	**Maurice Obstfeld**, University of California at Berkeley
Panelists:	**Thomas J. Jordan**, Swiss National Bank
	Mário Mesquita, Banco Central do Brasil (former Deputy Governor for Economic Policy, Banco Central do Brasil)
	Hiroshi Nakaso, Bank of Japan

APPENDIX 2: LIST OF PARTICIPANTS

Zeno Ronald Abenoja	Bangko Sentral ng Pilipinas
Enrique Alberola	Bank of Spain
Franklin Allen	University of Pennsylvania
Kosuke Aoki	London School of Economics
David Archer	Bank for International Settlements
Michio Ayuse	Bank of Japan
Alan Barkema	Federal Reserve Bank of Kansas City
Pierpaolo Benigno	LUISS Guido Carli
Ben S. Bernanke	Board of Governors of the Federal Reserve System
Lillian Cheung	Hong Kong Monetary Authority
Alberto Cogliati	Bank of Italy
Karolina Ekholm	Sveriges Riksbank
Charles L. Evans	Federal Reserve Bank of Chicago
Shin-ichi Fukuda	University of Tokyo
Pierre-Olivier Gourinchas	University of California at Berkeley
Masazumi Hattori	Bank of Japan
Ryozo Himino	Financial Services Agency
Hideaki Hirata	Hosei University
Yasuo Hirose	Keio University
James Holloway	Reserve Bank of Australia
Kaoru Hosono	Gakushuin University
Kiyoto Ido	Bank of Japan
Selo Imrohoroglu	University of Southern California
Nobuo Inaba	Ricoh Company, Ltd.
Shogo Ishii	International Monetary Fund
Hiro Ishise	Boston University
Takatoshi Ito	University of Tokyo
Kazumasa Iwata	Cabinet Office
Hideki Izawa	Kobe University
Pierre Jaillet	Bank of France
Hong Bum Jang	Bank of Korea
Ryo Jinnai	Texas A&M University
Toshiki Jinushi	Kobe University
Thomas J. Jordan	Swiss National Bank
Keimei Kaizuka	Ministry of Finance
Hidetoshi Kamezaki	Bank of Japan
Juno Kang	Bank of Korea
Ryo Kato	Bank of Japan
Yukinobu Kitamura	Hitotsubashi University
Teruyoshi Kobayashi	Chukyo University
Jarmo Kontulainen	Bank of Finland
Yutaka Kurihara	Aichi University

Sachiko Kuroda	University of Tokyo
Sophie Lim	Monetary Authority of Singapore
Liu Yuling	People's Bank of China
Yoichi Matsubayashi	Kobe University
Bennett T. McCallum	Carnegie Mellon University
Mário Mesquita	Banco Central do Brasil (former Deputy Governor for Economic Policy)
Ryuzo Miyao	Bank of Japan
Yoshikazu Morimoto	Bank of Japan
Daisuke Nagakura	Waseda University
Tomoyuki Nakajima	Kyoto University
Seiji Nakamura	Bank of Japan
Hiroshi Nakaso	Bank of Japan
Kiyohiko G. Nishimura	Bank of Japan
Tadashi Nunami	National Graduate Institute for Policy Studies
Maurice Obstfeld	University of California at Berkeley
Taku Oizumi	Bank of Japan
Mitsuaki Okabe	Meiji Gakuin University
Kumiko Okazaki	Bank of Japan
Yuri Okina	Japan Research Institute
Tsunao Okumura	Yokohama National University
Arito Ono	Bank of Japan
Hugh Patrick	Columbia University
Ceyla Pazarbasioglu	International Monetary Fund
Charles I. Plosser	Federal Reserve Bank of Philadelphia
Andrzej Rzońca	National Bank of Poland
Makoto Saito	Hitotsubashi University
Jean-Luc Schneider	Organisation for Economic Co-operation and Development
Mototsugu Shintani	Vanderbilt University
Etsuro Shioji	Hitotsubashi University
Masaaki Shirakawa	Bank of Japan
Shigenori Shiratsuka	Bank of Japan
Pierre Siklos	Wilfrid Laurier University
M. R. Chatu Mongol Sonakul	Bank of Thailand
Mark M. Spiegel	Federal Reserve Bank of San Francisco
Miyako Suda	Bank of Japan
Michio Suzuki	University of Tokyo
Shiba Suzuki	Meisei University
Urszula Szczerbowicz	Hitotsubashi University
Hiroo Taguchi	Hosei University
Wataru Takahashi	Bank of Japan
Yosuke Takeda	Sophia University
Kenshi Taketa	Aoyama Gakuin University
Hiroki Tanaka	Bank of Japan

Yuki Teranishi	Bank of Japan
Joseph Tracy	Federal Reserve Bank of New York
Takayuki Tsuruga	Kyoto University
Kazuo Ueda	University of Tokyo
Kozo Ueda	Bank of Japan
Peter van Els	Netherlands Bank
Christopher J. Waller	Federal Reserve Bank of St. Louis
Reinhold Wanka	Central Bank of Austria
Perry Warjiyo	Bank Indonesia
Wako Watanabe	Keio University
William R. White	Organisation for Economic Co-operation and Development
Mark Wynne	Federal Reserve Bank of Dallas
Tomoaki Yamada	Meiji University
Hirohide Yamaguchi	Bank of Japan
Kenzo Yamamoto	Bank of Japan
Naoyuki Yoshino	Keio University