

Masaaki Shirakawa: The era of linkages among Asia and across the Pacific Ocean

Remarks (via videoconference) by Mr Masaaki Shirakawa, Governor of the Bank of Japan, at the Federal Reserve Bank of San Francisco Conference, San Francisco, 11 June 2012.

* * *

1. Introduction

I am privileged to have the opportunity to speak at this invaluable conference being held by the Federal Reserve Bank of San Francisco. Today, I would like to talk about the strengthened linkages among Asia and across the Pacific Ocean, as well as the challenges in finance to be tackled to achieve sustainable growth in Asia. Unfortunately, our Monetary Policy Meeting scheduled for the day after tomorrow does not allow me to join you in San Francisco. Nonetheless I am grateful for being given the opportunity to speak in this way. I now realize that a new linkage across the Pacific, which relates to the topic I want to discuss today, is being formed through such innovative information technology like this.

Since the voyage of Christopher Columbus in 1492, there have been economic, cultural and political exchanges between the two sides of the Atlantic Ocean for more than five centuries. Since the nineteenth century, the two sides of the Atlantic Ocean have been regarded as the center of the civilized world. Compared to this long history of trans-Atlantic linkages, the history of trans-Pacific linkages is quite brief. Thirty years after Columbus made his voyage, the fleet led by Ferdinand Magellan discovered and crossed the Pacific Ocean during the years 1520 and 1521. However, more substantive trans-Pacific economic exchanges only began after the Forty-niners came to join the California Gold Rush and the population of the U.S. Pacific Coast increased substantially. The only exception was the Manila-Acapulco galleon trade, in which Spanish trading ships sailed between Acapulco and Manila once or twice a year when the Spanish viceroy of Mexico ruled the Philippines.

The biggest obstacle to linkages across the Pacific was the gigantic scale of the Ocean. In order to sail between Acapulco and Manila, Spanish people of the 16th century had to build the largest galleons they could, whose size was as much as 2,000 tons (Chart 1). Compared with the famous Mayflower whose size was estimated to be 180 tons, we can easily imagine how exceptionally big the Spanish galleons were. Even in the modern era, the first trans-Pacific undersea telegraph cable was built in 1903, 45 years after the construction of the trans-Atlantic cable. Non-stop trans-Pacific flights became widespread only 40 years ago, in the 1970s, after Boeing 747 “Jumbo Jets” were fully introduced (Chart 2). Thus, it was not long ago that people began to see the Asia-Pacific region as an economic bloc. Indeed, the Asia-Pacific Economic Cooperation, or APEC, was established as a forum for the governments of Asia-Pacific countries only in 1989.

Although there remains the geographical distance between Asia-Pacific economies, owing to technological innovation it is far less an obstacle to economic exchanges than before, and the Asia-Pacific countries have become able to enjoy the benefits of sitting around the same sea together.

Apart from the historical context, last year there were a couple of big events that reminded me of the strong linkages that exist within Asia and across the Pacific. The first one was the tragic Great East Japan Earthquake. This massive earthquake severely damaged supply chains of manufacturing of Japan (Chart 3). When factories of micro-controllers, integral parts of automobiles, came to halt, the resultant shortage substantially affected not only automobile production lines in Japan but also those in overseas in Asia and the United States (Chart 4). In terms of negative impacts on supply chains, the floods in Thailand since

last summer also struck production lines of hard disk drives, disrupting computer manufacturing in other Asian economies including Japan. These natural disasters revealed the strength of linkages among Asia-Pacific economies.

Another event that reminded me of strong linkages across the Asian-Pacific region was extremely quick popularization of tablet PCs and smart phones. Indeed, we now see people looking at smart phones almost everywhere. Today's industrial linkages do not necessarily take the traditional form of division of labor depicted in textbooks on international trade. With new "concepts," firms have become increasingly capable of attracting wide-ranging resources from all over the world to bring these new concepts to reality. As is shown in the case of tablet PCs, the Asia-Pacific region has become more and more important as an "incubator" of innovation. An estimated break-down of the costs of Apple's iPhone, whose retail price is 649 dollars, consists of manufacturing cost of 8 dollars, component costs of 188 dollars and a gross profit margin of 453 dollars (Chart 5). The concepts of iPad and iPhone were generated in Silicon Valley. During the process of turning these concepts into real merchandise, there were trans-Pacific flows of goods, human resources and financial services in all directions, such as in the development of component technologies, manufacturing processes and distribution channels. In such processes, not only Silicon Valley companies but also many Asian firms in China, Korea, Taiwan and Japan are involved.

2. Asia in the global economy

Asia acting as growth pole to enhance resilience of global economy

Now, let me briefly illustrate the economic growth of the Asia-Pacific region and the strengthened linkages among the countries of that region, as the basis for further discussion.

The economic growth of Asia has continuously exceeded that of the global economy in recent years. Indeed, the relative strength of the Asian economy has been more pronounced since the global financial crisis. According to the IMF World Economic Outlook, Asian growth, which stood at 5.9 percent in 2011, is expected to continue growing at a relatively high rate of 6 percent in 2012. Meanwhile, the growth of advanced economies, which stood at 1.6 percent in 2011, is expected to remain as low as 1.4 percent in 2012 (Chart 6). According to the IMF, Asian economies are expected to increase their share of the global economy from 30% to 40% or more by the year of 2030 if the current trend of Asian growth is maintained (Chart 7).

The Asian share of the global economy is also increasing in terms of trade (Chart 8). In this regard, Japan's "White Paper on the International Economy and Trade" published in 2011 provides an insightful analysis on the global trade structure. This Paper divides the world into six areas, that is, NAFTA, the EU, ASEAN, MERCOSUR, China and Japan (Chart 9). According to this analysis, the share of the trade between advanced economies such as NAFTA, EU and Japan to the total was as much as around 60 percent in 1990, but this figure declined to a little more than 30 percent in 2008. On the other hand, the share of trans-Pacific trade among NAFTA, ASEAN, MERCOSUR, China and Japan excluding that between NAFTA and Japan increased from around 25 percent in 1990 to around 45 percent in 2008 (Chart 10). This fact illustrates the dramatic development of trade network among the Asian-Pacific region.

The growth of Asia is leading global economy even after the global financial crisis. Despite the bursting of the housing bubble in the U.S. and the financial turmoil after the failure of Lehman Brothers, the global economy has not fallen into a deep and prolonged slump such as that experienced in the Great Depression in 1930s (Chart 11). As to the background of such resilience in the global economy, let me point out the contribution made by emerging economies, especially by emerging Asia, as well as various policy responses taken by governments and central banks worldwide. With the strong growth of emerging economies,

the global economy now has multiple growth “pillars”, which fortify its resilience. Needless to say, it may not be appropriate to overemphasize so-called “de-coupling” in this globalized economy. Nonetheless, further endogenous economic development associated with the rise in living standards in Asian and other emerging economies will surely continue enhancing the robustness of global economy.

Asia as a new frontier for global economic growth

I would also like to emphasize that the high growth of Asia, which enhances the resilience of global economy, also expands new growth frontiers for non-Asian economies.

As many advanced countries are now facing common issues of an aging population and fiscal imbalances, enhancing the growth potential has become an imminent challenge for these countries.¹ In addition, the solution to the European debt problem ultimately rests with the ability and efforts of peripheral countries to boost their productivity and growth sufficiently. In this regard, Asian economies could offer great potential, as they have a vast pool of human resources and are now becoming major high-tech suppliers. Moreover, emerging Asia is expected to substantially grow as consumption markets. According to an industry survey conducted early this year, China has surpassed the U.S. to become the world’s largest smart phone market by shipments.

To exploit Asia’s potential, advanced economies should build systematic and productive linkages with Asian economies, instead of viewing Asia simply as labor-intensive production base. Case in point is Japanese retailers, medicare service industries and private education industries which used to focus on the domestic markets. They are now formulating global business strategies targeting the broader Asian market. Moreover, through their environmental and energy-saving engineering technologies, advanced economies could contribute to alleviating growth constraints associated with the rapid rise in living standards in Asia. It would also be fruitful for advanced economies to consider how they could make use of Asia’s human resources and supply capacity to overcome the problems associated with their aging population. Establishing such strategic and coordinated linkages with Asian economies would expand growth frontiers and thus bring about “win-win” relationships, which would be beneficial to both Asia and the rest of the world.

3. Economic development and financial stability in Asia

Asia’s strength and challenges in terms of finance

Next, I would like to talk about the relationship between the economic development of Asia, new linkages and the role of finance, which is indeed the main topic of this conference.

As mentioned earlier, Asian economies recovered relatively smoothly and swiftly after the global financial crisis and remain a driving force of the world economy. As one of the major factors behind the resilience of Asia, I would like to point out the overall stability of Asian financial systems.

In my view, there are three major factors behind such financial stability in Asia.

First, Asia’s economic fundamentals are relatively strong. Most emerging Asian countries have excess domestic savings and their fiscal conditions are also better than those of advanced economies. The external balances of these countries generally remain in surplus.

¹ Regarding the issues associate with demographic changes, see Shirakawa, “Demographic Changes and Macroeconomic Performance: Japanese Experiences” (Opening Remark at 2012 BOJ-IMES Conference) [2012]

Against this background, capital inflows to Asia quickly rebounded after the sudden contraction during the initial stage of the crisis.

Second, the business models of Asian financial institutions are different from those of European and U.S. institutions. In Asia, traditional banking businesses play a major role in financial intermediation, and the “originate to distribute” business model, which was one of the major causes of the financial crisis, has never been popular. Moreover, Asian banks’ exposures to structured products were limited.

Third, based on the Asian experiences of financial crises in the 1990s, many Asian countries including Japan have already made various efforts to enhance the stability and resilience of their financial systems, such as strengthening banks’ capital and building financial safety nets. Now advanced economies are focusing on “macro-prudential” policies. In this regard, some Asian economies, based on the experiences of financial crises in 1990, have already made use of various macro-prudential tools such as loan-to-value ratio to curb excessive real estate loans. As such, some Asian economies have moved ahead of advanced economies in terms of implementing macro-prudential policies.

In spite of their relative stability, Asian financial systems also face challenges. One of the policy challenges is to foster the development of capital markets, especially the corporate bond markets. In emerging Asia, there would be huge financing needs for building social infrastructure such as public transportation, energy supply and communication networks. In view of the length of financing needs for building infrastructure as well as the risks associated with possible maturity mismatches, a well-functioning capital market, as well as credit intermediation through banks, should play an important role in such long-term domestic financing. Moreover, the co-existence of different financing tools such as bank borrowing and corporate bonds could enhance the resilience of the financial systems. In this regard, Asia has already taken various steps including the introduction of Asian Bond Fund.

Japan’s possible contribution toward financial developments in Asia

On this front, I firmly believe that Japan is able to contribute to Asian financial stability as well as to the development of financial infrastructure in Asia, for two reasons.

First, Japan’s financial system, on the whole, is being stable and resilient.

Given that Japan experienced a financial crisis in 1990s, various measures have already been taken to strengthen its financial system. Partly due to such efforts, Japan’s financial system have remained mostly stable, surviving successive events such as the failures of Lehman Brothers and other financial institutions, the Great East Japan Earthquake and the European debt problem. To date, internationally active Japanese banks have generally set aside sufficient capital, and are in a position to contribute, as financial intermediaries, to satisfying Asian needs for various financial services.

Second, not only for internationally active Japanese banks but also for Japanese non-financial firms, establishing linkages with other Asian economies is now at the core of their overseas business strategies.

Internationally active Japanese financial institutions are now allocating their resources to Asian businesses as a part of their global strategies and increasing their lending in Asia. They are also exploring various businesses such as M&A financing in Asia. For example, Japanese “mega” banks’ loans to Asia as a share of their total overseas loans is continuously increasing, and has now reached around 30 percent (Chart 12). Recently, some European banks are streamlining their exposures to emerging economies, and Japanese banks are filling a part of the void created by such “deleveraging” of European banks (Chart 13). Such Japanese banks’ activities would certainly contribute to stable financial intermediation in Asia.

Also for Japanese non-financial firms, economic developments in Asia also provide a new growth frontier. In view of the widening gap between savings and investment in Japan's corporate sector due to the sluggish growth in domestic investment opportunities, Japanese non-financial firms are now expanding their direct investments and M&A activities in emerging Asia so as to explore their business frontiers and to seek for higher rate of return. Such activities are not confined to large companies, but medium-sized manufacturers and service providers are also involved. In 2009, the aggregate amount of Japanese firm's direct investments in Asia exceeded the amount invested in the European Union (Chart 14).

Such activities of Japanese financial institutions and firms would contribute to sustainable growth in Asia by facilitating a steady flow of risk capital into productive investment in Asia, including Japan itself. On the other hand, in order for the Japanese economy to enhance its growth potential, it is critical that financial institutions and firms improve their productivity and profitability by taking advantage of the growth potential of Asia in terms of both supply and demand.

4. Toward a new “win-win” relationship

In view of the strengthened linkages among Asia and across the Pacific, I would like to highlight three tasks for policymakers in order that both Asia and the rest of the world achieve sustainable growth through establishing a win-win relationship from a broader perspective.

First of all, I would like to reiterate the importance of each Asian country continuing its effort to maintain economic stability by strengthening fundamentals and the policy framework. As Asia's share of the global economy increases, possible impacts on the global economy stemming from fluctuations in the Asian economy and policies adopted by each country in Asia could become more pronounced.

In terms of economic fundamentals, emerging Asia, lagging a bit behind advanced economies, will also be required to tackle the issue of ageing population in the near future. For example, the working age population in China is expected to start decreasing in around 2020 (Chart 15). How effectively and promptly each country responds to this issue, after enjoying the “population bonus”, could have significant implications for their economic fundamentals.

Regarding growth constraints on Spaceship Earth, policy efforts aimed at protecting the environment and saving energies would also become more important. As emerging economies' share of the global economy increases, growth expectations for the global economy often lead to rise in commodity prices, which constrains policy conducts of emerging economies by intensifying inflationary pressures. In this regard, policy efforts in environmental protection and energy savings will alleviate such growth constraints and enhance emerging countries' resilience against fluctuation of commodity prices. I believe that Japanese firms, which have strength in environment-related technology, could and should make a valuable contribution on this front.

From the policy framework perspective, it is also imperative that each influential economy maintain sufficient exchange rate flexibility. Under economic and financial globalization, inflexibility of exchange rates may trigger abrupt changes in international capital flows and increase the burden of monetary and prudential policies. In this regard, I truly welcome recent efforts Asian countries have made to enhance exchange rate flexibility.

Second, with regard to financial stability policy, we are still struggling with the question of reconciling the borderless nature of globalized financial services and the national nature of financial intermediaries located within the border of a home-country sovereign state.

If we look at the first half of the decade since 2000, or at western nations since the end of 19th century before the World War I, we can see that the periods of economic prosperity have

almost always coincided with big waves of globalization. Looking back at such history, we cannot avoid further progress in globalization, for it would be the surest way to raise growth potential for advanced economies which are faced with unfavorable demographics and for emerging Asia which is trying to raise living standards further. As a financial aspect of larger economic globalization, we cannot escape from financial globalization either. Moreover, since money is scalable and can now move beyond borders instantly at an extremely low cost, it is little wonder if financial globalization goes further in future.

On the other hand, financial service providers cannot be free from their home country's "nationality" no matter how far financial services themselves are globalized, as long as the current system of national borders is maintained. There have been debates on whether these providers could or should be saved in an emergency at the cost of taxpayers in a specific jurisdiction. Ultimately, the perceived quality of debt issued by financial institutions cannot be separated entirely from the credibility of their home country and the resilience of its regulatory and supervisory framework. At the very least, in order to perform their functions sufficiently, financial service providers must be backed up by public confidence under institutional frameworks such as home country's effective supervision. In fact, we see some signs of "re-nationalization" of funds under the current financial environments. At present, under the initiative of G20 and Financial Stability Board, policymakers are discussing various issues stemming from tensions between financial globalization and sovereign states, such as cross-border resolution of globally active financial institutions. Indeed, this issue is a quite big challenge for policymakers now.

Third, it is also important to further promote mutual understanding of different national economies and financial structures.

As I already mentioned, the resilience of Asian economy played a key role in preventing global economy from falling into a deep and prolonged slump. As this fact illustrates, global economy would be more vulnerable to shock when it consists of homogeneous countries in terms of economic structure and policy framework than when it is a hybrid system embracing diversity.

In spite of the development of information technology and strengthened linkages among global economy, various "differences" among countries and regions are likely to continue existing at least for a foreseeable but substantially-long period of time. Nonetheless, creative concepts, innovations and sources of growth will emerge from new linkages between such economic diversity.

Since we are living in a world of diversified economies, there should also be various forms of linkages, ranging from an ultimate form of currency union to much looser ties. Thus, it is important for policymakers to seek the most appropriate form and combination of linkages, taking differences in economic structures and nations' development stage fully into account.

In addition, at the occasion of international discussions, constructive dialogue is needed to foster a mutual understanding of such differences and to learn from one another. The economies of advanced countries tend to be affected by common economic cycles, and thus, their policy discussions inevitably tend to focus on similar themes such as the "Great Moderation". In this regard, the developments in Asian and other emerging countries are adding diversity to the world economy, and their fresh viewpoints will enable policymakers to explore new frontiers of policy debates.

5. Conclusion

In my speech today, I have sought to explain my current thinking given the deepening linkage among Asia and across the Pacific. Before concluding my speech, I would like to refer to one issue to which we might need to pay attention as financial linkages within this economic area continue to deepen. That is, the issue of time zone differences.

You are now watching me live, with only a slight time lag as video signals are transmitted from Tokyo to San Francisco. That said, it is the 12th of June for me, which is tomorrow for you, and I am actually talking to you from “the island of the day after” over the International Date Line. For you, my speech is being delivered on the 11th of June, but my diary shows this important speech is scheduled for the 12th of June. We are communicating across the Pacific in real time, but the dates in our minds are different.

As for the dates of a speech, I can rely on my secretary to ensure that there is no misunderstanding. However, when it comes to finance, dates mean a lot more. Suppose I am committed to sending money to some of you two days from now. Should the money reach the recipient on the 13th, or on the 14th? Moreover, if both sides take account of mutual weekends, there are only 4 days in a week when transactions can be processed. These problems could probably be solved by laying down rules beforehand. Still, complicated issues could arise in terms of risk management, including when bankruptcy procedures are set in motion.

The foreign exchange settlement risks associated with time zone differences have been substantially reduced by CLS settlement. Nonetheless, many of the currencies of emerging economies are not yet available for CLS settlement (Chart 16). The example I have used today is seemingly a small problem. Nonetheless, through solving these practical problems one by one the world will become closer to a seamless economy and the global economy including Asia-Pacific region will become able to realize its full potential. In this regard, I sincerely hope that the discussions held in this conference will constitute another step in the right direction.

Thank you for your attention.

(Chart 1)

Early Days of Trans-Pacific Linkages



A Spanish galleon.

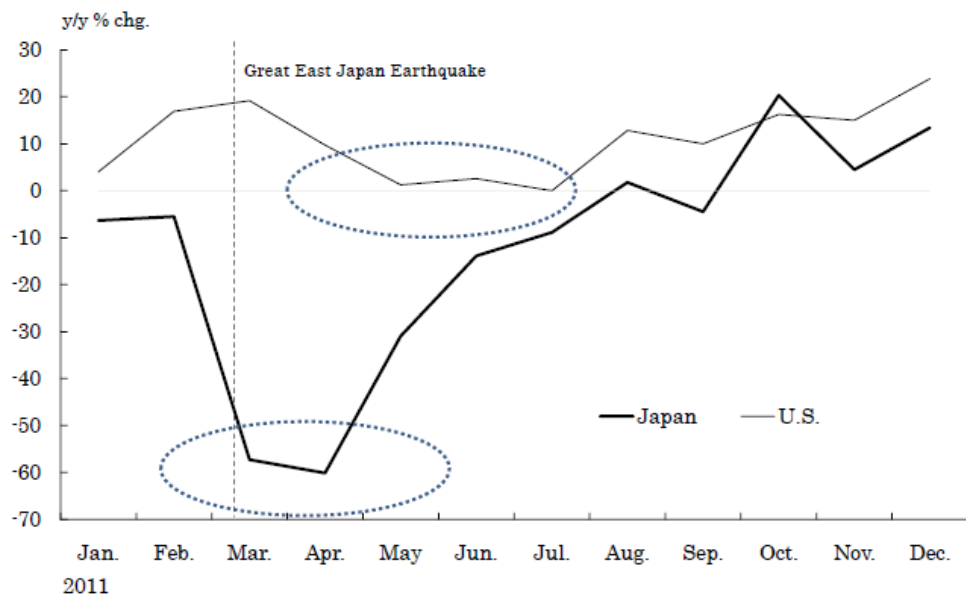
(Chart 2)

Boeing 747 “Jumbo Jet” in 1970s



(Chart 3)

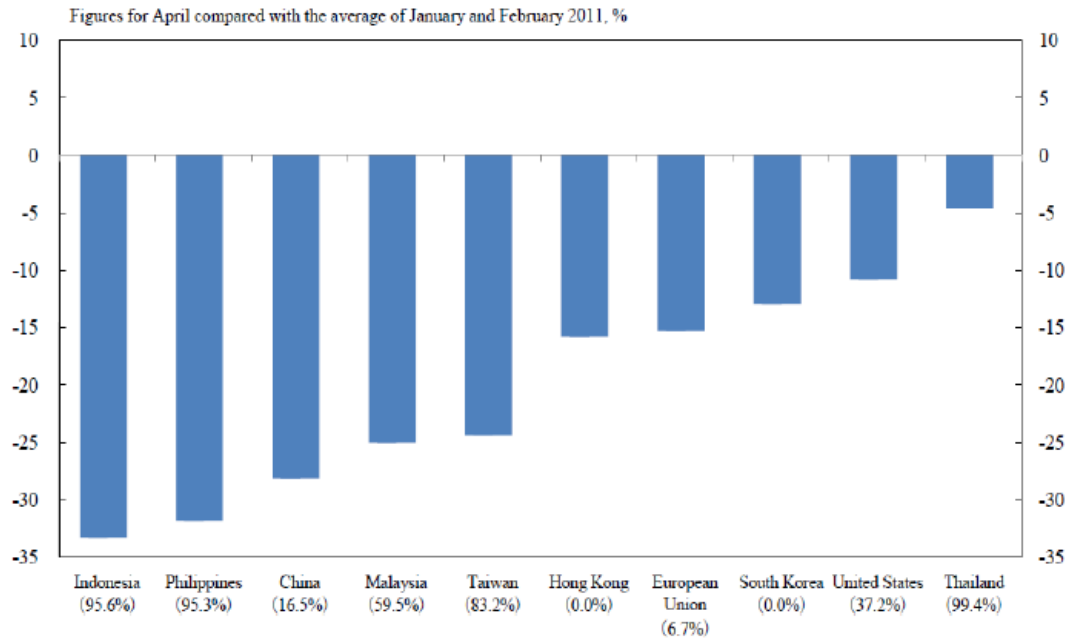
Automobile Production in Japan and U.S.



Source: Japan Automobile Manufacturers Association, Inc., FRB.

(Chart 4)

Decline in Japan's Exports of Automobile Parts After the Great East Japan Earthquake



Note: The parenthesized figure is the share of Japanese automakers in individual economies' automobile production.

(Chart 5)

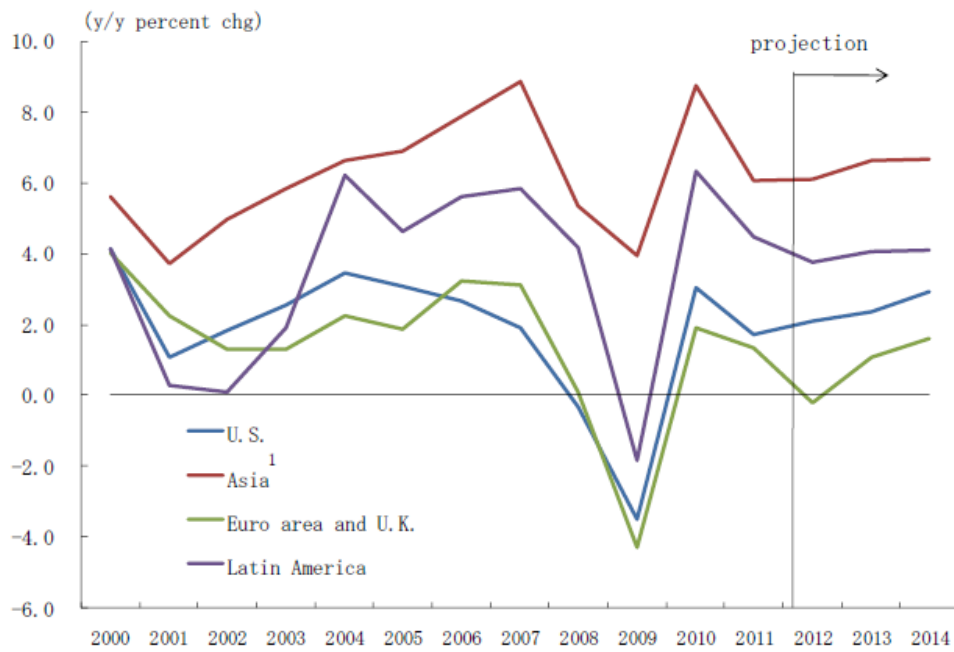
iPhone Production Costs

Components	Major suppliers		Amount of money per unit (U.S. dollars)
	Japanese-firms	Non-Japanese firms	
NAND Flash Memory	Toshiba	Samsung (Korea), Hynix (Korea)	19.2
DRAM	Elpida	Samsung (Korea)	9.1
Display	Toshiba, Sharp	LG (Korea), Chimei (Taiwan)	23.0
Application Processor		Samsung (Korea)	15.0
Camera Module	Sony		17.6
Bluetooth/WLAN and other communication equipment	Murata	Qualcomm (U.S.), Avago (U.S.), Broadcom (U.S.), TriQuint (U.S.)	30.0
Battery	Sony, TDK	Samsung (Korea), LG (Korea)	5.9
Mechanical/Electro-Mechanical	Ibiden		33.0
Cost of other components			35.1
Total cost of all components			187.9
Manufacturing cost			8.0
Gross profit margin			453.1
Retail price			649.0

Note: The costs and prices are for the iPhone4S (16GB) in 2011. The retail price is SIM-free and without contracts.
Sources: iSuppli; Nikkei Electronics.

(Chart 6)

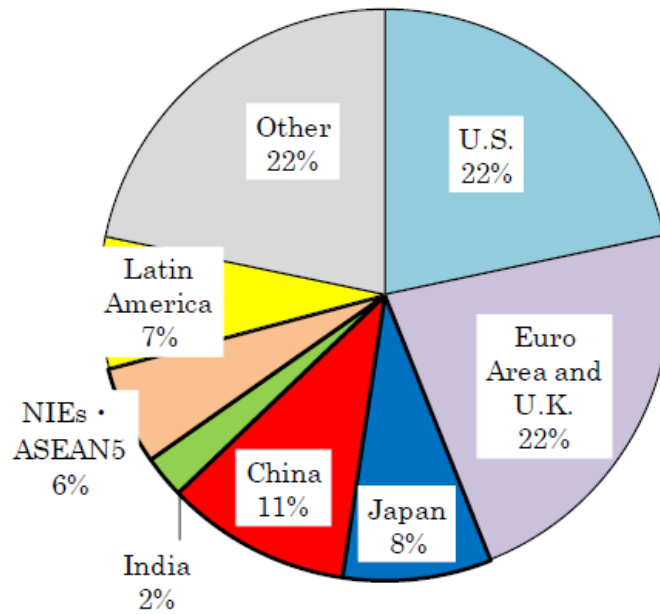
The World Economic Outlook Projections



Note1 : Japan, China, India, NIEs and ASEAN5.
Source: IMF

(Chart 7)

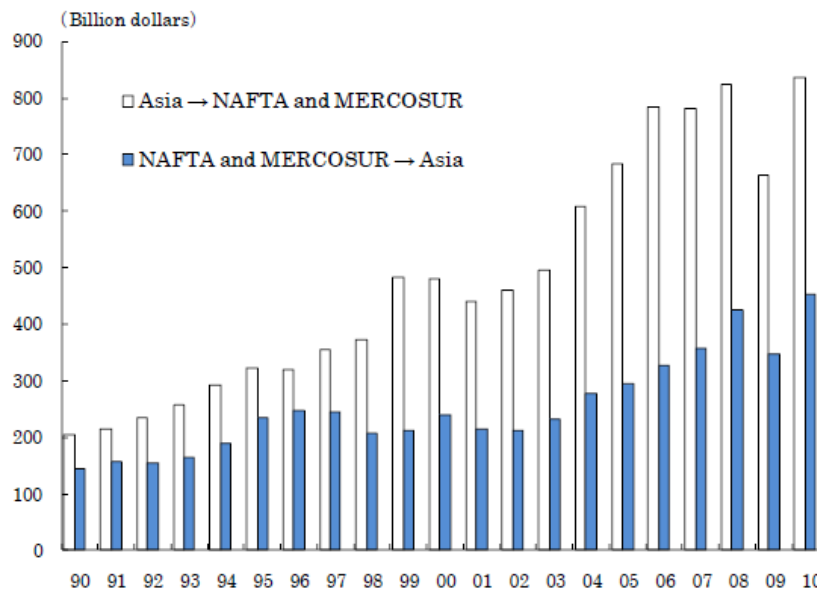
Nominal GDP Share (2011)



Source: IMF

(Chart 8)

Amount of Trade across Pan-Pacific



(Note) Asia includes Japan, China, Australia, South Korea, Taiwan, Singapore, Hong Kong, Thailand, Indonesia, Malaysia and Philippines.
NAFTA includes United States, Canada, Mexico.
MERCOSUR includes Argentina, Brazil, Paraguay, Uruguay and Venezuela.

(Source) RIET-TID 2011

(Chart 9)

Increase in the Share of Asia-Pacific Trade

Share of bilateral and regional amount of trade accounting for the total amount of trade among the six poles (%)

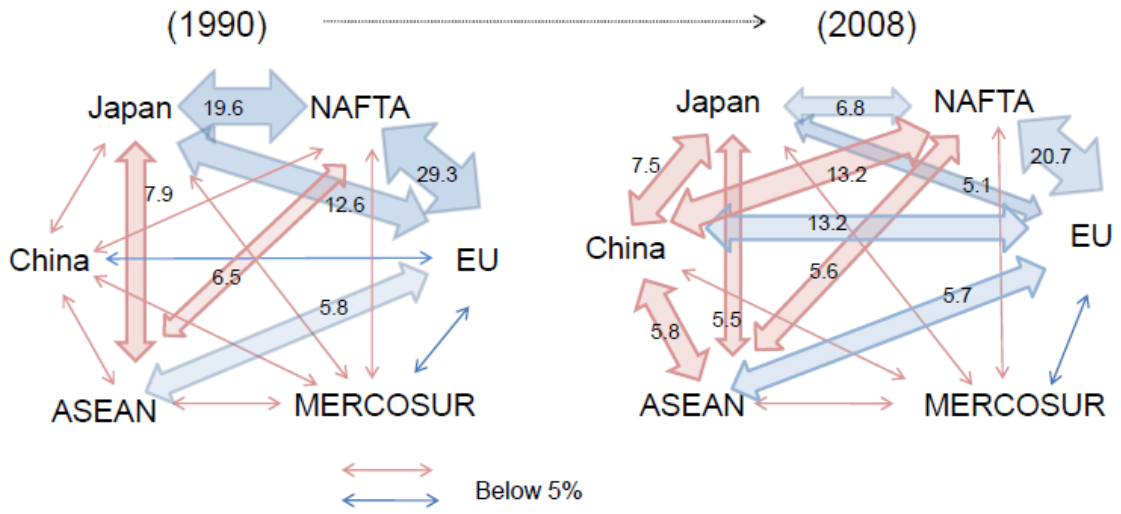
(1990)			(2000)			(2008)		
Rank	Country/Region	Share	Rank	Country/Region	Share	Rank	Country/Region	Share
1	NAFTA-EU	29.3	1	NAFTA-EU	27.0	1	NAFTA-EU	20.7
2	NAFTA-Japan	19.6	2	NAFTA-Japan	14.0	2	NAFTA-China	13.2
3	EU-Japan	12.6	3	NAFTA-ASEAN	8.5	3	EU-China	13.2
4	Japan-ASEAN	7.9	4	NAFTA-China	8.2	4	Japan-China	7.5
5	NAFTA-ASEAN	6.5	5	EU-Japan	7.8	5	NAFTA-Japan	6.8
6	EU-ASEAN	5.8	6	Japan-ASEAN	7.3	6	China-ASEAN	5.8
7	NAFTA-MERCOSUR	3.9	7	EU-ASEAN	6.1	7	EU-ASEAN	5.7
8	EU-MERCOSUR	3.5	8	Japan-China	5.5	8	NAFTA-ASEAN	5.6
9	NAFTA-China	3.3	9	EU-China	5.5	9	Japan-ASEAN	5.5
10	EU-China	3.0	10	NAFTA-MERCOSUR	4.0	10	EU-Japan	5.1
11	Japan-China	2.5	11	EU-MERCOSUR	2.8	11	NAFTA-MERCOSUR	4.2
12	China-ASEAN	0.9	12	China-ASEAN	2.3	12	EU-MERCOSUR	3.6
13	Japan-MERCOSUR	0.8	13	Japan-MERCOSUR	0.5	13	China-MERCOSUR	2.1
14	MERCOSUR-ASEAN	0.3	14	China-MERCOSUR	0.3	14	MERCOSUR-ASEAN	0.5
15	China-MERCOSUR	0.1	15	MERCOSUR-ASEAN	0.2	15	Japan-MERCOSUR	0.5

(Source) White Paper on International Economy and Trade (2011)

(Chart 10)

Increase in the Share of Asia-Pacific Trade

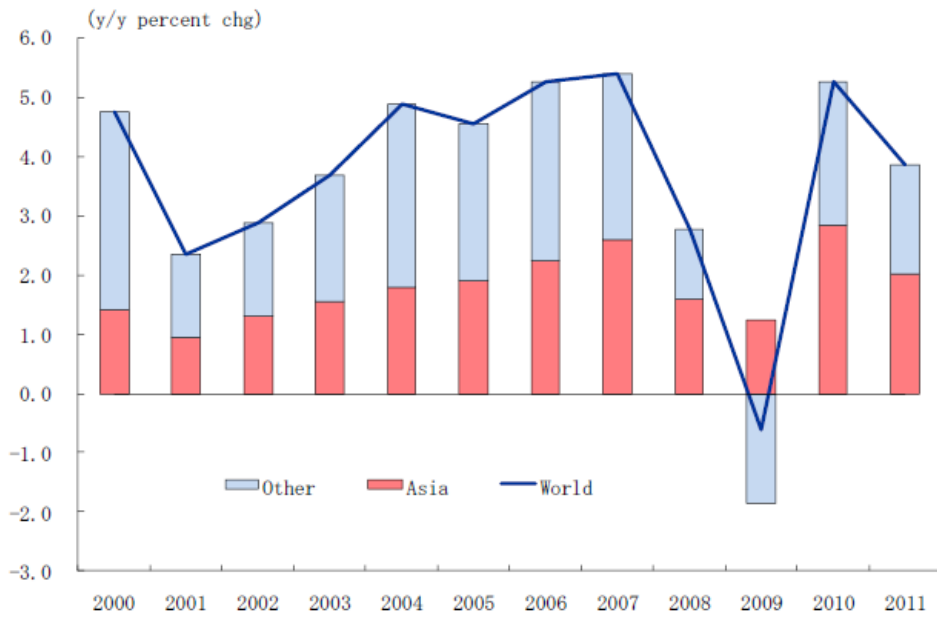
Trade among six poles



(Note) Share of bilateral and regional amount of trade accounting for the total amount of trade among the six poles
(Source) White Paper on international Economy and Trade (2011)

(Chart 11)

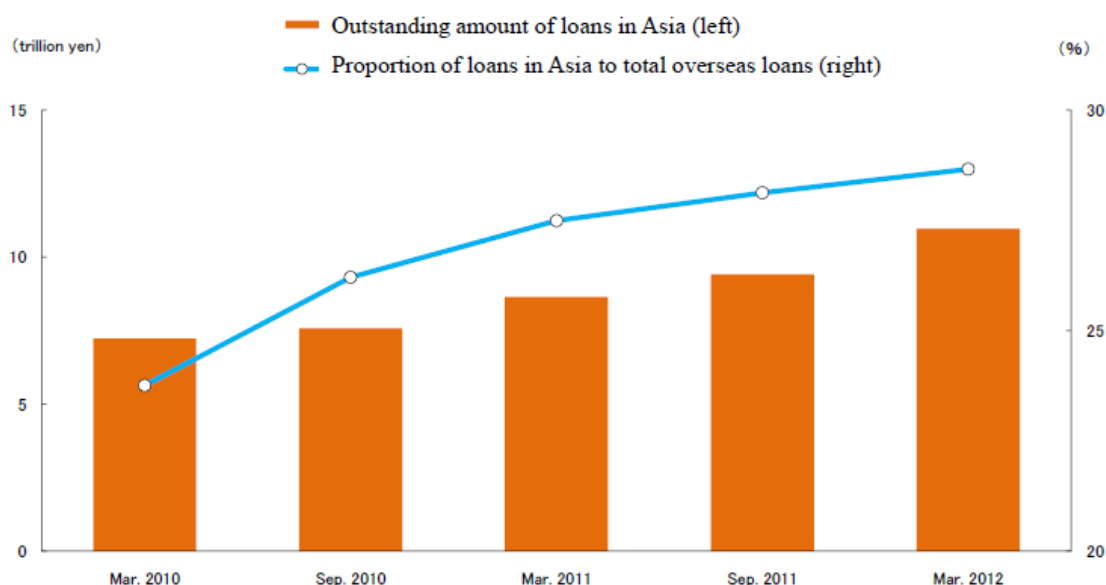
Asian Contribution to Global GDP Growth



Note1 : Japan, China, India, NIEs and ASEAN5.
Source: IMF

(Chart 12)

Loans in Asia Made by Japanese “Megabanks”

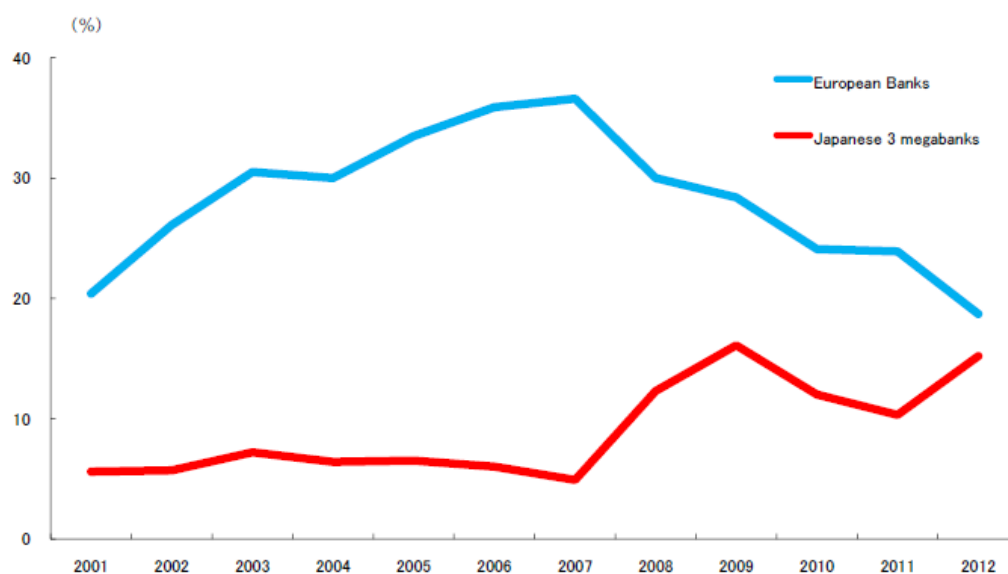


Note: Japanese megabanks comprise the Bank of Tokyo-Mitsubishi UFJ, Mitsubishi UFJ Trust and Banking Company, Sumitomo Mitsui Banking Corporation, Mizuho Bank, Mizuho Corporate Bank and Mizuho Trust and Banking Company.

Source: Financial reports of Japanese megabanks

(Chart 13)

Share of European and Japanese Banks in Terms of Syndicated Loan Arrangement



Note 1: The share is based on the amount of arrangement in global markets.

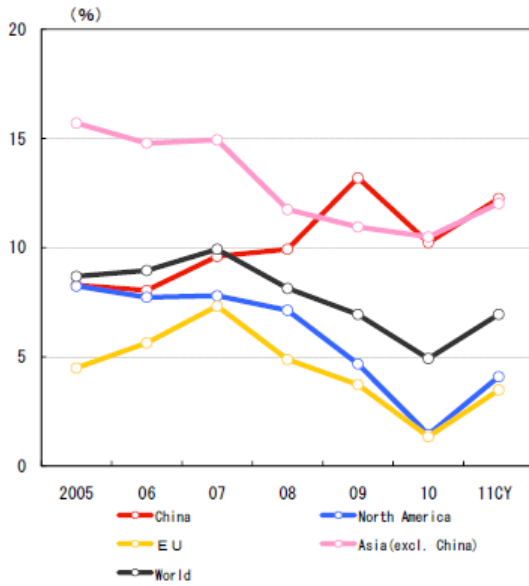
Note 2: The figure of 2012 is based on the available data figure on June 7, 2012.

Source: Thomson Reuters

(Chart 14)

Japan's External Direct Investment

(1) Rate of Return on Direct Investment¹



(Note 1) Figures of 2011 are annualized figure of the first half of 2011

(Note 2) At the end of the year

(Source) Bank of Japan

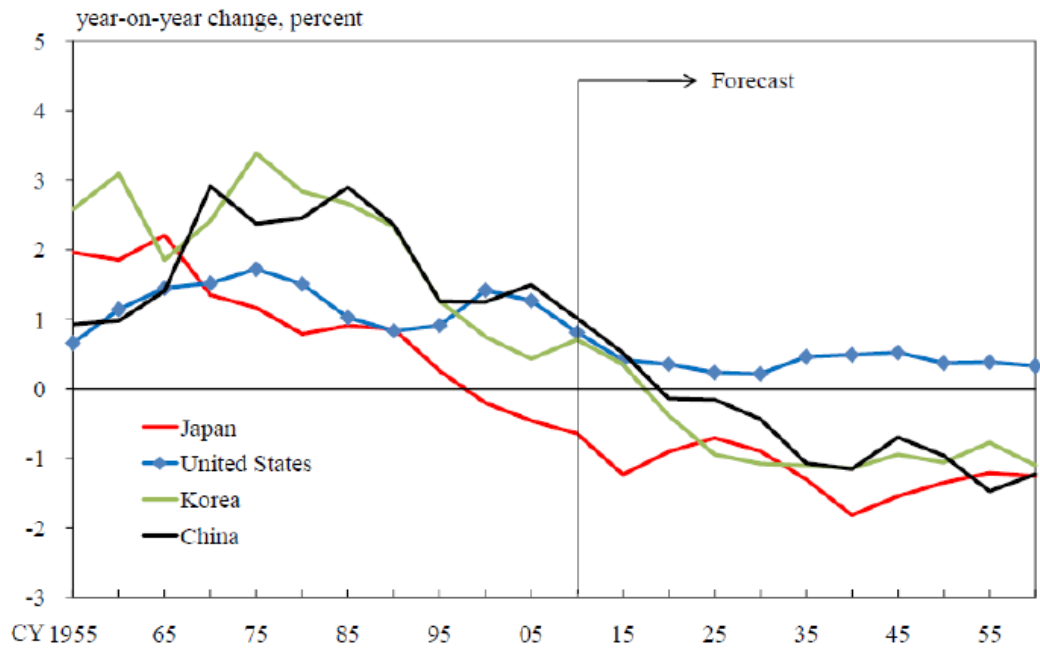
(2) Amount Outstanding of Japan's External Direct Investment²

(tril.JPY)

	2005	2010CY
China	2.9	5.4
Asia (excl. China)	7.5	11.9
North America	18.3	21.4
E U	10.8	14.9
Other	6.1	14.1
Total	45.6	67.7

(Chart 15)

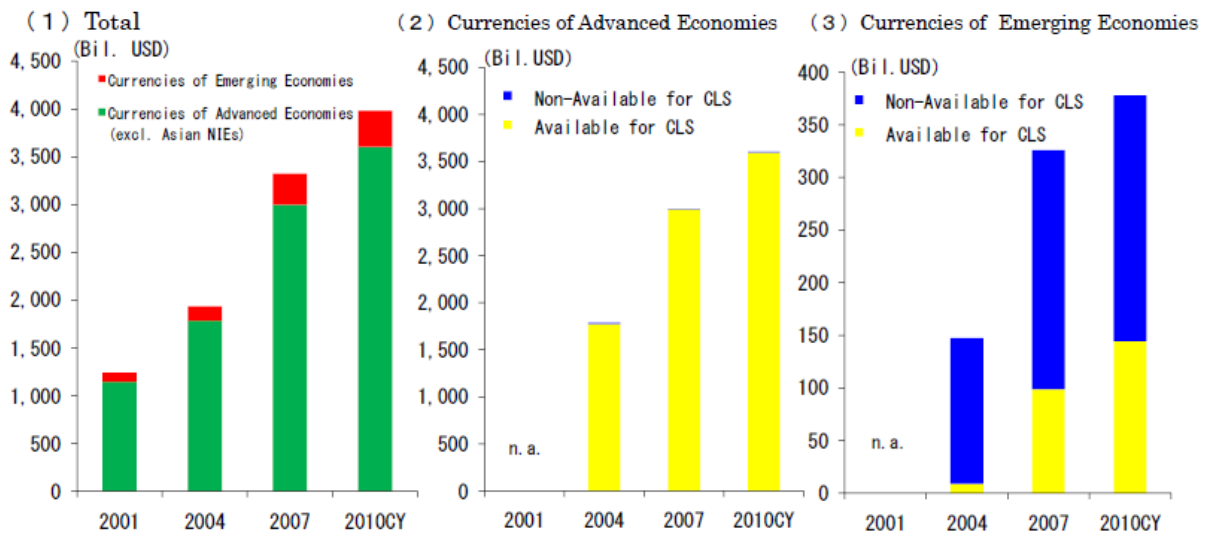
Growth Rate of Working-Age Population



Sources: National Institute of Population and Social Security Research; United Nations.

(Chart 16)

Volume of Foreign Exchange Transactions



(Note) Aggregate Transaction Volume divided by 2

(Source) BIS "Triennial Central Bank Survey"