

Concluding Panel Discussion: Growth, Integration, and Monetary Policy in East Asia

Introductory Remarks

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Now it is time for the concluding panel, where we are going to discuss growth, integration, and monetary policy in East Asia from policy perspectives.

We have discussed already a number of issues, policy issues, in the previous session. Therefore, this discussion is quite a natural extension from that one. But there are a few specific questions I would like to raise here, most of which were covered in the previous session. Let me start with the one not covered.

The first question concerns East Asian economic and financial integration with the rest of the world. Because of this integration, the degree of competition in product markets increased in the global marketplace. As a result, the pricing power of producers in national markets has weakened.

Also, because of an increase in the supply of labor-intensive products made in Asia, wages in industrial countries have been under downward pressure. This may be making the Phillips curve flat in Japan, the United States, and elsewhere. Of course, in these price dynamics, a low-inflation expectation is a key element of the flat curves.

Integration of East Asia with the rest of the world, or more generally speaking, globalization, is also very rapid in the financial world. Under financial globalization, capital moves across the financial markets and product lines instantaneously worldwide, which puts a damper on liquidity premia as well as credit premia, making both the yield curve and credit spread curve flat.

In these circumstances, saving investment behavior of a national economy seems to have become more sensitive to changes in interest rates and returns on investment, that is, the IS curve is flat. Now that all the curves are flat, the world is simply flat. This is what globalization is all about, as Thomas Friedman has written in his book. But Friedman said, "The world is not round but flat." I would say the world is flat instead of steep.

East Asia has played a most significant role in this process of making the world flat. We are obviously living in a world quite different from the one associated with a vertical Phillips curve and steep yield curves. The important question is whether all these flat curves exist for a transitional period of globalization, or under the present cyclical conditions, or for a longer period. This is not only an issue of academic interest, but also a very important question for central bankers in both industrial and emerging countries.

The second question comes from the sustainability of global imbalances. Globalization has in fact been accompanied by such imbalances. There is an argument that globalization has made these imbalances more sustainable than in the past. Decline in home bias among investors, efficiency in international capital allocation, widening of the market by hedge funds and other private pools of capital, and the yen carry trade are the issues related to this question.

Global imbalances have both deficit and surplus sides. The sustainability of the imbalances has long been discussed, mainly on the deficit side, in other words, sustainability of U.S. deficit financing. In recent months, the surplus side has been looming larger, where the sustainability of reserve accumulation is more often discussed, in light of its side effects on a central bank's balance sheet and the cost of sterilization. Under these circumstances, policy options, monetary policy options in particular, are immediate concerns for many central banks in East Asia, as we discussed in the earlier session.

Finally, integration within Asia poses interesting questions about the mode of monetary cooperation in this area. The Executives' Meeting of East Asia-Pacific Central Banks (EMEAP), a central banking group, has been active in discussing this issue and actually producing tangible results, such as the Asian Bond Fund. Are we on the right track? If yes, what can we do next to promote the welfare of our economies? These are the questions I would like to put forth at the outset of this session.

Panelists' Remarks

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I. East Asia's Monetary Policy and the Carry Trade: What Do We Know?

A key way in which East Asia's monetary policy—especially Japan's—has been viewed as impacting the United States and the rest of global finance is through the scope it opens for the so-called “carry trade,” which we broadly define here as a leveraged, unhedged short position in a low-yield currency financing a long position in a higher-yield currency. Many investors are believed to have taken advantage of Japan's low interest rates during the past decade to fund carry trade positions. Such positions, and their possible sudden unwinding, have been widely cited as a key contributor to global market turbulence in May 2006, February 2007, and especially October 1998. The carry trade is also viewed as posing a special challenge for monetary policy because it increases the sensitivity of capital flows to interest rate changes.

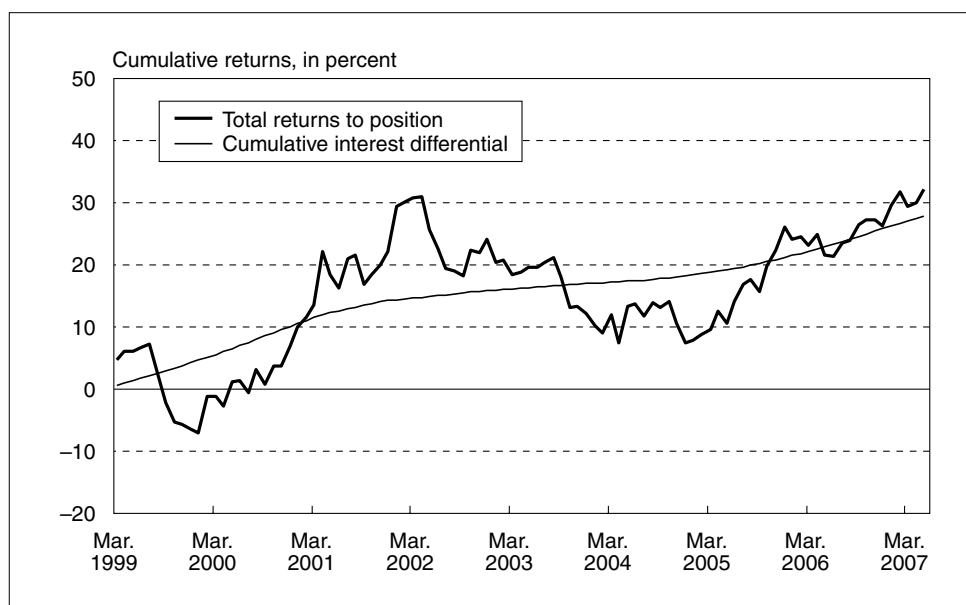
The logic underlying carry trade strategies is simple. If the exchange rate between “low” and “high” rate currencies is expected not to change (much) over the investment horizon, then the return to a carry trade position approximates the interest rate differential.

This is not a logic that economists would happily share: interest rate differentials, according to the uncovered interest parity (UIP) condition, should be offset by a loss in value of the higher-interest currency, thus eliminating—on average—the interest rate gain. Empirically, however, high-interest currencies have tended to appreciate relative to the yen, Swiss franc, and other low-interest currencies that have been used in recent years as funding currencies for the carry trade. In fact, as carry traders have sold funding currencies and bought investment currencies in recent years, they have contributed to exchange rate changes that have reinforced, rather than offset, interest rate gains, encouraging other investors to adopt the same strategy and, in turn, amplifying the impact on exchange rates.

To illustrate how failure of UIP has worked out in practice for carry traders, Figure 1 displays the returns to a strategy involving the sale of yen in February 1999, when the Bank of Japan adopted its zero interest rate policy, and the corresponding purchase of U.S. dollars at the then-current rate of ¥115 to US\$1.¹ As Figure 1 shows, the cumulative return to such a position by May 2007 would have been in excess of 30 percent, largely resulting from combining an average annual U.S.–Japan interest rate differential of 3.5 percentage points with an almost-stable (overall) exchange rate.

Calculations for a portfolio involving selling yen short in 1999 and buying and then holding until May 2007 an equally weighted basket of the seven OECD currencies that offered the highest interest rate in 1999 (the Czech koruna, Hungarian forint, Norwegian krone, Polish zloty, Turkish lira, British pound, and U.S. dollar) deliver

Figure 1 Cumulative Returns to the Yen-to-U.S. Dollar Carry Trade



1. For this calculation, I use short-term interest rates, because carry traders tend to invest in short-term instruments; a computation using longer-term instruments—which would presumably minimize investment transaction costs—would yield similar conclusions.

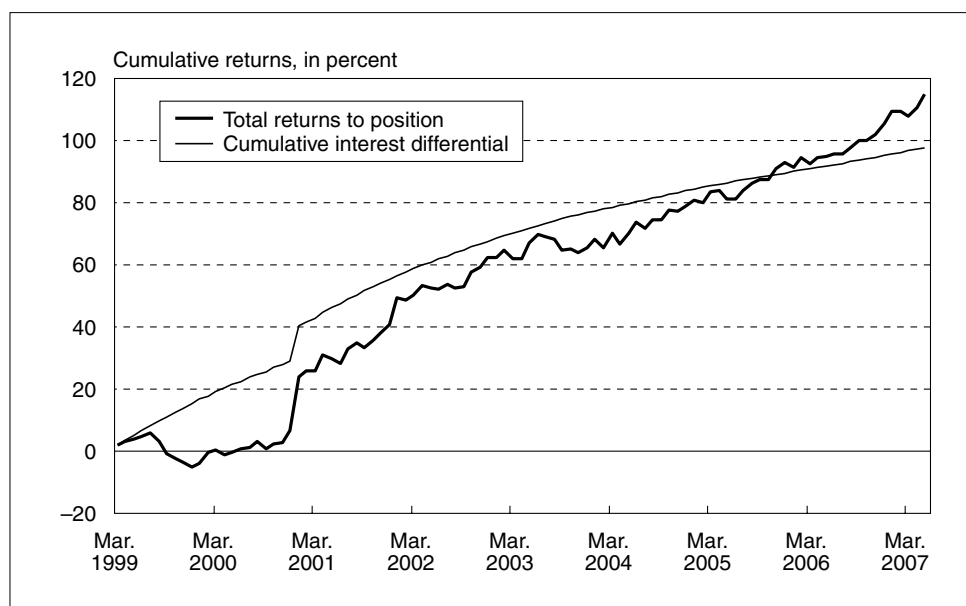
similar (in fact, larger) returns (Figure 2). Different portfolios, excluding the volatile Turkish lira or including the Swiss franc and other low-yield currencies among funding currencies, produce similar conclusions. Interestingly, much of the gains accruing to carry trades investing in currencies other than the dollar reflect the fact that high-yield currencies have gained on low-yield currencies in recent years, thus supplementing interest rate differentials with capital gains on the foreign exchange position.

The apparent success of the carry trade looks familiar to scholars of international financial markets, because it represents empirically just one more instance of failure of UIP. Explanations offered in recent years for the apparent success of the carry trade thus have tracked explanations offered in recent decades for the failure of UIP.

For instance, observing that the carry trades—as uncovered foreign exchange positions—are risky, observers have emphasized that excess returns to the carry trade may just compensate for the extra risk involved in such positions. A problem with this explanation is that investors' risk aversion would need to be implausibly high to justify the observed excess returns to the carry trade as an equilibrium outcome. Researchers who have done more careful calculations than those illustrated here, including detailed accounting for transaction costs incurred when rolling positions over, at the end of each month, quarter, or year, find the carry trade to involve a high Sharpe ratio—that is, a high expected return relative to risk taken—higher, for instance, than that involved in an S&P index portfolio.²

An alternative explanation put forth for the apparent success of the carry trade is similar to “peso”-style explanations offered for violations of interest parity: calculated profits on carry positions fail to account for rare but dramatic exchange rate changes that did not occur in the sample observed, but may occur at any time and—when

Figure 2 Cumulative Returns to the Yen-to-High-Yield Currencies Carry Trade



2. See, for instance, Burnside *et al.* (2006).

they do occur—are bound to bring returns to the carry trade back in line with returns on alternative investments. Indeed, for instance, the carry trade on the Thai baht was profitable until mid-1997, but returns turned negative when the baht depreciated in the third quarter of 1997.

Yet even this explanation may be not quite convincing, for wiping out the accumulated gains shown in Figures 1 and 2 would require larger depreciations of the U.S. dollar and of other currencies than many observers might view as plausible. More generally, studies that have attempted to address small-sample “peso” problems by examining longer and longer samples have failed to reconcile the data with the presumption of UIP.

Other explanations that have been invoked—including a role for transaction costs, central bank intervention, political risk, foreign exchange risk, purchasing power risk, interest rate risk, and the effect of news—have met with limited success. Newer approaches, motivated by the apparent success of the carry trade and focusing on the micro-mechanics of foreign exchange markets, are promising but have not yet been subject to close empirical scrutiny.³ Altogether, the widespread failure of UIP—or, *why does the carry trade appear to be so profitable?*—still puzzles most observers and scholars of international financial markets.

II. Measurement

So, how large are carry trade positions?

Estimates have been offered ranging from US\$80 billion and less, to US\$500 billion and more for the Japanese banking sector alone. This variance in estimates reflects several layers of difficulty. First, how exactly are carry trade positions defined? A narrow definition would focus on gross leveraged positions in the spot foreign exchange market. A broader definition would include positions in derivatives, particularly in futures/forwards. A related aspect concerns the set of investors whose positions we might want to investigate. While we may be able to estimate a leveraged position at a very high level of aggregation for a few economic sectors (e.g., the Japanese banking sector), we have little information on carry trade positions for a wide range of global investors, and essentially no information on positions in derivatives markets. And beyond the difficulty of assessing the right instrument and investor lies perhaps the greatest hurdle: to identify “interest-sensitive” positions. This is a key task, if the goal is to assess the likely impact of changes in interest rates on global investment and avoid including sectors—such as the Japanese public sector, with its large stock of foreign reserves funded almost entirely by yen liabilities—as engaging in the carry trade. Public-sector investors usually hold foreign assets for wholly different reasons than private investors, they are likely to have much greater tolerance for risk, and they are unlikely to be subject to the margin calls that often trigger private investors’ exit from carry trade positions, making their interest sensitivity much smaller than that of private investors.

Altogether, the quest for quantification of carry trades has so far been unsuccessful.

3. See, for instance, Burnside *et al.* (2006) and Plantin and Shin (2006).

III. Unwinding

Besides the (likely) large size of the carry trade, public concern with this investment strategy hinges on its potential for rapid unwinding. Because by definition carry trades are unhedged, they are vulnerable to adverse price movements, such as a depreciation of investment currencies (or appreciation of funding currencies). These movements cause a decline in the value of the collateral used to open the position, likely triggering margin calls and requiring investors to sell the high-yielding currency. This sale, in turn, lowers the value of remaining positions, inducing other investors to rush for the exit and speed up the unwinding.

Looking for common traits across episodes of presumed unwinding of carry trade positions, the “spider” chart in Figure 3 focuses on three recent episodes: October 1998, spring 2006, and February 2007. (In the figure, the U.S. dollar/yen exchange rate is centered on the day prior to the event that reportedly triggered an unwinding of carry trade positions.) The trigger event for October 6, 1998, in particular, was seen as a yen-favorable piece of legislation supporting banking reform that was presented in Japan. The event for April 19, 2006 was seen as an unexpectedly inflationary release of consumer price index data in the United States, which triggered a mini-inflation scare. And the event for February 22, 2007 was seen as the sudden losses recorded in the Shanghai stock index, which triggered a period of rapid risk reduction in global financial markets.

The figure shows that the three episodes were associated with a sharp appreciation of the yen, especially in October 1998, the most well-known episode of carry trade unwinding in the past decade. Figures 4–6 also show that, at the same time, the rolling 90-day correlations between the yen/U.S. dollar exchange rate and a basket of

Figure 3 U.S. Dollar/Yen Exchange Rate

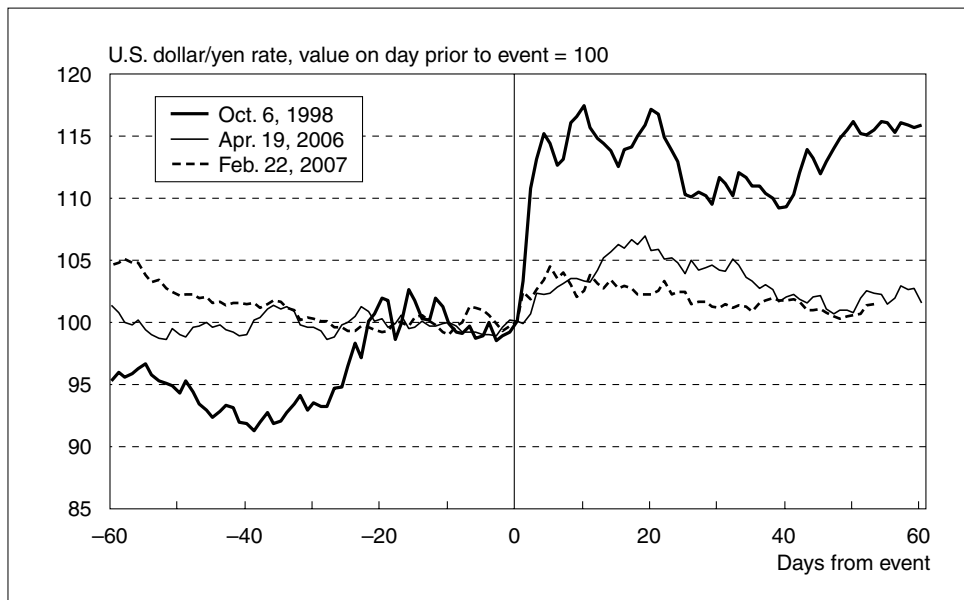


Figure 4 Yen/U.S. Dollar and High-Yield Currencies/U.S. Dollar Daily Correlation: October 1998

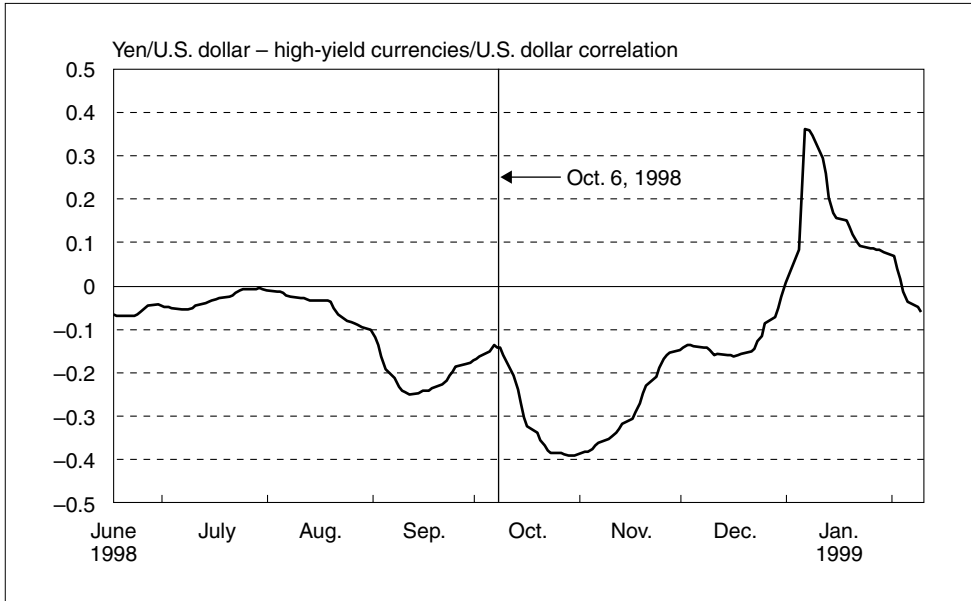


Figure 5 Yen/U.S. Dollar and High-Yield Currencies/U.S. Dollar Daily Correlation: Spring 2006

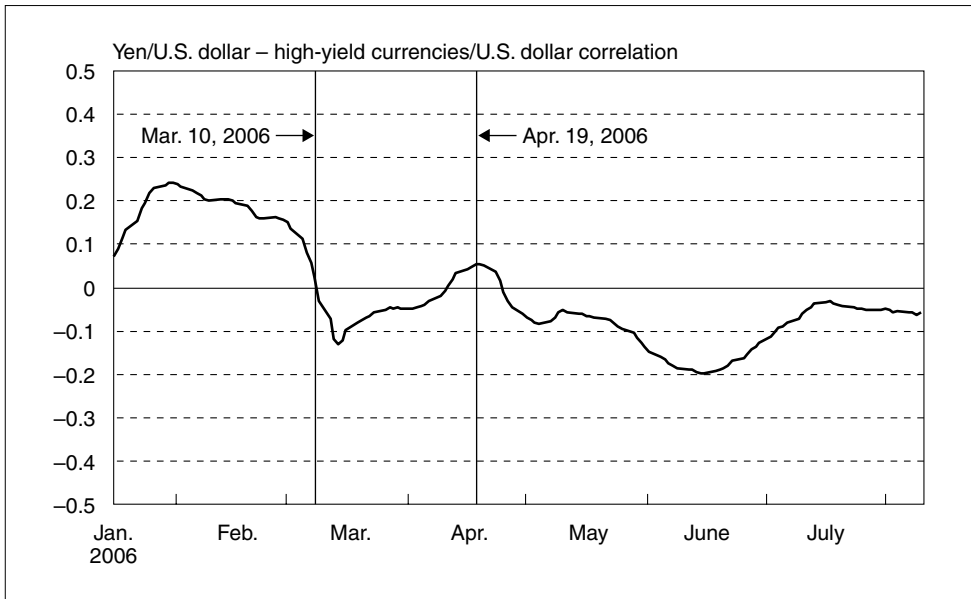
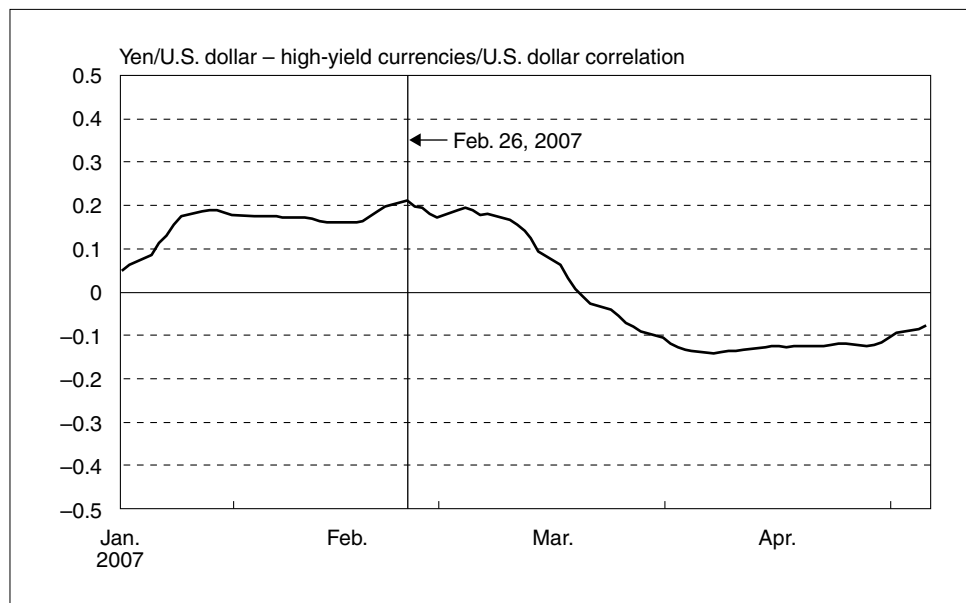


Figure 6 Yen/U.S. Dollar and High-Yield Currencies/U.S. Dollar Daily Correlation: February 2007



other key exchange rates against the dollar⁴ turned rapidly negative, suggesting that these currency pairs suddenly became driven less by dollar movements and more by cross-currency movements, with investors seemingly taking off rapidly from investment currencies to close their yen positions. The correlation turned negative especially rapidly in October 1998, while in April 2006 the anticipated nature of the end of quantitative easing in Japan, in advance of the April inflation scare, caused the decline to be more gradual.

Beyond the few common traits displayed by exchange rate dynamics, however, the triggers for carry trade unwinding in the three episodes were far from homogenous, with the first episode likely triggered by a policy event in the relevant funding country, the second episode likely triggered by a surprising data release, and the last episode, in February 2007, originating in a fairly distant area of the global financial system, whose global repercussions caught many observers by surprise. To complicate matters, we should include as examples of our inability to predict triggers for carry trade unwinding a number of cases in which “the dog did not bark,” including the end-May 2007 drop in the Shanghai stock market of about 7 percent. The latter event caused observers around the world to brace for a period of turbulence similar to that of February 2007, but was not associated with a significant global financial response. Altogether, it is hard to escape the impression that we know little about even the *type* of trigger that we might expect for the next unwinding episode. Even direct conversations with market participants are rather uninformative. Investors report

4. These are the Australian dollar, the New Zealand dollar, the Hungarian forint, and the Mexican peso, which in recent years have been reported as active investment currencies for carry trade positions.

monitoring a variety of asset prices and real economy indicators as early indicators of carry trade unwinding. Mostly, however, they report monitoring each other for signs that it might be time to pare back positions. This reads like a recipe for sudden unwinding.

IV. Summary

The answer to the question asked at the beginning of these remarks, “What do we know about the carry trade?” has to be “Not much.” It is difficult to reconcile the success of the carry trade with economic theory. We have made little progress in measuring carry trade positions. And we know that the carry trade has a penchant for unraveling in a hurry, but we have little confidence in forecasting the next type of trigger we might see. Given the possible role that the carry trade potentially plays in the financing of current global imbalances, this lack of success only increases the urgency for greater effort to understand the nature and dynamics of this critical form of international investment.

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Hans Genberg
Hong Kong Monetary Authority

It is a pleasure to participate in this closing panel. We have had a day and a half of lively discussions based on stimulating papers on each of the three conference topics—growth, financial integration, and monetary policy in East Asia—and in my intervention I would like to pursue the first and third of these topics somewhat further. My objective is to clear up some misconceptions that have entered into discussions and policy prescriptions regarding global imbalances and monetary relations in the region. The misconceptions relate to the consequences of the external orientation of East Asian economies on the one hand and with monetary policy strategies followed by regional central banks on the other. The main messages I would like to get across can be summarized in the following three points.

First, the openness and export orientation of Asian economies have served them, and indeed the rest of the world, well and should not be abandoned in favor of some ill-defined strategy of domestic demand-led growth.

Second, monetary policy strategies in the region are more heterogeneous than commonly thought. The region as a whole cannot be described as being on a U.S. dollar standard. Instead, monetary policies are increasingly focused on a domestic objective broadly defined as price stability.

Third, it follows from the previous point that proposals to coordinate exchange rate policies in the region should be rejected. The experience of Europe shows that imperfectly credible exchange rate commitments by central banks will lead to currency crises in the context of increasingly integrated financial markets. A better strategy would be to strengthen and clarify the focus on domestic objectives.

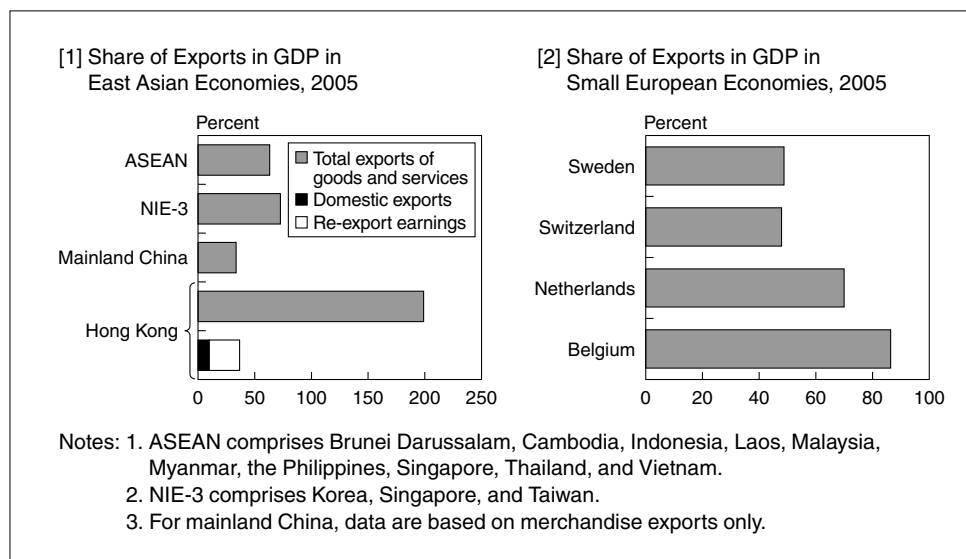
I. Openness, Export-Dependence, and Economic Growth⁵

In popular discussions about global imbalances, it is often asserted that Asian economies are too export dependent and need to switch to a growth strategy based on domestic demand. It is sometimes also asserted that the export dependency is related to mercantilistic pursuits of current account surpluses using undervalued currencies. While the combination of all these arguments does perhaps sound a bit like a caricature, each one individually has been put forward by otherwise serious economists.

I want to spend a bit of time on each. It is indeed true that Asian economies are very open to international trade, but this is not surprising as we would expect small economies to have large international exposure. The degree of openness in Asia is also not out of line with that of small European economies (Figure 1).

The empirical evidence presented in the paper by Sanghoon Ahn and Jong-Wha Lee at this conference (Lee and Ahn [2007]) as well as the literature they cite generally implies that a high degree of openness to imports and concentration in production on exports is entirely appropriate, because they are associated with higher rates of economic growth than otherwise would be the case. The reasons for this are explained in the paper, and I do not need to dwell on them further. I may be stating the obvious,

Figure 1 Degree of Openness to International Trade



5. The discussion in this section draws on He, Cheung, and Chang (2007).

but it is of course the degree of *openness* and not trade surpluses and deficits that is related to economic growth, and outward orientation by itself implies neither a tendency toward current account surpluses or deficits. For example, economies in the region generally had balance of trade deficits in the years immediately before the financial crisis in 1997–98, and they were as “export-dependent” then as they are now.

So where does the argument come from that Asian economies are too dependent on exports for their growth and should rely on domestic demand? I think it is due to the mixing of two arguments. One is the incorrect proposition according to which sustained economic growth can be influenced by aggregate demand, and that growth can therefore be driven by either domestic or external demand. According to modern theories of economic growth, however, growth is instead determined by the accumulation of factors of production and technical progress, and this view has been backed up by a large body of empirical analysis. As already noted, according to this view openness is likely to foster technical progress and growth, and it should therefore be encouraged.

The second argument related to East Asian export dependence is the correct statement that to reduce current account surpluses domestic absorption must increase relative to income. But this refers only to a cyclical adjustment phase and has no implication for the medium- to long-term growth rates of those two variables. Balanced growth requires that output, domestic demand, and external demand all grow at the same rate. Indeed if domestic absorption systematically grew faster than domestic output, the economy would be on a path with increasing trade deficits over time, a clearly unsustainable situation.

In summary, these arguments imply that (1) openness is beneficial for economic growth, (2) current account surpluses are not the necessary consequence of openness and “export dependence,” (3) correcting current account imbalances does not require reducing openness or switching to “domestic demand-led growth,” and (4) reaping the benefits from trade and openness does not require keeping the exchange rate “undervalued.”

II. Changing Strategies for Monetary and Exchange Rate Policies in East Asia⁶

Turning to the topic of monetary and exchange rate policy in the region, I would like to make three points:

- (1) Policy strategies in the region are quite heterogeneous.
- (2) Countries are increasingly focusing on domestic objectives.
- (3) Exchange rate coordination should be avoided.

As far as exchange rate regimes are concerned, all types of such regimes are represented in the region, with Hong Kong at one end of the spectrum with a fixed exchange rate arrangement and a currency board, and Japan on the other with a floating exchange rate. In between there are (1) China, Malaysia, and Vietnam with heavily managed U.S. dollar exchange rates but moving toward more flexibility, (2) Singapore with

6. The discussion in this and the following section is based on Genberg (2006).

a managed exchange rate used as an instrument for inflation control, and finally (3) Indonesia, the Philippines, Korea, Taiwan, and Thailand, which have adopted more flexibility.

The region is not on a U.S. dollar standard as suggested by some authors. Regressions in the spirit of Frankel and Wei show that local currency dollar exchange rates load significantly on the euro, yen, and Korean won exchange rates. Table 1 presents results from the estimation of regressions of the form

$$\Delta S_{i,t} = \alpha_0 + \sum_j \alpha_j \Delta S_{j,t} + u_{i,t}, \quad j \neq i, \quad (1)$$

where S_k represents the dollar exchange rate of currency k . This type of regression can be used to assess whether a particular currency is more or less rigidly pegged to another. If a coefficient α_j is equal to unity and if $u_{i,t}$ is “small” for all t , then currency i is pegged to currency j . If all α 's are zero and the u_i 's are small, then the currency is pegged to the dollar. When some α 's are nonzero, then currency i is systematically related to the currencies corresponding to the nonzero coefficients. Such relationship could come about either because the central bank is actively managing the currency or simply because the behavior of currency traders/investors in the market generates a correlation between particular currencies. In either case, however, the conclusion would be that the regional currencies are not on a dollar standard.

In Genberg (2006), I show results from similar regressions estimated over year-long samples starting in 2000. The conclusions from these are that U.S. dollar exchange rates of local currencies do fluctuate with the euro, the yen, and the won, but the correlations change over time. I take this to imply that, with the exception of Singapore, the countries represented in the table do not have overriding exchange rate objectives conditioning their monetary policies. Instead, central banks are increasingly focusing on domestic price stability as their monetary policy objective.

Table 1 Regression Results

Weekly data, 2000–06

	Euro	Yen	Korean won	Adjusted R ²
Indonesian rupiah	0.090 (0.199)	0.095 (0.250)	0.383 (0.002)	0.053
Yen	0.389 (0.000)	n.a. n.a.	n.a. n.a.	0.172
Korean won	-0.003 (0.912)	0.263 (0.000)	n.a. n.a.	0.170
Philippine peso	0.013 (0.702)	0.058 (0.134)	0.131 (0.021)	0.031
Singapore dollar	0.146 (0.000)	0.181 (0.000)	0.161 (0.000)	0.527
Thai baht	0.113 (0.000)	0.171 (0.000)	0.248 (0.000)	0.293
Taiwan dollar	0.072 (0.000)	0.087 (0.000)	0.266 (0.000)	0.364

Note: Parentheses indicate p -values, and “n.a.” denotes not applicable.

Several central banks have adopted inflation targeting: Korea did so in 1998, Thailand and Indonesia in 2000, and the Philippines in 2002. While the *de facto* commitment to inflation targeting varies across countries and time, the fact that these central banks have announced that they are inflation targeters clearly signals their emphasis on internal objectives as the guiding principle for their monetary policies. Other central banks have set price stability as a target without calling themselves inflation targeters (Japan and Singapore), and others still are moving in this direction (Malaysia and Vietnam).

In view of the openness of the economies to trade, an important issue in the region is the role of the exchange rate in an inflation-targeting strategy. Policymakers have two concerns. One is how much attention the central bank should pay to the exchange rate in the case where it uses a short-term interest rate as the policy instrument, and the other is whether the exchange rate itself should be used as an instrument for inflation control. When the pass-through of import prices to domestic inflation is substantial, the exchange rate may have a prominent place in a targeting rule for a policy interest rate without constituting an objective. The difficulty for the central bank may, however, be to convince economic agents that it is not *targeting* the exchange rate as opposed to using it as an indicator of inflationary pressure.

The other issue relating to the exchange rate is whether it should be used as the policy instrument, as with the Monetary Authority of Singapore (MAS). Bennett T. McCallum analyzed this issue in his keynote address (McCallum [2007]), and I think further work on this would be interesting, at least from an academic point of view. In practice, however, there does not seem to be any intention among other actual or prospective inflation targeters in the region to follow the example of the MAS.

III. Exchange Rate Coordination in East Asia

There have been suggestions that East Asian central banks should coordinate exchange rate policies to avoid the emergence of intra-regional misalignments in the process of adjustment of global imbalances, and as a strategy to create deeper monetary integration. With respect to the former concern, it is argued that exchange rate stability vis-à-vis the renminbi has become an important policy concern, given the increasing degree of vertical integration of regional trade and the central role China plays in this process.

Regarding the road to deeper monetary integration, Europe is sometimes used as a model. The successful introduction of the euro and the success of the European Central Bank in delivering monetary stability have naturally raised the question of whether East Asia might be the next candidate for monetary unification. But in discussing monetary unification, it is essential to keep in mind that a monetary union between a set of economies implies a single common currency, which in turn requires a single common central bank. For this reason, the decision to establish a monetary union becomes intensely political. Indeed, European monetary integration was as much, if not more, a political process as an economic one. Without strong support from the political leadership in France and Germany, it was unlikely to have come about at all. Whether the same political support will emerge in East Asia is at present unclear.

Be that as it may, the European experience does carry an important lesson for East Asia with respect to the consequences of exchange rate cooperation in the presence of increasingly integrated financial markets and policy objectives that focused on domestic variables. The lesson from Europe is that such exchange rate cooperation proved to be a recipe for currency crises.

I think the same would be the case in East Asia. At this conference, we have heard that financial integration is deepening. I have argued that monetary policy is increasingly focused on domestic objectives. Under these conditions, exchange rate cooperation would simply not be credible. It would be far better to consolidate the existing trend toward strategies based on price stability and, to the extent that monetary unification is a longer-term goal, start to think about the institutional structure which would support such unification.

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Már Gudmundsson **Bank for International Settlements**

My comments will focus on policies for further financial integration in East Asia. Before I make those, however, I would like to thank the Institute for Monetary and Economic Studies of the Bank of Japan for the opportunity to attend this very interesting conference and to speak here today. I should probably also say that the views I express are mine, and not necessarily those of the Bank for International Settlements.

The subject of my comments is "policies for further financial integration in East Asia." However, I will also discuss the implications of such further financial integration for monetary and exchange rate policies, both in the near term and far in the future. My viewpoint will be that of central banks; that is to say, I will discuss areas where central banks either run the show or are prominent. The focus will for the most part be on emerging East Asia.

I think it is important, before going to the policy agenda, to take stock and ask ourselves where we are. To my mind, there are four key aspects of the current situation that the policy agenda must take into account.

First, regional financial integration in East Asia has lagged trade integration, which is high compared to many other regions. This lagging of financial integration is partly because capital controls remain in place in important countries, and partly because domestic capital markets and banking systems are underdeveloped in some economies. Furthermore, they will have a tendency to remain so as long as a significant part of financial intermediation in the region goes through the U.S. financial system.

Second, large-scale sterilized foreign exchange intervention might be beginning to reach its limits in key countries, as witnessed by increasing distortions in financial systems that are forced, or induced, to buy sterilization bonds; strong money, credit and asset price increases; and incipient inflationary pressures. We might also be reaching political limits as expressed in ongoing concerns that accumulation of low-yielding foreign assets is not necessarily the best investment and in the associated pressures for higher returns on foreign exchange reserves.

Third, policymakers in the region are very much aware of the need to develop and integrate domestic regional capital markets. Major initiatives have already been taken or are under way. I could mention the Asian Bond Fund 2 (ABF2), which directly enhances the depth and liquidity of domestic bond markets. Maybe more importantly, the process of setting up the ABF2 gave impetus to the harmonization of rules and regulations pertaining to capital markets. I could also mention the focus on the development of corporate bond markets, which was the topic of a highly successful seminar organized by the Bank for International Settlements and the People's Bank of China in Kunming in 2005 (see Bank for International Settlements [2006]). More generally, I could mention the report of a working party of the Committee on the Global Financial System (see Committee on the Global Financial System [2007]). This issue is also on the agenda of the G-8 countries at the moment. Thus, everybody is jumping on this important bandwagon.

Fourth, there is a perceived need to gradually lift remaining restrictions on capital account transactions. Thus, it seems to be on the long-term policy agenda of China to eventually lift these restrictions. The aim seems to be to integrate more fully with the global capital markets, and give a further boost to the development of domestic capital markets. In the discussions yesterday, Maurice Obstfeld asked why countries seemed to be eager to lift capital controls when it had proven so difficult to quantify the benefits of free capital movements. I am not going to answer that question, but rather state as a matter of fact that this is the direction we are going in, which will in turn have implications for the optimal design of exchange rate policies and monetary frameworks.

Having listed the most relevant aspects of the current situation, let me ask a general question, the answer to which might affect how best to proceed: should everybody go it alone? Is it the case that if each country puts its own house in order, develops and liberalizes its own markets, makes its exchange rate flexible and adopts an inflation target, then the outcome for the region or the global community will be the best available? Or is regional and global central bank cooperation, or more generally governmental cooperation, important? I tend to think the latter, in other words, that cooperation has a role to play. It can provide important peer pressure—think of the role it played in Europe—and there probably are externalities in economic development

and policy implementation. Being part of a region that is prosperous and is progressing in the same direction as individual countries want to go will make life easier for these same countries. An additional reason for cooperation is that the optimal monetary framework is not given for all times by first principles of economic theory. It changes as economies and their financial systems evolve. Sharing experiences and learning from others will thus be helpful. Such knowledge transfer is facilitated by regional or global central bank cooperation.

What are the next steps?

First, to promote the integration of capital markets by proceeding with the gradual opening of capital accounts, by progressive harmonization of financial market regulations, and some harmonization of monetary instruments that affect how markets develop. Examples of these are reserve requirements and the method used by the central banks to inject or withdraw liquidity.

Second, the development of domestic bond markets: there is a case for widening the investor base, improving the informational underpinnings of these markets, easing restrictions on nonresidents' issuance in domestic markets, nurturing the development of corporate bond markets, improving liquidity, and developing repo markets.

The third item on the agenda is more exchange rate flexibility. It is both a policy goal and, up to a point, unavoidable. It is prompted by further capital account liberalization and financial sector development and integration. It is made more pressing by the risk to economic stability that is in the long run created by large-scale foreign exchange intervention. More exchange rate flexibility will in turn stimulate market development. Referring to our earlier discussions and taking the example of China: it is sometimes stated that you cannot have exchange rate flexibility until you have developed your financial markets. That is true—up to a point. But the reverse is also true, that if you restrict flexibility of market prices too much, including that of the exchange rate, then you will put an obstacle in the way of the further development of financial markets.

This raises the issue of whether the associated exchange rate volatility might be harmful for the regional input-output matrix and the current high level of trade integration. There might be something to that, but I think that in general the evidence seems to show that these effects are smaller than people think, partly because more developed financial markets provide ways to mitigate these effects.

Even if this is the path that we are going to take, I think we need to acknowledge that there are significant unresolved problems with pure inflation targeting and floating exchange rates as financial globalization progresses, especially for smaller countries. We know from theory that if financial globalization goes all the way, in the sense of financial markets becoming fully integrated and the law of one price holding, then there will be no interest rate channel of monetary transmission and everything will occur through the exchange rate channel. Whether that is a good or a bad thing depends to a significant degree on how well the exchange rate behaves. Are exchange rate changes smooth ways to adjust to shocks and disturbances, or are they themselves a source of disturbances? I think that the current experience of New Zealand might be indicative of the problems that lie ahead in this regard. Thus, extensive carry trades, which were mentioned earlier, are both a reflection and a cause of a misbehaving

exchange rate. If exchange rates were well aligned with fundamentals and uncovered interest rate parity held in the short to medium term, there would be little money to be made out of carry trades.

The fourth item on the agenda might be to develop and multilateralize the current regional reserve pooling. That would require multilateral surveillance. However, there are some question marks over how beneficial this is going to be, given the relatively strong correlation of shocks in the region.

Let me now, before I start thinking even more long term, make one comment on global imbalances, as that was a question posed by the chairperson and also raised yesterday. I do not think it is clear what is most likely to be the first factor to pull the plug on current global imbalances. We have tended to think about this issue from the standpoint of the deficit countries: are the deficits in the United States sustainable and, if not, will the medium-term adjustment be prompted by fiscal policy, exchange rate movements, or a shift in the saving and investment behavior of the private sector?

However, it is quite conceivable that the adjustment will start among the surplus countries. More developed domestic and regional financial markets might thus shift regional or domestic financial intermediation away from the U.S. financial system and into the region, which in turn might reduce the currently high saving rate in key countries. There is thus potentially a link between the policy agenda of developing domestic and regional financial markets and that of getting global external balances on a more sustainable footing. Another possibility is of course that surplus countries reach some kind of limit in terms of foreign exchange intervention.

Finally, thinking long term: I made references to the problem that foreign exchange markets have a tendency, even if there is no special government intervention, toward excess volatility and sometimes misalignments. One of the solutions to this for a small country is to enter a monetary union.

In Europe, the thinking was that monetary union was a necessary complement to economic and financial integration. The question is: will the same thought gain ground in this region? I do not think that history will stop with inflation targeting and flexible exchange rates. Furthermore, near-term exchange rate flexibility does not preclude monetary union, or unions, further down the road. What I do know, though, is that the European roadmap is not the best one. Given how far off in the future monetary unions are likely to be in this region and the difficulty of tight exchange rate management when capital movements are free, I draw the conclusion that exchange rate cooperation, or multilateral limits on exchange rate movements, are premature.

Thank you.

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Comments

Bennett T. McCallum
Carnegie Mellon University

From the perspective of a discussant, I found these panel papers to be rather disappointing—but that is a good outcome, because what a discussant really wants is something with which he can strongly disagree! Unlike in some previous years, I did not find anything of major importance with which I would clearly disagree in the three panelists' presentations.

Let me start with Leonardo Bartolini's discussion of the carry trade and the failure of uncovered interest parity (UIP). I found it really quite interesting and challenging. The basic puzzle, of course, from the perspective of economic theory, is why asset holders were willing to hold yen rather than U.S. dollars or other higher-yielding currencies, when Japanese interest rates were several percentage points lower and the Japanese exchange rate was not appreciating enough to make expected yields the same.

How could it be that UIP was strongly violated over the long spans of time that he mentioned? I think this is a very interesting issue, and I will admit that the explanation that I offered for the standard version of the UIP problem, in McCallum (1994), was mainly directed at monthly fluctuations. Also, I think that it probably did not pertain to situations at the zero lower bound for one country's interest rate. Maybe the resolution of the puzzle has something to do with the zero lower bound; I will try to think about that—but I have not succeeded in doing so thus far. One thing that I did note from Bartolini's discussion is that the inclusion of the Swiss franc as a funding currency, in addition to the yen, reduced the earnings from the carry trade.

Anyhow, with respect to monetary policymakers, it would appear that the major issue is whether the failure of UIP implies that the conduct of monetary policy is not going to work in the normal manner, that is, whether unsterilized purchases or sales of foreign exchange are going to have their expected stimulative and contractionary effects. My impression is that no problem of this type logically follows from the UIP failure described. Thus, in the model that I used for the simulations in my keynote speech yesterday, a relation implying UIP was included but with a huge random stochastic component. That is, the UIP equation reflected a huge random departure from UIP—one that had a standard deviation of the discrepancy of more than 10 percentage points on an annual basis. Yet that did not, according to the simulation results reported, keep the policy rules—either of them, the interest rate or the exchange rate rule that I was discussing—from having their intended stabilizing effects, despite this ongoing large random discrepancy from UIP.

More generally, the failure of UIP in the foreign exchange markets is both theoretically and factually similar to the failure of the expectations theory of the term structure in domestic bond markets. Marvin Goodfriend mentioned to me the other day that the carry trade is analogous to the practice of what he called "riding the yield curve" in the U.S. bond markets that took place during the early 1990s. There seem to be puzzles of this sort in many financial markets if you look closely; enough such

puzzles that I find it a little bit strange that financial economics has such a glowing reputation. In any case, I do not see that the failure of UIP or the presence of the carry trade is posing by itself any special problems for monetary policy, and I would think that trying to respond to the many types of financial market issues that arise would seem likely to lead to more trouble than if the central bank were to keep its attention focused on its basic macroeconomic goals.

Már Gudmundsson's remarks pertained mostly to the topic of a possible single-currency arrangement for the East Asian area—at least, part of his remarks did. And I agree with his practical agenda: for the East Asian countries to continue with development and integration of financial markets, plus greater flexibility of exchange rates. However, I find it a little hard to imagine a single-currency area that includes both China and Japan, basically on political grounds. It must be admitted that the creation of the euro area was a surprise to many people, and somewhat of a surprise to me. The objectives behind the creation of the euro area seem, however, to have been more political than economic. I had the opportunity to read the paper of Gudmundsson's (2007) that Hans Genberg mentioned in his remarks in which he expands on the discussion, and found it very impressive in its thorough and accurate consideration of issues. His conclusions, after much discussion, seemed correct to me. But the amount of “back and forth” in argumentation seemed a bit excessive, and I think it is because the paper's discussion was focused on the topic of exchange rate policy. Now, I argued yesterday that exchange rate policy and monetary policy are two sides of the same coin. Nothing in Gudmundsson (2007) is inconsistent with that view, but I think it is usually more conducive to clear thinking to focus on monetary policy rather than on exchange rate policy. Of course, in doing so you recognize that one kind of monetary policy regime is to join a currency union or have a currency board arrangement. Those represent one extreme, and the opposite is often said to be a pure float. At the same time, Mundell (2001) has pointed out that the term “pure float” is not an adequate description of policy. What is your monetary policy to be once you are floating? Of course, his point is entirely correct, and it is correct because the term applies to the exchange rate arrangements, not to monetary policy. So, to repeat, I think it is much clearer to start from the point of view of discussing things in terms of monetary policy arrangements.

With respect to Hans Genberg's remarks, I agree very strongly with most of what he said, and think that, for reasons that are obvious by now, exchange rate coordination should be avoided. I believe that my time is up.

Thank you.

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Maurice Obstfeld
University of California at Berkeley

I am discouraged by the comprehensiveness of the previous speakers' comments, because they leave little remaining to be said. Nonetheless, I will offer some reflections on what has been said here today, starting with Leonardo Bartolini's very interesting comments on the carry trade.

My initial reaction is to think that the carry trade *per se* is less interesting than the reasons for the failure of uncovered interest parity (UIP) in the data. The empirical regularity that high-interest currencies tend to yield positive excess total returns is a very long-standing one. Seventeen years ago, Ken Froot and Richard Thaler published a well-known piece in the *Journal of Economic Perspectives* setting this out (Froot and Thaler [1990]), and it is amazing that this empirical regularity has not actually changed over the years.

One way to frame the issue is to think about the standard risk-neutral UIP theory and the response of asset markets to monetary shocks within a risk-neutral world. When a country lowers its rate of interest, the mechanism thought to force the UIP condition to hold reflects borrowing in the low-interest currency and purchasing of the high-interest one until the exchange rate moves in such a way as to eliminate expected excess returns measured in any single currency. In the specific case of the United States and Japan, when Japan lowers its interest rate there would be borrowing of yen and a demand for U.S. dollars until the yen has depreciated in an overshooting manner to eliminate expected excess returns. That story is consistent with accounts of the carry trade, except that under UIP the exchange rate ends up moving in a very volatile manner—an overshooting manner, in fact—to *fully* eliminate any expected excess returns.

In practice, it seems that the adjustment which this overshooting story describes is incompletely consummated: excess returns in the high-interest currency remain. The question is: why? An illuminating paper, "The Limits of Arbitrage," published a decade ago in the *Journal of Finance* by Shleifer and Vishny (1997), sets out some of the reasons why it is difficult in practice to arbitrage away all differences in expected returns. Here the issues of collateral and margins come up, issues that Bartolini also raised in his discussion. So we get to the key question of why UIP does not hold. And if margin requirements or collateral requirements are important, that is going to have implications for monetary policy, because actions that change the values of collaterals could have market impacts that feed on themselves and that therefore amplify disturbances. Now, this is not a new idea. A decade ago during the Asian crisis period and shortly after, we saw contagion effects that were said to be based on the same sorts of mechanisms. For example, when Russia went into its crisis, that event initiated margin calls on positions in other countries, which in turn led to the appearance of contagion. Obviously policymakers should and do worry about such spillovers.

What might the equilibria in this sort of market look like? These equilibria might look like those we see in speculative attack models. Bartolini mentioned the idea of traders looking toward each other's opinions to forecast what might happen, so indeed there might be coordination problems, particularly in a setting where a central bank may be standing by effectively presenting a put option by being perceived as having an

interest in preventing an excessively sharp currency movement from occurring too quickly. I think the future modeling of these possibilities could build on the literature on speculative attacks, even though we are looking at markets of managed exchange rate flexibility under a float rather than a pegged rate.

Let me move on to Hans Genberg's remarks. I agree very strongly with just about everything he has said. I will mention one sense in which I think export-led growth strategies have proved to be fragile, and that is in the sense of provoking protectionist pressures in trading partners. To some degree, this has been a very unfair circumstance for countries like China, because China over the past decade or more has changed its trade pattern so that it imports a high volume of intermediates and re-exports them to the United States and other countries. But it is the bilateral balance with the United States that has attracted so much attention there. These final exports from China that are causing so much concern in the U.S. Congress would otherwise be reaching the United States as final exports from other East Asian countries, so one can argue that China is taking a lot of the heat for regional export success. Nonetheless, the pattern of export-led growth for China, for Korea, and for Japan has historically led to trade tensions with trading partners.

That is not to deny the other good reasons for moving to a more domestically oriented pattern of demand growth. Genberg's presentation hinted at the other reasons that one might want to, say, increase Chinese consumption on welfare grounds. Here is a country that is growing rapidly, it is saving massively, and clearly, to the extent that some of its future consumption gains can be brought forward to present generations, that would be a good thing. There is also a strong case for increasing government consumption in certain key areas—health, the environment, and the like. And of course, were these changes to occur, not only would the external imbalance diminish, but also there would necessarily have to be a change in relative prices—a real appreciation of the currency.

A couple of years ago at Berkeley, when Genberg was discussing a paper of mine and Kenneth Rogoff's on the U.S. current account adjustment, he referred to the Salter-Swan dependent economy model. Today I will return the favor. We know in that model that when a country reduces an external surplus through an increase in demand, some of that demand will fall on non-tradables, bidding up their relative price in terms of tradables, thereby causing a real currency appreciation, and increasing the supply of non-tradables. For China, of course, an increase in the consumption of services and other non-tradables is a totally appropriate development. So if one looks broadly at what would be a sensible strategy, a welfare-enhancing strategy, for rebalancing China's economy, it would have to include a rise in consumption and surely a fall in the current level of investment by Chinese firms, much of which is going into fairly unproductive uses due to distortions in the economy. Perhaps Yu Yongding is going to say some words about that later on.

Már Gudmundsson argued in his comments that more exchange rate flexibility is needed in the region. I completely agree with that, particularly in connection with China, as I spelled out at length in my keynote speech yesterday. He also brought up the very important and related issues of external financial account liberalization and internal financial reform and development. I have little to add to his presentation,

although what I would say is that in terms of rebalancing an economy such as China's, internal financial strengthening is a key element. It will help allocate the copious savings of the economy in a more rational way; furthermore, I believe that a stronger financial sector, offering better risk diversification and higher returns to savers, would actually be likely to reduce the savings rate in China, not raise it, and increase consumption. The effect on savings would, of course, reflect the interplay of substitution effects and income effects, and for a high-saving economy like China the income effects would truly be massive and would allow much higher consumption today without any diminishment of consumption possibilities tomorrow. So for China, internal financial strengthening is a very important element of an optimal economic strategy going forward.

There is also evidence that financial development will spur growth. While the evidence in the growth literature is subject to identification problems, I do believe it points on the whole to a causal influence of financial development on economic growth. That is a major reason why all the countries in the East Asian region are pushing for more sophisticated, more effective, better regulated financial systems. Some, such as Korea, have made huge strides in this direction.

Yesterday I raised the question: why external liberalization? Part of the answer lies in domestic financial development. In East Asia we have a region with extensive openness to trade, a region that is also investing in domestic financial development. It seems to me impossible in practice that such economies can be kept effectively financially closed except with massive interventions, truly draconian penalties, and massive distortions. I think these developments are simply not in the cards: capital controls will not be enforceable in the environment toward which East Asia is moving. For the same reason that openness to capital movements is inevitable, I think, as Gudmundsson has proposed, that exchange rate flexibility is also inevitable, as suggested by the logic of the trilemma, also known as the impossible trinity. To try to peg exchange rates while also pursuing the desirable goal of domestic inflation targeting would leave economies open to speculative crises of the sort that we saw in Europe in the early 1990s, and in Asia in the late 1990s. I doubt very much that monetary union is in the cards in the East Asian area, at least not in our lifetimes. Genberg (2006) reaches the same conclusion in a recent paper.

I find it instructive to reflect upon today's discussion of different levels of financial cooperation. The suggestion of a variety of Asian credit unions reminded me of the proposals for an Asian monetary fund that emerged in the late 1990s, in part out of annoyance at the way the International Monetary Fund (IMF) had handled aspects of the Asian crisis. The analytical point that a broader credit union is better than a narrower one is clearly right; the IMF does need to be made more effective. If we think about a regional central bank, we actually come back to the original Keynes plan for the international monetary system, which was based on a world central bank issuing a world currency that he called "bancor." In essence, when we talk about a regional currency union or look at the European Central Bank we are looking at institutions of which Keynes would have approved, because Keynes's original blueprint for what eventually became the IMF would have been an institution capable of conducting countercyclical monetary policy. That did not come to pass in the

structure of the IMF itself. Nor do I think we can expect this to happen soon in Asia, given the diverse sovereignties and the lack of an institutional evolution commensurate with the remarkable developments in Europe since the early postwar period.

I do think that the argument for some sort of inflation targeting at the individual-country level in East Asia is a sound one. I expect that inflation targeting at similar low-inflation rates, with credible and transparent policy procedures, will actually go a long way toward a *de facto* stabilization of exchange rates in the region. I do not believe that monetary union is necessary. I think the experiences of Sweden and the United Kingdom, as part of the European Union but not part of the euro zone, well illustrate that the case for regional monetary union is not terribly compelling. And of course within East Asia, much of Europe's evolution in terms of market unification has not yet taken place. Much deeper economic integration, based on the standard insights of optimum currency area theory, is a prerequisite for deep monetary unification.

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Yu Yongding
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Thank you, Mr. Chairman. Thank you, everyone. I have learned a lot from this morning's discussion. I share most of the opinions expressed by the previous speakers, even though I have some reservations regarding certain specific comments. Because of time constraints, I am not going to comment on my previous speakers' discussions. I would just like to use this opportunity to share with you some of my thoughts on current macroeconomic problems in China.

Most foreign economists tend to use the term "impossible trinity" to analyze Chinese macroeconomic issues. I think this framework is applicable to China in principle, but the application needs certain modifications because the Chinese situation is really quite different from other countries. It is very difficult for outsiders to have a very clear picture about what is going on in China.

I returned to China in 1994. I have spent more than 10 years trying to understand developments there. I have managed to achieve a little bit of success. Here I should say a few things to show that China's situation is complicated. The first concerns China's exchange rate regime. The regime by definition is managed floating, and it is heavily managed. More precisely, it is a regime with reference to a basket of currencies. Be aware that the regime is not pegged to a basket, but set with reference to a basket of currencies. So the People's Bank of China (PBOC) has tremendous leeway with the reference, as you can imagine.

The second thing I wish to point out is that in China we still have capital controls. The most important characteristic of these controls is reflected in the fact that the renminbi (RMB) is not convertible. I think this is a very important point. Many foreign economists tend to forget this in their analyses. They tend to say that China does not have independence of monetary policy, but this is not true, because capital controls still exist and work. This is a very important element that we should not forget. Having said that, I must admit that China's capital controls are extremely leaky. So on the one hand the RMB is not convertible; on the other hand, capital controls are leaky. It is very important to take these two points into consideration when we analyze China's macroeconomic issues within the framework of the "impossible trinity."

The third thing concerns the independence of monetary policy. China enjoys such independence, though it is becoming less and less effective. We use many types of measurements to check whether China retains such independence. For example, there is quite a significant interest rate spread between the interest rates in China's money market and corresponding U.S. financial asset rates in the London interbank market. Based on interest rate parity, we can say that China still has certain control over capital movements, and therefore enjoys independence of monetary policy to a certain extent.

It is essential to keep in mind that the Chinese government emphasizes the importance of independence of monetary policy. To maintain such independence is a priority. Mainland China is not Hong Kong. It is all right for the Hong Kong dollar to peg to the U.S. dollar and relinquish independence of monetary policy, but not for mainland China. It is impossible for China to give up independence of monetary policy, because it is a large country, with a population of 1.3 billion. So the problem now is, under an inflexible exchange rate regime with leaky capital controls, how China can maintain such independence. At this moment, the answer to the question lies in the sustainability of the sterilization operation. Many people ask whether China will be able to maintain a stable exchange rate while maintaining independence of monetary policy. I think this depends on whether sterilization policy is sustainable.

I would like to give you a very brief introduction to that operation. China is currently facing a tremendous problem of excess liquidity, caused by its exchange rate policy as well as its huge twin surpluses—capital account and current account surpluses. Last year, the twin surpluses were approximately US\$200 billion, and this year I think they will be larger. Inflation in China remains a potential threat, and has surpassed 3 percent, China's implicit inflation target. So the PBOC has to sterilize the excess liquidity consistently. One of the major instruments of sterilization is to sell central bank bills to commercial banks. The PBOC does not currently sell government bonds, because it has sold out all such bonds. At the same time, the PBOC has to raise reserve requirements frequently. Currently, the reserve requirement is 11.5 percent. So far this year, we have raised the requirement five times. Finally, the PBOC has to raise benchmark interest rates. Here, I should emphasize that to raise the benchmark interest rate in China is not equivalent to raising the federal funds rate or call rate and so on. When we talk about raising benchmark interest rates, we are talking about raising the floor of the interest rate on loans by commercial banks and the ceiling of the interest rate on deposits by the commercial banks. In other countries, to decide

interest rates on loans and deposits is not the business of a central bank, but of private commercial banks. However, this is a very important policy instrument used by the PBOC, because in China interest rates are not fully liberalized.

Besides the three instruments that I just mentioned, there is a fourth instrument that can and has been used to sterilize excess liquidity. This fourth instrument is exchange rate policy. In other words, it is to allow the RMB to appreciate a little, so that the PBOC's burden of sterilization can be reduced.

Why do I say that sterilization is not sustainable in China in the long run? Because there are many constraints. One of the very common constraints is that if you tighten monetary conditions, raising interest rates, there will be more capital inflows and so this will create more problems. This is a typical issue of the "impossible trinity." But in China, in my view, the most important constraint is not capital inflows. It is sterilization's negative impact on the performance of commercial banks.

In China, commercial banks are holding an increasing number of central bank bills with very low yields. Over the past four years we have sold, I think, more than RMB3 trillion of central bank bills net; you can check the precise figures, which are more than the total amount of government bonds sold by the Chinese Ministry of Finance over the past 10 years. At this moment, the ratio of commercial banks' central bank bills to total assets is more than 10 percent. On top of this, we have a reserve requirement of 11.5 percent, and the interest rate on this reserve requirement is 1.8 percent. So you can imagine how important the negative impacts of this kind of accumulation of low-yield assets on commercial banks' performance can be. In China, commercial banks' most important source of profits is loan rate \times total loans – deposit rate \times total deposits, which accounts for more than 90 percent of commercial banks' total profits. So if you reduce this ability of the commercial banks, then definitely their profitability will worsen. Now, most Chinese banks are listed companies; they have to answer to their shareholders. So the pressure on banks to earn profits is tremendous, and they must continually consider how to do this. I think there are basically two ways: to invest in very risky projects with high yields or to increase loans to the public, so as to increase the denominator in the ratio of low-yield assets to total assets. Both of these will lead to a worsening of a bank's performance. Banks' books are mostly quite good at this moment, due to large capital injection and writing off of nonperforming loans. But if the sterilization continues for a longer time, these hard-earned achievements could be lost. This is a serious problem indeed.

Currently, I think there is still some room for the PBOC to carry on with the sterilization policy. Taiwan suffered this kind of problem in the late 1980s. There the reserve ratio was even higher. Now in mainland China the reserve requirement is 11.5 percent; it may rise further; who knows? I think China will be able to continue to maintain sterilization for a certain period of time, maybe one or two more years, but certainly not forever. Unsustainability of sterilization will force a change in policy, if the twin surpluses continue and foreign exchange reserves continue to increase.

Due to the constraints on sterilization and also because of the inflation worry and asset bubble worry, the PBOC has to further tighten monetary policy. To do so without further damage to the performance of the commercial banks, the PBOC has to let the exchange rate go a little. We are doing things in combination. We are doing

everything to a certain extent, and we try to achieve compromises with everyone. Each policy instrument has different impacts on different economic entities. We do not want to hurt the real sector (exporters) very much, hence we do not wish to allow the RMB to revalue in a big way. We do not want to hurt commercial banks very much, hence we do not wish to sterilize too heavily. We do not wish to hurt the PBOC very much, hence we do not raise the yields on central bank bills very much. As a result, we have to “hurt” everyone slightly and thus compromise becomes the characteristic of China’s monetary policy.

So far, the PBOC has successfully managed the “impossible trinity.” Interest rates have risen a bit; low-yield assets have been forced upon the banks a bit; the exchange rate has appreciated a bit. The real sector, the banking sector, the central bank, and the exporting sector have shared the burden jointly. But the fundamental problem of the “impossible trinity” remains.

Thank you.

General Discussion

I. Exchange Rate Coordination and Monetary Cooperation in East Asia

Enrique Alberola Ila (Banco de España) disagreed with the strong position of Hans Genberg (Hong Kong Monetary Authority) against exchange rate coordination. He claimed that the case for exchange rate coordination now was higher than before, since the Chinese exchange rate regime was under some transition and other countries’ regimes were becoming more flexible. In response to Alberola Ila’s argument, Genberg explained that the problem of exchange rate coordination was who would be responsible for monetary policy in the region. He remarked that exchange rate coordination in the region would not be credible, since the central banks in the region were increasingly focusing on domestic objectives such as price stability. He then insisted that monetary policy should explicitly commit to domestic objectives and should completely leave aside exchange rate coordination.

On the possibility of Asian monetary union, Bennett T. McCallum (Carnegie Mellon University) claimed that a single currency could not be the choice if policy-makers in the region wanted to pursue a policy directed toward inflation targeting. Maurice Obstfeld (University of California at Berkeley) remarked that the idea of having a single currency for the region was hopeless unless institutional convergence, in the sense of improving central bank independence, goals, strategies, standards, and institutions within financial markets, was attained. Már Gudmundsson (Bank for International Settlements) acknowledged that if an Asian monetary union was to emerge at all it would most likely be far in the future. He then remarked that a key factor behind such an emergence might be that the same concern would arise as in Europe, in other words, that exchange rate volatility would be seen to stand in the way of reaping the full benefits of an economically and financially integrated region.

Regarding monetary cooperation in East Asia, two issues were raised. First, in regard to Gudmundsson's argument that the highly correlated shocks made the multilateralization of reserve pooling in East Asia less beneficial than otherwise, Jong-Wha Lee (Asian Development Bank) asked whether there was strong evidence of a high correlation among shocks among East Asian countries, and whether we could judge the desirability of reserve pooling solely based on the correlation of these shocks. In response to Lee's question, Gudmundsson clarified that he was not saying that multilateralization of reserve pooling was undesirable, only that it was less beneficial than otherwise if shocks are highly correlated. He then remarked that multilateralization could, in the current Asian context, have other benefits in terms of enhanced central bank cooperation and further integration in the region. Wataru Takahashi (Bank of Japan) later pointed out that one should not pay too much attention to the issues such as the common currency and the coordination of monetary policy. He further insisted that it was crucial to promote cross-border financial activities in the region for the sake of integration. In particular, given the dominance of bank finance in the region, the reform of the banking sector involving issues such as cross-border banking and the introduction of foreign banks were important.

Yu Yongding (Chinese Academy of Social Sciences) commented that the general tendency of the discussion on monetary union and monetary cooperation in this conference was very different from that in other forums in which he had participated, especially in Japan.

II. Monetary Policy and the Carry Trade in East Asia

Hiroshi Nakaso (Bank of Japan) explained how he had looked at the yen carry trade. The current yen carry trades differ in some ways from those observed in 1998: namely, (1) they are mostly driven by retail investors rather than large hedge funds; (2) the aggregate positions held by hedge funds are still large, but leverage is probably lower; and (3) the size of the foreign exchange market is substantially larger. These differences imply that even if some of the hedge funds unwind their positions, the impact on the foreign exchange market would be smaller when compared with 1998. Regarding the size of the yen carry trade, Nakaso claimed that a rough estimate was possible. He remarked that all kinds of carry trades by retail investors could be broadly regarded as the correction of a traditional home bias.

Marvin Goodfriend (Carnegie Mellon University) compared the short-term profitability of the "carry trade" in recent years to the profitability of "riding the U.S. yield curve" in the early 1990s, following up on McCallum's comment relating yield curve issues to carry trades. Goodfriend pointed out that people who borrowed at low short-term rates to take a position in the long-term U.S. bond market in the 1990s correctly bet that Federal Reserve Board Chairman Alan Greenspan's credibility for low inflation ultimately would keep long-term rates low and long-bond prices high. Goodfriend remarked by analogy that participants in the carry trade are betting that monetary policy in Japan will keep the yen/U.S. dollar exchange rate from falling

much. He wondered whether this “political economy” story in the context of deflation could help facilitate understanding of the evolution of the carry trade in Japan.

Leonardo Bartolini (Federal Reserve Bank of New York) claimed that central banks cared about the carry trade mainly because it may enhance the responsiveness of capital flows to monetary policy moves. Gudmundsson disagreed with McCallum’s argument that the failure in uncovered interest parity itself was not posing any serious problems for monetary policy. This failure is often a reflection of exchange rates being misaligned with fundamentals during extended periods, followed by sharp corrections. That poses a significant challenge for the conduct of monetary policy in small open economies. In this context, he raised the concern that the road to utilizing the exchange rate channel may be bumpy in the sense that it had a tendency to overshoot or misalign, while the interest rate channel would be blocked due to financial globalization. He also claimed that the use of the exchange rate as an instrument in Singapore, which had been discussed in McCallum’s keynote speech, should be given serious consideration in small and very open economies, although it might not be applicable to other countries with relatively bigger non-traded goods sectors. McCallum replied that his argument about the uncovered interest parity did not have anything to do with the example of Singapore, and would be equally applicable to inflation-targeting regimes and Singapore-style regimes.