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Bank of Japan

Issues Facing the Futures Markets and the Industry

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Introduction

The futures market is a key building block of the financial structure of an economy, and its efficiency and soundness contribute to the economic well being of the public at large. The Futures Industry Association has, I believe, provided important input into the evolution of this vital market. The Bank of Japan appreciates your efforts, and that is why I am pleased to appear as the keynote speaker for the FIA Japan Conference today.

To be honest, the futures market in Japan is falling behind those in other international financial centers. If you were to ask a man or a woman on the street in Tokyo, what he or she knew about it, you would in all likelihood get a blank face. This is rather unfortunate, considering that Japan was probably home to the world's first organized futures exchange. In the early eighteenth century, rice futures began trading in Dojima, Osaka, complete with a system of margining and cash settlement. The price of rice, which as you know is the staple food in Japan, was set through day-to-day trading at the exchange in Dojima, called *kome-kaisho*, and the trading houses lining the streets around the exchange provided essential financial services to the ruling warrior class, which relied on rice as its main source of income. The exchange was ingrained in the economic life of late-feudal Japan for almost two centuries.

The fact that such a sophisticated market grew organically on its own makes me somewhat optimistic that, given the right conditions, the futures industry can flourish in Japan. In fact, margin trading in foreign-exchange, which is quite similar to futures trading, is popular at the retail level in Japan.

Today, I would like to offer you some thoughts on how to create or enhance the conditions that would be conducive to increasing public welfare, by embracing financial innovation, as well as the advancement of futures markets in Japan. For this purpose, I need to reflect on our experiences of the recent Great Financial Crisis. While almost five years have passed since the first dislocations in the U.S. mortgage securities market became evident, the global financial system has not yet recovered to the point where we can confidently venture out onto new frontiers. This is especially true on the European continent, where confidence in the outcome of the policies adopted by some euro area members to contain

their debt dynamics has not been rebuilt sufficiently. We are still in the process of tackling issues that came to light during the crisis, and my remarks will therefore reiterate this point.

There are two broad themes. One is to pick up the many loose ends that manifested themselves while we frantically dealt with one emergency after another. Broadly speaking, financial market infrastructures weathered the Crisis relatively well, and yet they have revealed many weaknesses. In my view, as I will explain later, Japan has done a fairly good job in this regard. Another theme is more philosophical. While it is very important to reinforce the structural integrity of our financial architecture, finance cannot function without the trust of the society. The Crisis has raised questions about the role of finance in the broader society. Given the public's displeasure with finance in general and speculation in particular, the futures industry must articulate its case much more strongly if it hopes to thrive in the years ahead. Criticism against banks and bankers is not as pronounced in Japan today as it was ten years ago or as we see it now in the United States or Europe, but that should not be an excuse for us gathered at this Conference to avoid reflecting on this important issue.

I. Improving the Infrastructure of Financial Markets

Let me begin with the infrastructure issues.

During the height of the Great Financial Crisis, especially in the second half of 2008, financial markets, particularly in the United States and Europe, virtually ceased to function. Market participants were not lending to each other even in secured markets such as the repo market. Households and non-financial corporations could not borrow as banks stopped lending to preserve cash and new debt issues ground to a halt. Stock markets, while they continued to function, were in a freefall and generated much anxiety. It is not an exaggeration to say that the global financial system, and hence the economy, was only one step away from total collapse. Problems with U.S. sub-prime mortgages were exacerbated many-fold by the lack of transparency regarding the distribution of risk. Another important factor that amplified uncertainty was the buildup of transaction backlogs. There were transactions worth billions of dollars and euros, but it was difficult to get any idea of who bore the ultimate risk. Big swings in market prices suggested that potential losses

could be enormous. Nobody would dare trade in the face of the fear that their counterparty might be on the losing side of trades and therefore could be teetering on the brink. The issue was especially acute in the over-the-counter (OTC) derivative markets, including credit default swaps (CDS), where the sheer volume and arcane processing systems conspired to hide the true state of affairs even from the most experienced observers.

Thus, it is no wonder that, when the leaders of the Group of Twenty (G20) countries met in Pittsburgh in September 2009, they decided to do something about this state of affairs.¹ As regards the OTC derivatives markets, the leaders drew heavily from the experiences of the futures markets, which remained relatively unscathed during the crisis. They decided to enhance the transparency and resilience of the OTC derivatives market by encouraging the use of more standard instruments and moving them onto electronic platforms and centralized clearing. When the reforms are finally in place, which the leaders have promised will happen by the end of this year, the OTC derivatives market will more closely resemble the futures market. Even those instruments that could not readily be standardized will be subject to margining and reporting requirements, concepts that are already proven in the futures markets.

If this were the end of the story, I would not have brought up the issue today. While the futures market provides us with a good off-the-shelf model, in the form of exchanges and their associated clearing infrastructures, that model could be improved further. For example, although centralized clearing will insulate market participants from the failure of counterparties, the effectiveness of the arrangement depends heavily on the design of the system. A clearing house must ensure that its integrity will not be compromised when its members fail. This is easier said than done. How should it set the initial margin? How frequently and in what form should it collect variation margins? How much of an additional buffer should it hold against the risk of margin shortfalls? There will not be a "one size fits all" solution, but a set of broad principles could be drawn up.

That is why central banks and regulators have been working on the "Principles for Financial Market Infrastructures," which were published by the Committee on Payment and

¹ See Leaders' Statement released after the G20 Pittsburgh Summit held on September 24-25, 2009.

Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) back in April this year. The new Principles contain 24 elements, covering all aspects of financial market infrastructures including basic governance structures, day-to-day operations, risk management, and crisis resolution.² They are designed to ensure that the infrastructure supporting global financial markets is robust and thus well placed to withstand financial shocks. Compared with existing recommendations, the new Principles introduce new or more demanding requirements. For example, clearing houses that are systemically important and multi-jurisdictional and those that clear complex products will be required, at a minimum, to withstand the simultaneous failure of the two largest participants, instead of the largest participant, as in the current set of recommendations. The Principles will apply to all systemically important payment systems, central securities depositories, securities settlement systems, central counterparties, and trade repositories, which collectively clear, settle, and record transactions in financial markets. The Bank of Japan, in close cooperation with the Japanese Financial Services Agency, has participated in the international discussions leading to the agreement on the new Principles and is firmly committed to implementing them as soon as practicable.

Along with this international push for more robust and resilient market infrastructures, there have also been efforts that reflect Japanese domestic experiences. While the failure of Lehman Brothers did not cause much disruption in Japan, and hence cross-border spillovers were minimal, it was found that the crisis resolution mechanism at the Japan Government Bond Clearing Corporation (JGBCC) could be further improved. It took herculean efforts at the JGBCC to come up with securities and funds that Lehman Brothers could not deliver after its bankruptcy filing. It was a close call. Much progress has been made to reduce risk and ensure the continuity of operations even in extremely stressful situations, especially in the area of dealing with a large number of fails and raising emergency liquidity.

² See Committee on Payment and Settlement Systems (CPSS) and Technical Committee of the International Organization of Securities Commissions (IOSCO), "Principles for financial market infrastructures, assessment methodology and disclosure framework," April 2012. The original text is available on the BIS website.

<http://www.bis.org/publ/cpss101.htm>

As I have noted at the beginning, these efforts to strengthen market infrastructures in Japan are moving forward at a good speed. For example, with respect to the G20 commitment to move OTC derivative trading onto centralized clearing by the end of this year, Japan has set up the necessary legal and institutional framework, and is probably the first market of any significant size to do so. On this basis, the clearing of CDS began from July 2011, and yen interest rate swaps will also be centrally cleared by this October. Another significant risk-reducing measure is the shortening of the settlement cycle for JGBs. Since this April, the settlement cycle of JGBs was shortened to T+2 from T+3, thereby reducing unsettled positions. Market participants have also decided to begin laying the groundwork for shortening the settlement cycle further to T+1. Working together, authorities in Japan and the industry are committed to enhancing the robustness and resiliency of the Japanese market infrastructure, which should enable Tokyo to thrive in the increasingly competitive quest to become a global financial center.

Before moving on to my second theme, let me add a few footnotes concerning financial market infrastructures.

One is the tradeoff that arises from the increasing use of centralized clearing. Centralized clearing has unambiguous advantages -- for example, the mitigation of counterparty risk, better collateral management, increasing transparency, and enhanced market liquidity through standardization. These positive effects should augment the robustness and resiliency of market infrastructure. That is why the G20 has aimed for its wider adoption in view of the lessons of the Great Financial Crisis. At the same time, centralized clearing has its own issues. It may increase, if not properly designed, moral hazard among market participants, who will be less concerned with counterparty risk. Centralized clearing also concentrates risk in the clearing entity itself, which might become "too big to fail." The Bank of Japan has always been aware of such a tradeoff and has continually stressed managing it wisely.

This brings me to the second and third footnotes.

If the negative effects of centralized clearing are to be effectively managed, central banks and other regulators must strengthen the oversight and supervision of clearing entities. As we have already seen with the new Basel banking rules, the move will inevitably result in higher contingency buffers at the clearing entity in the form of collateral or margining requirements, loss-absorption pools, or paid-in capital. Since the users of centralized clearing, who are going to face less risk, will not have the incentive to increase the costs of clearing by committing more financial resources, higher buffers must be imposed by the authorities. This may increase the costs of trading, but that is a necessary price to pay in light of our experiences of the Great Financial Crisis.

Lastly, the access of clearing entities to central bank services must be well thought out in the context of wiser management of centralized clearing. The advantages of using central bank money for settling accounts are obvious. In Japan, the Bank of Japan has long had constructive relations with various domestic financial market infrastructures, including the Japanese stock exchanges and the Tokyo Financial Exchange. At the same time, it must be stressed that an account at the central bank should not be confused with automatic central bank liquidity provision in times of stress. The Bank of Japan wishes to see operators and members of all infrastructures further enhance their liquidity management arrangements.

II. The Role of the Futures Industry in the Broader Society

Now, let me turn to the philosophical issue.

Unless it has provided significant services to public welfare, the futures industry would not have evolved to where it stands today. Nevertheless, even in the best of times, the futures markets face some skepticism by the public. Futures trading is a pure transfer of risks. Participants trade on the basis of their outlook on the direction of prices. Some of them wish to protect themselves, or hedge, against adverse price movements. Others just bet on the direction of prices, hoping to profit from it. In pure pecuniary terms, one participant's gain is another's loss. Although in terms of utility, the whole process is not zero sum because hedgers' utility is greater in view of risk reduction, the zero-sum nature of the pecuniary gains and losses leads some people outside the industry to regard such activity as reprehensible, especially when it seems to encourage wild price swings.

In some jurisdictions, hostility to speculation surfaces as outright bans on futures trading on certain products. For example, in the United States, the definition of commodities under the Commodity Exchange Act explicitly states "except onions," while corn, wheat, frozen concentrated orange juice, and all other kinds of edible products are included. This idiosyncrasy could be traced to a cornering of the U.S. onion market in 1955, which then led to the enactment in 1956 of the Onion Futures Act. Potatoes failed to make the list of banned products in 1964, but lawmakers were persuaded enough to add a ban on the trading of "motion picture box office receipts" in the recent Dodd-Frank Act. Here in Japan, the resumption of rice futures, notwithstanding their historic significance that I mentioned at the outset, has taken a long time.

In the days before the Great Financial Crisis, however, the futures industry could still find many sympathetic ears for its case. It was a widely shared credo that the pursuit of individual interest in financial markets would result in the transfer of various risks to those economic agents who were most willing to take on such risks. Given the different risk preferences of economic agents, the resulting redistribution of risks to those who were most capable of managing them was believed to enhance the efficiency of the whole economy. It was believed that the invisible hand would inevitably bring about a good outcome. The futures markets, sometimes regarded as the closest one could get to perfect markets, were thus regarded as increasingly important links in the various chains of risk transfer in economies. The public could be persuaded that the speculative activities of the futures industry were not only beneficial to the direct participants but also an essential pillar of the institutions that realize the optimal distribution of risks within the broader society, and thus should be encouraged with as few restrictions as possible.

That belief, however, was badly shaken during the Crisis. Not a few people have now come to believe that the financial industry was only greedily pursuing its self-interest with total disregard for the benefits to the broader society, and that the culmination of such a trend was the bailout of the industry at a great cost to taxpayers. As a result, while draconian prohibitions on the trading of certain products are still the exception rather than the rule, regulations to curb so-called excessive speculation, such as restrictions or bans on

short selling, have been strengthened during and after the Great Financial Crisis. The public is no longer willing to give the benefit of doubt to the view that what was good for the industry was good for the economy.

Now, it is not sufficient for the futures industry to maintain that speculation itself is good. It must make the case that speculation actually brings about good outcomes. In other words, it must explain why futures trading is an essential building block of the economy.

Therefore, the industry must reflect on its original purpose. The futures market came into being so that economic agents could protect against the future movement of prices. For example, the price of West Texas Intermediate crude oil delivered at Cushing, Oklahoma in three months' time could be influenced by many factors. If the U.S. economy were booming and people resumed driving huge pickup trucks, demand would skyrocket and so would the price for crude oil. On the other hand, if new sources of supply, such as oil sands and shale oil, were to come on line in significant quantities, a supply glut would send prices of oil tumbling down. If we knew the probability distribution of all possible outcomes, we could of course calculate one fair price, but this is never the case. No matter how hard we try to see the future, it is uncertain. Protection could never be bought unless there were economic agents that were willing to speculate and take the other side of the transaction.

This does not necessarily mean that all futures trading must be underpinned by an actual need for protection. Even if two speculators trade against each other, the cumulative effects of such activity -- a continuous process of trial and error -- should ensure that the resulting price would be the best-informed guess that society could make. Since each trade is backed by a financial commitment, there should be little incentive to misquote prices. Substantial speculative activity should also make it easy to enter and exit the market with the smallest price impact, i.e., it should enhance market liquidity. Furthermore, such prices are formed in the most transparent manner. By allowing speculation to go on, society could ensure the availability of protection against unwanted price movements and be confident that the price charged for the service is fair enough.

So, one can reasonably conclude that speculation should have a role to play in our economy. However, there may also be limits to speculation.

As I noted earlier, a futures trade between two speculators, or two agents without any underlying positions to protect, is a zero-sum game. By itself, such a trade does not create any new value. A hundred million trades with a profit of one basis point will generate a profit of 1 million dollars, but that money must come out of the pocket of other market participants. It just does not make sense to put too many resources into such a venture.

Herein lies a paradox. If appropriately conducted, speculation does bring about useful outcomes for society. Nevertheless, if there were only speculation, there would be no economic basis for sustaining it, because the expected return of such activity is zero (or negative if one factors in the costs). The only reason why speculative activity can continue is that costs are in effect borne by agents that wish to obtain protection. That sort of structure suggests that there must be an inherent limit to the level of speculative activity in a futures market. Growth for growth's sake is not acceptable. Can market forces sort this out? This is a question that the futures industry must ask itself, and I hope that the industry takes it seriously.

In this regard, the fact that many commodity futures in Japan are not flourishing might lead us to conclude that any market that fails to attract a sufficient amount of non-speculative activity will languish. The market might take care of the balance between speculative and non-speculative activities. In the case of financial futures, banks have legitimate hedging needs, and such activity will support a certain level of speculation in the market. Meanwhile, the depressed levels of activity in financial futures for short-term instruments, in today's ultra-low-interest-rate environment, might be consistent with the self-correcting forces of the markets.

Concluding Remarks

Today, I have reflected on how far the industry, especially in Japan, has progressed in meeting the challenges arising from the Great Financial Crisis. I have also pointed out that the industry still needs to redefine its role in the post-Crisis environment. In order to end

my remarks on a positive note, I would like to quickly outline two opportunities for the industry.

One is that there are still many risks for which the introduction of a traded market could be beneficial to the economy. An example is longevity risks. As I have stressed on numerous occasions, Japan is facing acute challenges in terms of demography, which in turn weaken potential growth. A well-designed product that could deal with longevity risks could facilitate Japan meeting those challenges.

Another opportunity is in terms of leveraging the advantages of the futures market structure. One feature that comes to my mind is the transparency of prices. There may be many areas in which prices determined on futures exchanges could become benchmarks for related economic activity. The recent attention over the setting of LIBOR seems to confirm such a view.

Such positive contributions should confirm that the futures industry will continue to perform useful and indispensable functions within the society.

We are now in a period of great changes. Last night, we heard the remarks of the Minister of State for Financial Services, Mr. Matsushita. He told us that Japan had implemented and was planning to introduce many reforms that would enhance the competitiveness of and strengthen the confidence in the Japanese financial markets. Considering that a period of change is a period of opportunities, I believe that the industry could potentially accelerate its growth by satisfying the unfulfilled needs of the Japanese economy.

From a broader perspective, Japan's headline growth figures over the last 20 years remained low, and the period is often described as the lost decade or decades. Nevertheless, the impact of the bubble bursting in the 1990s was well contained, relative to what we saw recently following the Great Financial Crisis. Weak growth, at least in the second decade after the bursting of the bubble, can be explained, to some extent, by adverse demographic trends, or more precisely, a failure to adapt to such trends. As I have repeatedly pointed out, Japan's *per capita* growth is about the average among the G7 economies, and the

growth of output per working age population is the highest in the G7.³ Compared with most developed economies, the increase in unemployment has been modest. Japan no longer offers the low-hanging fruits found in fast-growing emerging economies, but, as one of the richest economies, it offers tremendous opportunities. In the financial sector, most Japanese financial institutions are now beginning to compete from a position of strength. Their credit spreads remain more stable relative to their global peers, and they are gradually and carefully filling the void created by the retreating European financial institutions. Since I see many guests from overseas in the audience today, I would like to stress that if we can combine the tremendous opportunities that I mentioned with a stable financial system, Japan could perhaps be one of the most promising markets.

I do hope that the Bank of Japan can continue its dialogue with the industry to facilitate this process.

Thank you for your attention.

³ See Masaaki Shirakawa, "Demographic Changes and Macroeconomic Performance: Japanese Experiences" (Opening Remark at 2012 BOJ-IMES Conference hosted by the Institute for Monetary and Economic Studies, the Bank of Japan), May 30, 2012.
http://www.boj.or.jp/en/announcements/press/koen_2012/data/ko120530a1.pdf