〈研究ノート〉

Japan's economic expansion between 2002 and 2007 and the risks to the continuity of the recovery[1]

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Abstract

After more than a decade of economic stagnation, in 2002 the Japanese economy started to expand again. The economic recovery, which continues until the present, has become the longest economic expansion since the Second World War.

The economic expansion can be understood as a consequence of very favorable external conditions supported by a very loose monetary policy. Besides, as enterprises slashed its labor costs, profits increased which boosted investment. The GDP grew at an average accumulated annual rate of 2%. Annual accumulated growth rates of exports and private investment were 10% and 4% respectively. The reduction in the unemployment rate

1 This paper is the revised version of the report on the Japanese economy presented in August 24th 2007, at the International Student Seminar (Japan-China-Korea) about "Economic Gap, Legal System and Society" organized by the Office of International Affairs of Osaka University of Economic and Law.

has not translated in a tangible improvement in working conditions. This is because, the increase in employed workers was mainly due to an increase in part-time and other irregular workers who are paid lower wages. In 2007 these irregular workers already represent one third of the total of employed workers. Several indicators show how that the deterioration in the working conditions has inevitably produced an increase in poverty and a worsening in the inequality in the income distribution.

Several factors are threatening the continuity of the economic recovery in Japan. Some of the most important ones are the increase in oil prices, the crisis in the credit markets which was originated from the collapse of the residential investment bubble of United States and the risk of a sudden reversal of the carry trade operations.

Other long term problems like the shrinking and aging population and the high level of the Government's debt should be solved to assure a smoothly and continuous economic expansion.

Introduction

How did Japan manage to escape for the more than ten years long recession? How can the six years long economic expansion be explained? Both, external and internal factors have helped the recovery.

First of all, very good economic conditions in the world economy and specially continuous growth in Japan's main trade partners, United States, China, the EU, Korea, Taiwan and others Asian countries picked up during this period. Higher demand from those countries ignited the expansion in exports which in turn induced an increase in investment.

On the other hand, special internal conditions related to the monetary policy and some changes in the labor market supported the recovery. First

of all, the ultra loose monetary policy produces very low interest rates allows enterprises borrow cheaply and invest. Besides, as interest rates are much lower than in other countries, large amounts of funds have been flowing out of Japan making the yen cheaper. This has made Japanese goods more competitive and has boosted exports. The second internal factor that supported the recovery is the slashing of labor costs by the enterprises: both the number of employed persons and the wage rate has fallen. On the top of it, cheaper part time workers were substituted for the more expensive full time workers. All this produced lower labor cost and supported the ability to compete in the international markets.

Six years have elapsed and the recovery still continues. However, the benefits of the recovery have not been able to produce an important improvement in the conditions of ordinary workers and some indictors show that poverty and income distribution have worsen. While unemployment has fallen, the new working positions are being occupied by cheap part-time jobs. Improvements in the level of unemployment rate have been made at the expense of the real wage rate, which remains lower than when the recovery started. Consumption of the households remains weak and economic growth is still too much dependant of the expansion of exports. Investment is expanding too but it is basically oriented to expand equipment and machinery to produce to sell to other countries. The deepening in the dualism in the labor market with increasing part time workers may be viewed as one of the main explanations of the increase in poverty.

A shrinking and aging population started haunting policymakers and poses several threats to the economic growth due to a reduction in the labor force. In the next four years about eight million workers will be retiring creating a great pressure in the financing of the social security pension and health system. The implementation of social policies to solve the ageing population problem as well as the poverty problem will require

important compromises as the government is already tightened by its huge debt. In 2006 the net debt of the Government represented a 93% of the total value of production in one year.

In section 1 we analyze the main factors that explain the economic recovery since 2002. In section 2 we describe some of the most important structural socio economic problems of Japan: that is, the shrinking and aging population problem, the duality in the labor market, the increase in poverty and the debt of the government. Finally, in section 3 we consider the risks to the continuity of the present economic recovery.

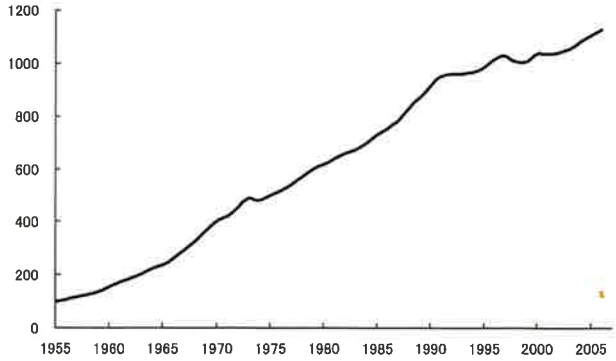
1. How did the economy managed to escape from the 12 years stagnation?

1.1. Evolution of the real GDP

In the graph below we can observe the evolution of the real GDP of Japan since 1985. The "real GDP" measures only changes in volumes of production.

Figure 1: Index of the Real GDP

After more than a decade of economic stagnation, in 2002 the economy started to grow again



Source: Cabinet Office, National Accounts

We can distinguish five different periods which we summarize in the table below. The average accumulated annual change rate in the GDP slows down from 9% during the period of "rapid growth (1955-1973)" to 1% during the "Stagnation (1992-2001)". What we call the "recent expansion" is the period that begins in 2002 to 2007 in which the rate of growth increased to 2%. Although below the high rates of the 60', 70' and 80' is shows that the economy has been able to escape the long recession

Table 1: Average accumulated annual growth rates of the GDP

PERIOD		%
1. Rapid growth	1955 - 1973	9
2. Oil shocks	1974 - 1984	3
3. The Bubble	1985 - 1991	4
4. Stagnation	1992 - 2001	1
5. Recent expansion	2002 - 2007	2

Source: Cabinet Office, National Accounts

1.2. Causes of the economic expansion between 2002～2007

How can we explain the economic recovery that started in 2002? What are the main factors that allowed the economy to recover after more than 12 years of economic stagnation?

The main factors that have pushed for an economic recovery can be analyzed considering the destiny of the GDP. Total production is sold in the market and total purchases will come from: 1) the Households (Consumption) from 2) the enterprises ("Investment"), from 3) the Government ("Government Expenses"), and 4) from other countries ("Exports"). The formula to compute the GDP is the following:

GDP = Consumption + Investment + Government Expenses + Exports − Imports

Total "Imports" are subtracted in the above formula because imported goods which are included in the different components of demand are not production of the country. The right side of the above equation is the "total demand" and the left side is the "total supply". In the short run changes in total demand causes changes in the GDP.

In Table 2 we summarize the annual change rate of the GDP and each of the components of demand since 2001. The change rates are "real change rates" that is, they represent changes in volume exclusively.

As can be observed from Table 2, the economic recovery that started in 2002 was lead by a remarkable expansion in exports and was supported by an improvement in private investment. On the other hand, expenditure of the Government has been contracting what indicates that the fiscal policy has been contractionary and was not a factor supported the recovery. Finally, Consumption of the households remains weak during the whole

period.

In the following sections we want to find an explanation for the important increase in exports and investment.

Table 2: Annual real growth rates of the components of demand (%)

The economic recovery started with an increase in exports. Investment followed up. Consumption of the households has improved but it is still weak

	2001	2002	2003	2004	2005	2006	2007*
Consumption	1.6	1.3	0.8	1.4	1.9	1.6	1.5
Private Investment	-6.4	-2.6	4.5	5.5	3.9	4.1	4.8
Government Exp.	-0.1	-0.5	-0.6	-4.4	-1.2	-3.2	-1.4
Exports	-7.9	11.5	9.8	11.4	9.0	8.2	7.4
Imports	-3.4	4.8	3.0	8.5	5.8	3.0	1.3
GDP	-0.8	1.1	2.1	2.0	2.4	2.3	2.5

Source: Cabinet Office, National Accounts
* 1st semester (preliminary figures, change rate with respect to similar period of 2006)

To understand how the different components of the GDP contributed to the growth of each year we must compute the "contribution rate" which is calculated multiplying the change rate by the relative importance respect to the total of the GDP. For example for the Consumption of the Households, the contribution rate is computed as follows.

$$\text{Contribution rate of Consumption} = \text{growth rate of consumption} \times \text{Consumption/GDP}$$

And similar equations are used for the rest of the components of the GDP. In the Table below we display the average composition of the GDP in the period 2002-2007. Notice that consumption is the most important component, followed by private investment.

Table 3: Structure of the GDP (%)

	2002	2003	2004	2005	2006
Consumption	67	66	66	66	65
Private Investment	19	19	20	20	20
Government Exp.	13	12	11	11	10
Exports	11	12	13	14	15
Imports	10	10	11	11	11
GDP	100	100	100	100	100

Source: Cabinet Office, National Accounts

The data for contributions of each component of the GDP is presented in the Table below. Exports, which represents a smaller proportion of the total GDP has the grates contribution. This is because expansion rates hare important. On the other hand, the contribution of the Consumption of the Households remained limited even in spite of its important weight in the structure of the GDP, because its persistent weakness during that period.

Table 4: Contribution to the growth rate (%)

While exports only represent about 11% of the GDP, its contribution to the growth rate is large because of its rapid expansion

	2002	2003	2004	2005	2006
Consumption	0.9	0.5	1.0	1.2	1.0
Private Investment	-0.5	0.9	1.0	0.8	0.8
Government Exp.	-0.1	-0.1	-0.5	-0.1	-0.3
Exports	1.3	1.2	1.5	1.3	1.2
Imports	0.5	0.3	0.9	0.6	0.3
GDP	1.1	2.1	2.0	2.4	2.3

Source: Cabinet Office, National Accounts

1.3. Why did Exports increase?

Four basic factors are behind the expansion in exports in that period:

A) the economy of Japan's main trade partners improved,
B) yen depreciation (the yen became cheaper),
C) deflation and
D) labor costs cut.

We explain each of the above factors in the following sections.

A. the economy of Japan's main trade partners improved

The world economy is under a phase of expansion: the world growth rate of the real GDP has expanded at a 5% annual accumulated rate in the last four years. Japan's main partners (United States, China, EU, Korea, etc.) are experiencing an important improvement in their growth rates as can be seen from the Table below.

Table 5: Annual real growth rates: Japan's main trade partners (%)

There was positive and important growth in Asia, the United States and the EU between 2002-2006

	2000	2001	2002	2003	2004	2005	2006
USA	4	1	2	3	4	3	3
China	8	8	9	10	10	10	11
EU	4	2	1	2	3	2	3
Korea	9	4	7	3	5	4	5
HK	10	1	2	3	9	8	7
Thailand	5	2	5	7	6	5	5
Singapore	10	-2	4	3	9	7	8
Malaysia	9	0	4	6	7	5	6
Australia	3	2	4	3	4	3	3

Source: International Monetary Fund

As the economic activity picks up, imports of those countries increase. Purchases of Japanese products expanded too. In the Table below, we summarize the Japanese exports to those countries.

Table 6: Change rate of exports by country (%)

	2001	2002	2003	2004	2005	2006
America	-4	1	-10	2	8	14
China and H.K	-4	12	9	11	4	7
EU (*)	-2	14	12	18	13	8
Korea	-7	16	13	19	8	14
Taiwan	-24	12	10	26	6	7
England	-8	2	2	6	3	6
Thailand	6	24	24	17	8	17
TOTAL EXPORTS	-5	6	5	12	7	15

(*) Germany, France, Italy and Spain
Source: Japan External Trade Organization

B. The yen depreciation

The second important factor that has been favoring exports since 2002 is the reduction in the value of the yen. That the yen depreciated with respect to the currencies of its main trade partners can be seen from the Table below.

What caused the yen depreciation? One of the main explanations relays on the ultra loose monetary policy applied by the Bank of Japan (BOJ) which pushed interest rates to very low levels. This has induced to the so called "yen carry-trade transactions" : investors borrow yens to buy other foreign currencies which pay higher returns. When investors sell yens and buy other currencies the yen becomes cheaper and this favors exports companies as their income expressed in yens becomes higher.

Table 7: Annual average exchange rates (¥ per unit of foreign currency)

The yen depreciation boosted exports at the beginning of the recovery

	US$	€	£	CNY	KRW (100)	AU$
2000	108	100	164	13	10	62
2001	122	109	175	15	9	63
2002	125	118	188	15	10	68
2003	116	132	190	14	10	76
2004	108	134	198	13	9	80
2005	111	137	201	14	11	84
2006	116	147	216	15	12	88
2007*	118	162	237	15	13	99

*January-November
Source: International Monetary Fund

In the Table below we can observe the spread between the interest rate in Japan and other countries. It is illustrative to see that as the interest rates in the United States became lower in 2002, 2003 and 2004, the yen appreciated with respect to the dollar in those years. Since 2005, the spread became bigger as interest rates in United States and other countries increased. The spread is also important if we consider the difference between the lending rate in Japan and the deposit rate in other countries. This would indicate that investors can profit by borrowing in Japan and investing abroad.

Table 8: Interest rates

Interest rates in Japan are much lower than in other developed countries

Interest rate on deposits

	USA	UK	NZ
2001	3.7	5.0	5.4
2002	1.7	4.0	5.3
2003	1.2	3.7	5.1
2004	1.6	4.6	5.8
2005	3.5	4.7	6.7
2006	5.2	4.8	6.9
2007	5.3	5.5	7.2

Japan interest rates

deposit	lending
0.06	2.0
0.04	1.9
0.04	1.8
0.08	1.8
0.27	1.7
0.68	1.7
0.80	1.8

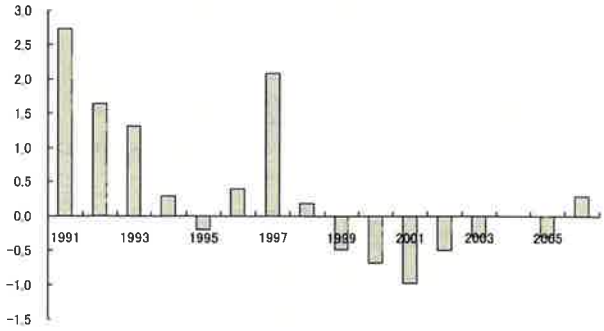
*First quarter.
Source: International Monetary Fund

C. Deflation in Japan

The third factor that favored exports is deflation. The long depression and sluggish domestic demand has pushed prices down which makes Japanese goods cheaper to foreign consumers. The CPI was negative since 1999 to 2005.

Figure 2: Consumer Price Index (CPI) : annual change rate (%)

After seven years of deflation, in 2006 prices started to increase



Source: Statistics Bureau.

Both the depreciation of the yen and the persistent deflation made Japanese goods cheaper. The "real effective exchange rate" measures both the effect of the nominal exchange rate and the change in prices in both Japan and other countries. The real effective exchange rate is computed as the average exchange rates with respect to the currencies of the main trade partners (United States, China, the European Union, South Korea, Taiwan, etc), divided by the relevant price index. The formula is as follows

$$\overline{e} = Average\left(\frac{e_{USA} P_{USA}}{P}, \frac{e_{China} P_{China}}{P}, \cdots \right)$$

where

e_{USA} is the exchange rate respect to the dollar (yens/dollar),

P_{USA} is the price index in the United States,

P is the price index in Japan

e_{China} is the exchange rate respect to the Renminbi (yens/Rmb),

P_{China} is the price index in Chine,

The average is a "weight average" according to the percentage of exports from Japan to each country. The index of the effective real exchange rate since 2000 is presented in the table below.

Table 9: Real effective exchange rate ($\overline{e}$)

The real depreciation supported the increase in exports

2000	100
2001	112
2002	119
2003	119
2004	118
2005	125
2006	137
2007	146

Source: Bank of Japan

An increase in the rate indicates a real depreciation of the yen. Notice that the value of the yen fell in real terms continuously and in 2007 was 46% lower than in 2000.

D. Labor costs cuts

The last important factor that favored exports is the reduction in labor costs. This was achieved by both a reduction in the number of employed persons as well as a reduction in salaries. The labor cost reduction played an important role in boosting profits of the enterprises which led to an expansion in investment. We will analyze this factor in detail in section 1.6.

1.4. Why is Private Investment growing?

Investment has grown at a 4% accumulated annual growth rate. Some of the main factors that explain the improvement in the private investment are the following.

A. The continuous increase in investment since 2003 is a direct consequence of the expansion of exports. Exports companies have been increasing investment (machines, factories, buildings) to support the expansion of purchases from overseas.

B. A very loose monetary policy produced extremely low interest rates which favors the expansion in investment because it is easier for enterprises to repay their loans.

C. Enterprises were able to increase the profit rate by reducing labor cost either by reducing salaries and bonus or by substituting part-time workers for full-time workers.

From the Table below it can be seen that the increase in private investment is a consequence of the growth in equipment. Private residence investment remained stagnant during since 2002 to 2006.

Table 10: Index of the real private investment

While investment in equipment increased since 2003, housing has fallen

	2001	2002	2003	2004	2005	2006
Housing	100	98	98	99	99	98
Equipment	100	97	104	111	118	123

Source: Cabinet Office, National Accounts

1.5. Production

Although the recovery started in 2002 it is not until the following year that the expansion becomes more noticeable. As can be observed in Table 8, manufacturing and services have led the recovery. In 2006, Manufacturing was 20% higher than 2001 and Services 14% higher. The construction sector which has a weight of 8% of total production has contracted between 2001 and 2005 by 10% in real terms.

Table 11: Structure (in 2002) and real growth rates of Production

The recovery was lead by the manufacturing sector

	structure 2002(%)	2002	2003	2004	2005	2006
Agriculture, fishing and mining	2	5.3	-5.4	-7.7	3.7	-2.1
Manufacturing	21	-1.5	5.3	5.8	5.2	4.3
Construction	8	-3.2	-5.2	2.2	-3.2	0.4
Electricity, gas and water	3	-0.3	-0.1	3.8	8.7	-0.1
Wholesale and retail trade	15	-1.0	-1.8	1.2	1.3	-1.8
Finance, insurance, real state	17	2.8	1.5	-0.1	1.5	0.0
Transport and communication	6	2.3	1.1	0.9	-0.3	1.1
Services	20	2.4	2.4	2.1	3.7	2.2
Government services	8	1.8	1.9	0.7	0.7	0.5
TOTAL PRODUCTION	100	0.3	1.4	2.7	1.9	2.4

Source: Cabinet Office, National Accounts.

Which industries lead the economic expansion since 2002? In Table 12 we can see the structure of production by type of industry (in 2002) and the growth rates by industry. It is easy to identify that "transport machinery" (vehicles in general) and "machinery" led the recovery. This was mainly production to be exported to the USA, China, EU and Korea. The other industries are sluggish because they are dependant on the dynamics of the local demand which it was weak during that period.

Table 12: Structure and real growth rates of Manufacturing Sector

Production of vehicles and machinery were the most dynamic sectors

	structure 2002(%)	growth rates (%)				
		2002	2003	2004	2005	2006
Food and beverages	13	-2	0	0	-4	0
Textiles and clothing	4	-10	-4	-4	-10	-1
Paper and printing	9	-5	0	1	3	-5
Oil and chemical prod.	14	-1	0	-2	-1	-2
Ceramics and minerals	4	-6	1	3	-1	4
Iron, steel and metals	13	-10	3	-4	8	-4
Machinery	26	-1	22	19	12	16
Transport machinery	9	14	-2	7	11	11
Wood and furniture	3	-10	-3	-3	0	-4
Other industries	5	-1	-14	-14	-19	-80
TOTAL	100	-2	5	6	5	4

Source: Cabinet Office, National Accounts.

1.6. The "contribution" of workers to the recovery

One more important feature of the present economic recovery is that enterprises have implemented a strategy that aimed to reduce labor costs and improve their ability to compete in the foreign markets. In the Table below is presented the total labor and capital income (profits and other rents paid by enterprises) from 2001 to 2005. From 2001 to 2004, the accumulated total transfer of income from labor to capital was ¥12 trillion representing a reduction of about 4% of the labor income in those years.

Table 13: Total labor and capital income

The reduction in salaries resulted in higher profits

	2001	2002	2003	2004	2005	2006
Labor Income	268	261	256	256	259	263
Capital Income	85	87	93	98	94	95

Source: Cabinet Office, National Accounts

How did enterprises manage to reduce labor costs? The achieved by following the following three main strategies: 1) labor restructuring: a reduction in the number of employed persons, 2) reduction in the wage rate (both the ordinary salary and bonuses) and 3) substitution of part-time workers for full-time workers.

Actually, the strategy of labor restructuring started in 1998 well before the economic recovery. As can be observed from Table 11, between 1997 and 2003 the number of employed persons was reduced by 2.4 millions. Half of these became unemployed and half got out of the labor force.

Table 14: Employment (millions) and Nominal wage rates Index

Labor restructuring started in 1998 before the recovery

	Employed	Unemployed	wage rate index
1997	65.6	2.3	100.0
1998	65.1	2.8	100.8
1999	64.6	3.2	102.0
2000	64.5	3.2	101.5
2001	64.1	3.4	101.7
2002	63.3	3.6	100.8
2003	63.2	3.5	100.6
2004	63.3	3.1	99.9
2005	63.6	2.9	101.1
2006	63.8	2.8	101.0
2007	64.9	2.4	99.0

Source: Ministry of Health, Labor and Welfare

The increasing amount of unemployed workers favored a reduction in the wage rate. The historical peak of the average nominal wage rate occurred in 1999. In 2004 was 2% lower (see the Figure 3b) and after a short improvement it has fallen recently.

Figure 3a: Employment (million workers)

Employment fell between 1997 and 2003. Since then it has recovered

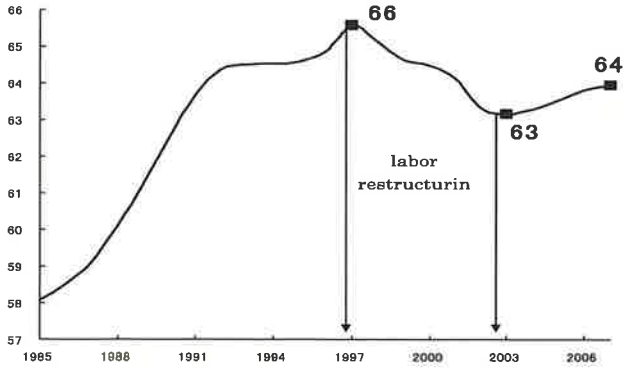
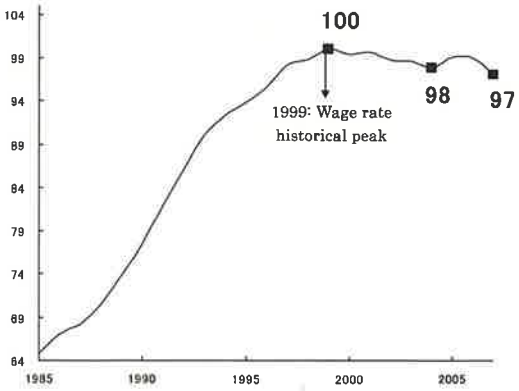


Figure 3b: Index of the nominal wage rate

The nominal wage rate is 3% lower than its peak

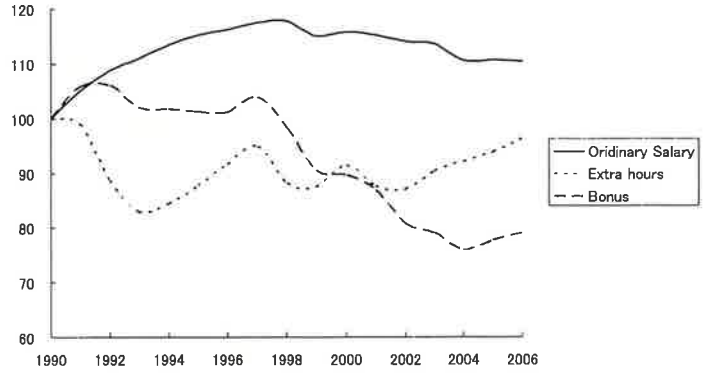


Source: Statistics Bureau, Statistical Research and Training Institute

The nominal wage rate index displayed in the above chart does not include extra hour payment and bonuses. The reduction in salaries is even grater if we consider these two components too. As can be seen in the following graph there has been a drastic cut in bonuses.

Figure 4: Index of the ordinary salary, extra hour payments and bonuses

Both ordinary salary and bonuses have fallen in the last six years

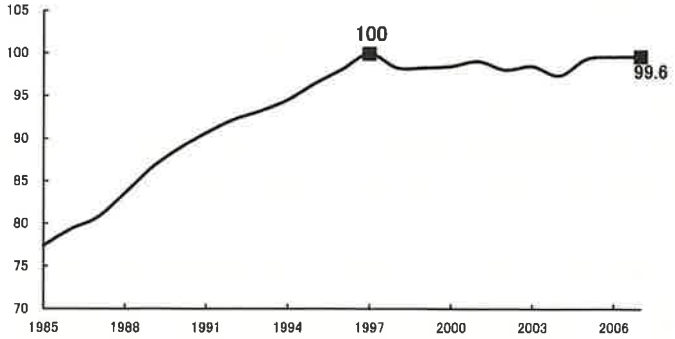


Source: Ministry of Health, Labor and Welfare

As the reduction in the nominal wages has surpassed the price reductions, the real wage rate has fallen too. Since 1997 the real wage rate has fallen and remained lower than its peak which occurred in 1997. In 2005 the real wage rate recovered 2% but since then remained almost unchanged.

Figure 5: Index of the real wage rate

The real wage rate has recovered since 2005 but remains below its peak

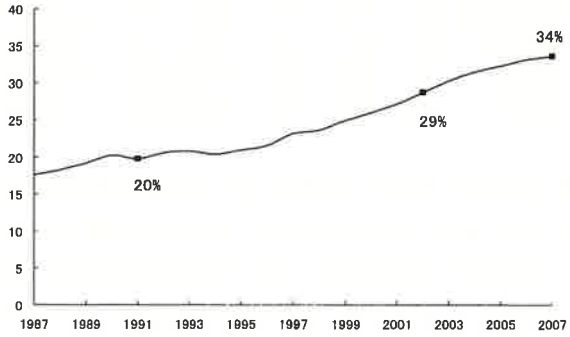


Source: Statistics Bureau, Statistical Research and Training Institute

The third strategy applied by the enterprises to reduce labor cost has been the substitution of part-time workers for full-time workers because they receive less than half the wage rate. In the first and second quarter of 2007, part-time, dispatched and other irregular workers already represent 34% of the total of workers.

Figure 6: Percentage of irregular workers

The proportion of cheaper irregular workers has increased continuously



Source: Ministry of Health, Labor and Welfare

As can be observed in the Table below between 2006 and 2001 about 3 millions part-time and dispatched workers have been substituted for full-time workers.

Using part-time or dispatched workers allows the enterprises to obtain substantial cuts in labor costs. Part-timers earn half the wage rate the full-timers do. Dispatched workers earn a higher wage rate but they are still 30% below the wages of full timers (Table 16).

Table 15: Number of employees (millions) according to the type of contract

	TOTAL	Full-time	Part-time + dispatched
2001	50	36	14
2002	49	35	14
2003	49	34	15
2004	49	34	16
2005	49	33	16
2006	50	33	17

Note: Employees does not include managers and directors)
Source: Ministry of Health, Labor and Welfare

Table 16: Average wage rate by gender and kind of contract (year 2006)

	total	male	female
① full time	1,909	2,074	1,456
② part-time	969	1,057	758
③ dispatched	1,281	1,321	1,257
②／①	0.51	0.51	0.52
③／①	0.67	0.64	0.86

A reduction in labor income allowed for an expansion of profits does not necessarily mean that that enterprises have benefited in expense of workers. This is because workers also own stocks and bonds issued by the enterprises and receive dividends and interests from their investment. However, some measures of how much of the total net wealth is owned by

the working households show that they own a relatively low percentage of total wealth or net assets (wealth= assets - liabilities). According to the Households Survey performed by the Statistics Bureau, in 2006 the 100% of all working households owned less than 1/3 of the total wealth of the nation. Furthermore poor workers do not save much and own very little assets: the poorest 50% of the working households owned less than 10% of total wealth. Then, we may say that workers did not benefit too much from the higher profits during 2002 to 2006.

Table 17: Wealth owned by working households

Poor workers own a very low fraction of the total wealth of the country

	% of wealth
All households	100
Working households	30
50% poorest working households	9

Source: Statistics Bureau (Households Survey)

1.7. Economic Policy

How did the Fiscal and Monetary policy help in producing the economic recovery? During the period 2002 to 2006 the Government reduced its total expenditure by 11% in real terms. This was due mainly to an important reduction in the public investment which by 2006 was 36% lower than in 2001. Current expenditures increased at a moderate pace during the period.

Table 18: Annual real change rate (%) in the total expenditure of the General Government (calendar year)

There has been important cuts in public investment

	Total	Current Expenditure	Public Investment
2002	-0.8	2.4	-5.4
2003	-1.8	2.3	-9.8
2004	-2.2	1.9	-8.4
2005	-1.5	1.7	-6.7
2006	-1.3	0.4	-7.4

Source: Cabinet Office, National Accounts.

Why didn't the Government use an expansion of its expenditures or the public investment to revitalize and support the economic recovery? First of all, an increase in the government expenditure without rising taxes requires an expansion of the debt which was already too high (153% by 2001). Secondly, because an expansionary fiscal policy produces an increase in the interest rate which would have had a negative impact in the level of private investment and also in the level of exports. The reason is that a higher interest rate would have produced an inflow of capital from the rest of the world and would have made the yen more expensive.

In an effort to improve the government finances and as the recovery was under way, the Government reduced the tax deductions to the income tax and the inhabitant tax which had been put in force since 1999. Those deductions which were 20% for the income tax and 15% to the inhabitant tax were reduced in half to 10% and 7.5% in 2006 and definitely eliminated in 2007. This while allowed for a higher collection of taxes implied imposed a higher tax burden on the population.

As a consequence of the reduction of expenditure and the increase in taxes, and the increase in the GDP, the deficit of the General Government (Central Government, Local Government and Social Security Agency) as a

proportion of the GDP fell continuously from 8.3% in 2022 to 3.3% in 2006. However, deficit as a percentage of the GDP is still high and is the highest among the developed countries.

Table 19: Deficit of the General Government (% of the GDP)
The fiscal situation has improved in the last four years but the deficit is still one of the highest in the developed world

2002	-8.3
2003	-7.7
2004	-5.5
2005	-6.1
2006	-3.3

Source: Cabinet Office, National Accounts

The monetary policy seemed to have played an important role in the recovery. The Bank of Japan had been implementing a policy of zero interest rates since February of 1999 and also a policy of "quantitative easing" which meant an increase in the amount of liquidity poured into the market since March of 2001. The zero interest rate policy was reversed in August of 2000 (observe in the graph below that the monetary base contracted that year) but as this affected negatively the level of production it implemented it again in the following year.

The Monetary Base increased 17%, 20% and 13% in 2001, 2002 and 2003. This extreme loose monetary policy was supposed to stimulate investment and produce economic growth. However, this did not happen until 2003 because enterprises burdened with high level of debts were not prone to expand their debt. Notice that the total of money circulating in the economy measured by the M2+CD increased at rates below 3%. Finally, as the interest rate is lower than in other countries outflows of capital started producing a yen depreciation which stimulated exports in 2002.

In March and in July of 2006 the "quantitative easing" policy and the zero interest rate policy were terminated. The Bank of Japan raised the key interest rates: the discount rate was raised to 0.4% from 0.1% and the benchmark overnight lending rate (the target rate of inter-bank uncollateralized overnight transactions) to 0.25% from its almost zero previous level. The Monetary Base contracted 23% in 2006. Again, in February of 2007 the discount rate was raised again to 0.75% and the target rate of inter-bank transactions to 0.5%. Although there has been consensus inside the Bank of Japan's governors that the monetary policy should be normalized and the interest rates be raised, persistent deflationary pressures added to the credit crisis in the United States have prevented the Bank of Japan increase those rates.

Table 20: Monetary Aggregates (annual change rate -%-)

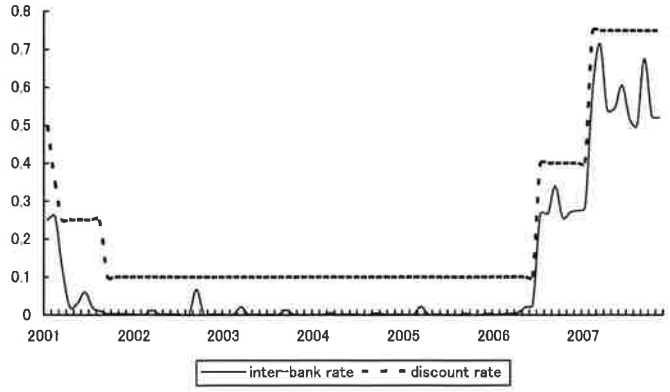
The quantitative easing policy ended in 2006

	M 2 + CD	Monetary Base
1999	3	14
2000	2	-1
2001	3	17
2002	2	20
2003	1	13
2004	2	4
2005	2	1
2006	0	-23
2007*	2	0

* November 2007.
Source: Bank of Japan

Figure 7: Inter-bank main interest rates (annual rate -%-)

The zero interest rate policy was terminated in 2006



Lending by local banks and other financial institutions continue falling even in the first four years of the recovery. In particular, it is interesting that enterprises managed to increase production while borrowing was falling. This indicates that they financed the recovery with profits. In 2006 and 2007 borrowing of corporations remains very low while loans to individuals have started to recover.

Table 21: Lending by Financial Institutions (annual change rate -%-)

Corporations manage to increase production not with borrowing but with the increased profits

	total	Corporation	local governments.	Individuals
2002	-5	-8	9	-7
2003	-5	-8	12	-16
2004	-4	-5	7	-8
2005	-2	-4	9	-6
2006	2	1	9	8
2007	1	0	7	28

Source: Bank of Japan

1.8. The Balance of Payments

Since 2001 exports have been increasing continuously producing an expansion of the "trade balance". As the economy picked up, imports increased too and the trade balance shrank in 2005 and 2006 although remain positive. Notice that the "income balance" increased continuously and in 2005 and 2006 surpassed the trade balance. As a whole the current account reached ¥20 trillion which represents 3.5% of the GDP.

The remarkable increase in the income balance is the consequence of the continuous positive current account in the past which translates in investments in the rest of the world. The return to these investments is what produces a surplus in the income balance.

Table 22: Current Account (calendar year in trillion yens)

The trade balance continues to be high, and the Income balance has become the main source of the current account surplus

	Exports	Imports	Trade Balance	Services Balance	Income balance	Transfers	Current Account balance
2001	47	38	8	-5	8	-1	11
2002	49	38	12	-5	8	-1	14
2003	52	40	12	-4	8	-1	16
2004	58	44	14	-4	9	-1	19
2005	63	52	10	-3	11	-1	18
2006	72	62	9	-2	14	-1	20

Source: Ministry of Finance

In the Table below we can see the Balance Accounts. The total current account balance equals the total capital account balance. While "capital balance" indicates the flow of capital composed by direct investment and financial investment, "change in reserves" indicate the value of reserves

gains by the monetary authorities. Financial and direct investment has increased substantially in the last two years. " Errors and omissions" may include accounting discrepancies as well as purchases of foreign currencies by individuals or corporations, funds that are not being circulated through the financial system.

Table 23: Capital Account (calendar year in trillion yens)

	Capital balance	Changes in Reserves	Errors & omissions	Capital Account balance
2001	-6	-5	0	-11
2002	-8	-6	0	-14
2003	8	-22	-2	-16
2004	2	-17	-3	-19
2005	-14	-2	-2	-18
2006	-12	-4	-4	-20

Source: Ministry of Finance

As the purchasing power parity theory suggests, the huge surplus in the current account indicates that in the long run the yen would tend to appreciate.

1.9. The Stock Market

Although the economy started improving by the beginning of 2002, the Nikkei Average Stocks Index continued falling until reaching in April of 2003 ¥7,831, the lowest level since the last month of 1982. Bu the second quarter of 2003, the Index started to recover and since then it has multiplied by almost 2. By December of 2007, level of the Index is at a similar level as in 1985-1986 when the last asset bubble started.

In 2007 the index increased in the first semester, but since the credit crisis became evident in August it started falling. While most of the main

Stock Exchanges in the world registered gains respect to the previous year, the Nikkei Index was 11% lower. Several factors like the uncertainty about the effects of the credit crisis on the economic growth in the United States as well as the increases in the price of oil have clouded the horizon of the Japanese economy.

Figure 8: The Nikkei Average Stock Index since 1980.

From 2003 to 2007 the Index has recovered about 95% of its value

Table 24: Nikkei Stocks Average Index in 2007

In second semester, stocks fell under the pressure of the increases in the price of oil uncertainty about the credit crisis and its effects on the Japanese economy.

January	17,383	February	17,604
March	17,288	April	17,400
May	17,876	June	18,138
July	17,249	August	16,569
September	16,786	October	16,738
November	15,681	December	15,308

Source: Nikkei Shinbun.

1.10. Production, prices and exchange rate in 2007

In the Table below we can observe the seasonally adjusted growth rates of the GDP in the first three quarters of 2007. Growth rates are the change rate with respect to the previous quarter. The GDP increased 0.8% in the first quarter, then fell in the second quarter by 0.5% and recovered again in the third quarter increasing 0.4%. Notice that exports continue increasing and to leading the general economic expansion. On the other hand Consumption of the Household although increasing continues to be sluggish and is growing below the total GDP. Private residential investment, which has been contracting almost every year since 2002, continues falling in 2007. The situation has become more dramatic in the third quarter of 2007 because of the stricter rules for obtaining building permits which were put in force in June. The new regulations were introduced after an architect fabricated earthquake-resistance data in 2005. In 2008 the construction sector is expected to recover as pending permits are granted.

Table 25: Growth rates of the GDP in 2007, quarterly data

In 2007, exports and investment continue to be the main sources of growth. Consumption remains weak

	1st quarter	2nd quarter	3rd quarter
Consumption	0.6	0.2	0.3
Private Residential Investment	-1.6	-3.8	-7.9
Non-Residential private Investment	-0.4	-1.7	-1.1
Government current expenditures	0.2	0.3	0.2
Public Investment	4.9	-4.6	-2.3
Exports	3.2	1	2.6
Imports	1	0.7	-0.2
GDP	0.8	-0.5	0.4

Source: National Accounts

After seven years of deflation in 2006 the Consumer Price Index rose 0.3% in 2006. However the Government did declare "victory" on the battle against the reduction in prices as in the first three quarters of 2007 the Consumer price index remained unchanged or even fell However, the continuous pressure of the increases in energy prices have started to reverse the trend. In the October the CPI increase 0.3% respect to the same month of the previous year, and in November increase 0.6%. Similarly the "core CPI", which excludes fresh food, also shows that prices may have started to pick up. Taking a more detailed look at the different components of the index it is clear we can infer that recent price increases may be more due to an increase in energy prices than increases due to a recovery of consumption.

The enterprise price index which measures the average prices of transactions between enterprises are systematically above the CPI, showing that enterprises are having difficulties in passing on to consumers the inflationary pressures derived either from the increases in the prices of commodities. This is a reflection of the double phenomenon of increase in commodity prices and the weakness in domestic demand specially consumption of the households.

Table 26: Consumer Price Index (CPI) and Enterprise Price Index

There are signs that deflation may be coming to an end.

	CPI	core CPI *	Enterprise Price Index
January	0.0	0.0	1.7
February	-0.2	-0.1	1.3
March	-0.1	-0.3	1.4
April	0.0	-0.1	0.8
May	0.0	-0.1	0.4
June	-0.2	-0.1	0.6
July	0.0	-0.1	0.8
August	-0.2	-0.1	0.7
September	-0.2	-0.1	0.7
October	0.3	0.1	1.9
Nov.	0.6	0.4	1.9

Change rate with respect to the same month of the previous year.
* The core CPI excludes fresh food
Source: Statistics Bureau.

A more detailed look to the different components of the price index (see Table below) show that price increases have occurred in energy related expenditures as well as clothing, health and education. Prices of furniture and electrical appliances have fallen continuously.

Table 27: Main Components of the Consumer Price Index

Deflation may have ended, but not for the best reasons because, it is energy prices what is pushing prices up.

	Food	Heat and Water	Furniture and electrical appliances	Clothing	Health	Transport. & Communic ations.	Education
Jan.	-0.2	1.0	-1.3	0.6	-0.3	0.4	0.7
Feb.	0.1	0.1	-1.3	0.3	-0.3	-0.4	0.8
Mar.	0.8	0.0	-1.7	0.4	0.0	-1.1	0.8
Apr.	0.7	0.1	-1.5	0.7	1.0	-0.6	0.8
May	0.3	0.2	-1.4	0.6	1.2	-0.6	0.8
June	-0.3	0.3	-1.6	0.4	1.0	-0.2	0.8
July	0.3	0.3	-1.9	0.6	0.7	0.1	0.8
Aug.	-0.4	0.2	-1.8	0.8	0.8	-0.2	0.7
Sep.	0.1	0.2	-1.7	0.6	0.4	-0.5	0.7
Oct.	0.9	1.0	-1.5	0.3	-0.5	0.2	0.7
Nov.	0.9	2.2	-1.6	0.7	-0.3	1.5	0.7

Source: Statistics Bureau.

The continuation in the deflationary pressures though have subdued, are still present and is still close to the lower bound of the comfort zone of inflation defined by the Central Bank which is 0% to 2%. This may prevent the Bank of Japan from increasing the interest rates in the near future.

Since August of 2007 the yen has appreciated with respect to the main currencies. One of the main reasons is that since that month the credit crisis originated in the United States became serious and while the Federal Reserve reduced the federal funds rate, investors started changing their investment positions by selling their high risk assets. This produced a reversal in the carry trade transactions. The yen appreciated the most with respect to the American dollar (from ¥123/dollar in June to ¥110/dollar in November). Appreciation respect to the won was also 11%. With respect

to the renminbi, the pound and the Australian dollar appreciation was around 8%..With respect to the euro appreciation was 3%. The yen appreciation is not welcomed by exports companies because their income measured in yens fall for this reason. As the economic recovery is still dependant on the expansion in exports, a further yen appreciation may affect negatively the current expansion. We will address this issue again in section 3.

Table 28: Exchange Rates

Since the credit crises originated in the sub-prime mortgage problem in the United States in August the Federal Reserve reduced the federal funds rate and then, the yen has appreciated.

	US$	€	£	CNY	KRW (100)	AU$
January	121	158	239	16	13	94
February	119	157	232	15	13	94
March	118	157	232	15	13	95
April	119	163	239	16	13	100
May	122	164	241	16	13	101
June	123	167	247	16	13	105
July	119	163	242	16	13	102
August	116	159	234	15	12	95
September	115	164	235	15	13	102
October	115	166	238	15	13	106
November	110	162	227	15	12	98

Source: Bank of Japan

How has the yen appreciation affected exports? In the Table below it is presented the monthly change rate of the value of exports to the twelve main destinies of Japan's exports. Though total exports (first column) slowed down in June and July, it has recovered and has been strong since August to October. Observe that exports to the United States have retre-

ated since April. The basic explanation for this is the yen appreciation against the dollar. Exports to the United Kingdom also fell between April and August, but have recovered since then. Exports to most of the other trade partners have been strong in spite of the yen appreciation.

Table 29: Monthly change rate of the value of exports (%)

While exports to most of the Asian countries remain strong, exports to the United States have fallen since the dollar started to appreciate in July

	TOTAL	USA	CHINA	KOREA	Taiwan	HK	Thailand
January	16	3	46	14	6	26	7
February	6	3	5	11	-16	-4	9
March	9	2	14	5	-1	13	12
April	8	-6	16	12	1	0	10
May	9	-5	18	5	2	12	14
June	8	-1	14	1	-3	6	10
July	5	-5	13	1	-2	0	2
August	11	2	20	8	7	4	13
September	8	-8	18	0	5	-4	13
October	16	0	21	16	-2	7	12

	Germany	Singapore	Holland	UK	Malaysia	Australia
January	18	22	24	8	7	15
February	9	4	33	14	1	13
March	17	10	34	8	6	10
April	6	12	34	-4	20	14
May	10	21	30	-2	15	4
June	8	-4	21	-7	25	-14
July	8	17	32	-5	5	-9
August	10	20	25	4	4	29
September	8	10	17	25	21	5
October	18	11	37	31	9	25

Source: Japan External Trade Organization: Trade Statistics Database

2. Japan's Main Unsolved Structural Economic Problems

The recent expansion gave some relief to the country after the ten-years-long recession. However, the expansion in the economic activity has not been enough to produce a tangible improvement in ordinary workers lives and there are still several difficult structural problems to be solved.

While production and profits of the enterprises increased after 2002, the unemployment rate started falling only two years later. The real wage rate continued falling; there was a slight improvement in 2005, but since then it has been falling again. All these has contributed to the weakness in the consumption of the households

As we understand, four main problems must be tackled with urgency:

1) Shrinking and aging population
2) Working conditions
3) Increase poverty and in the inequality in the income distribution
4) High debt of the government.

Any social policy to be implemented to try to solve problems 1) to 3) will be seriously restricted by the high levels of the debt of the government. The above problems are all interconnected, will require several years to be solved and are a big challenge for the present and futures administrations. In the following sections we analyze the scope and dimension of the above problems.

2.1. Shrinking and aging population

Japan's total population has stayed almost unchanged in the last three years. In July 2007 was 127.8 millions. The percentage of population older

than 64 years old continues rising: in 2007 reached 21% of total population one of the highest percentages in the world.

Table 30: Structure of population: July 2007

Japan has the oldest population in the world

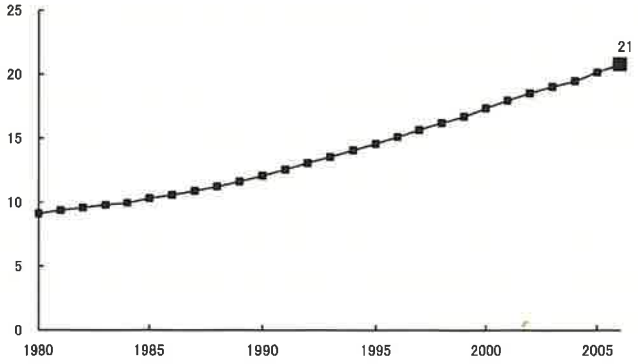
Interval of age	% on total population
0 ～15	14%
15～64	65%
65～	21%

Source: Statistics Bureau.

The aging population is not a new phenomenon as can be immediately inferred from the following graph. The percentage of the population above 64 years old has been increasing continuously in the last three decades.

Figure 9: Percentage of population above 64 years old

The aging population phenomenon has been progressing in the last 30 years

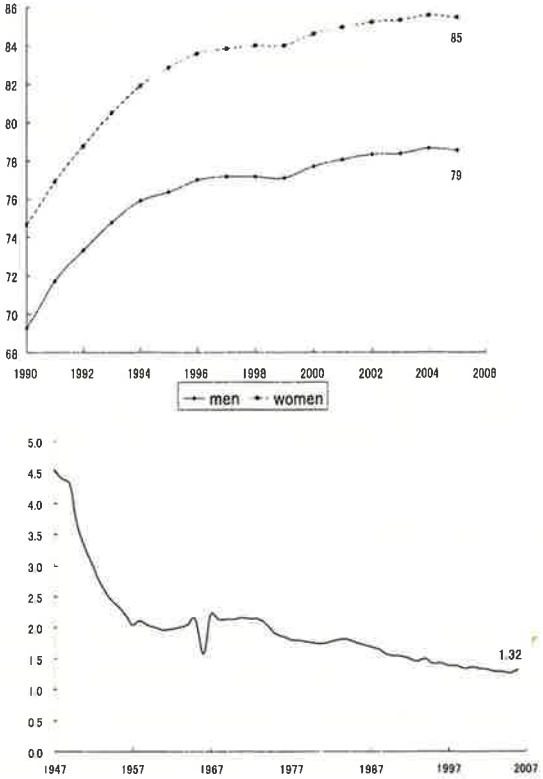


Source: Statistics Bureau

The aging population phenomenon is a result of the continuous increase in the life expectancy (for women: 85 years old, for men 79 years old)

and the reduction in the fertility rate. Life expectancy in Japan is the highest in the world according to the World's Bank. The number of children per women (Total Fertility Rate) was 1.32 in 2006 well below the replacement level which is 2.1 children per woman (level to keep the population constant over time).

Figure 10: Life expectancy (above) and Total Fertility Rate (below)
While the life expectancy continues increasing,
the fertility rate is below the replacement level

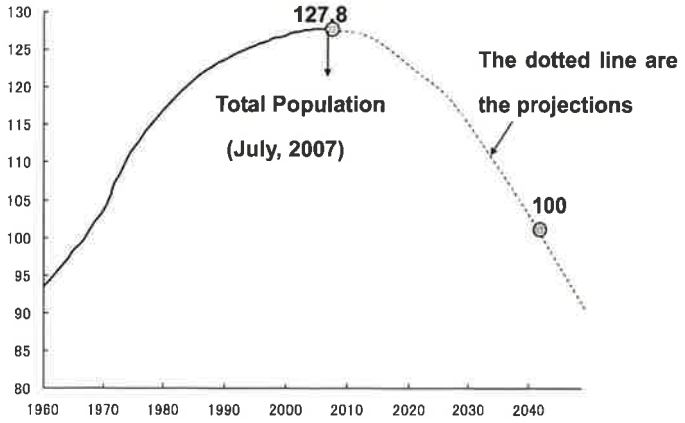


Source: Ministry of Health, Labor and Welfare

According the middle projections of the National Institute of Population and Social Security Research, population would start falling at some point this year or the next. By 2045 is expected to fall to 100 millions with 38% above 64 years old.

Figure 11: Population of Japan (1960～2007) and Projections (2007～)

The population of Japan is expected to start falling in the next years



Source: National Institute of Population and Social Security Research
A shrinking and ageing population generates two big economic problems: 1) the reduction in the labor force which imposes severe restrictions on the expansion of the economic activity, and 2) the expansion in pensions and health care costs.

a. Reduction in the Labor Force

One direct consequence of the shrinking and aging population is a reduction of the labor force. The labor force is defined as the population above 14 years old capable and willing to work. The total labor force reached its peak in 1998 amounting to 68 million and has been falling until 2005. Since then it has been showing signs of some improvement.

Table 31: Labor Force

The labor force started reducing in 1998 basically due to a reduction in the male labor force.

	LABOR FORCE (MILLION PERSONS)			LABOR FORCE PARTICIPATION	
	total	male	female	male	female
1998	67.9	40.3	27.7	77	50
1999	67.8	40.2	27.6	77	50
2000	67.7	40.1	27.5	76	49
2001	67.5	39.9	27.6	76	49
2002	66.9	39.6	27.3	75	49
2003	66.7	39.3	27.3	74	48
2004	66.4	39.1	27.4	73	48
2005	66.5	39.0	27.5	73	48
2006	66.6	39.0	27.6	73	49
2007*	67.3	39.3	28.0	74	49

Source: Ministry of Health, Labor and Welfare * June.

In above Table (at the right) we show the declining trend of the "labor force participation" which is the percentage of the labor force on the population of above 14 years old. Both male and female participation has reduced, but losses are higher in the male labor force.

How would the reduction in the labor force affect the working conditions of workers? A reduction in the labor force translates in a reduction in the labor supply. As long as the economic recovery keeps is momentum, a reduction in the labor supply creates a pressure for higher wage rates as enterprises compete for the scarcer number of workers. The real wage rate may improve.

However, the reduction in the labor force is also the result of an increase in the number of older workers who would stop working and start receiving pensions (we analyze this in the following section). This means that the young working population will have to pay higher contributions to cover the increased pension and health costs. Lower birth rates also means

lower expenses on raising children, then the young generation should not be unable of paying the higher contributions (or taxes).

As a consequence of the above, while the real disposable income of workers may not improve that much. The total real disposable income of all workers and pensioners as a whole may improve. In the short and medium term this may produce an expansion of consumption which in turn may allow the economy shift the engine of expansion from exports to consumption. This may produce a new wage of economic growth.

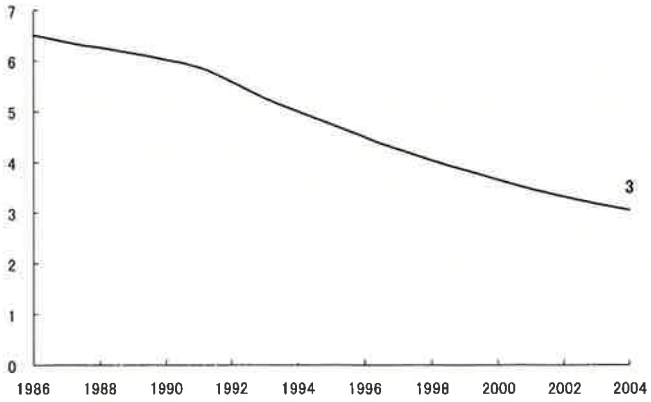
However, a shift of the source of economic expansion from exports to consumption requires that enterprises remain capable of paying higher wages, which in turn requires that productivity continues to expand. Investment in more efficient production processes through technological change and innovation are a prerequisite to the viability of the strategy in the medium and long term. Besides, the expansion of productivity is also a necessary condition for export companies to remain competitive in this environment of higher labor costs.

b. Aging population and pressures in the Social Security System

Another important problem that arises with the shrinking and aging population is the related to the financing of the Social Security System. In Japan the Pension System is a Pay-as-you-go system: the young generation makes contributions to fund which finances the pension to be paid to the old generation. According to data published by the Social Security Agency, in 2007, for each person of 65 years old or more there are only 3 persons of 15 to 64 years old. The ratio is expected to fall to 2.3 by 2015 and to 2 by 2020.The ratio of the number contributors to the Pension System to the number of pensioners has been falling from 6 in 1990 to 3 in 2004.

Figure 12: Ratio Contributors/Pensioners

The number of contributors per pensioner continues falling



Source: Ministry of Health, Labor and Welfare

In the following chart we present the total income and outlays of the total Pension System. Notice that contributions of the population are not enough to cover the total expenditure on pensions. An additional income source from taxes is being used to cover the difference. Income from taxes which is the amount of the deficit of the Pension Fund, represents almost 15% of the total value of pensions.

Table 32: Income and expenses of the Pension System (in trillion yens)

As the amount of pension payments increase

the deficit of the Pension System widens

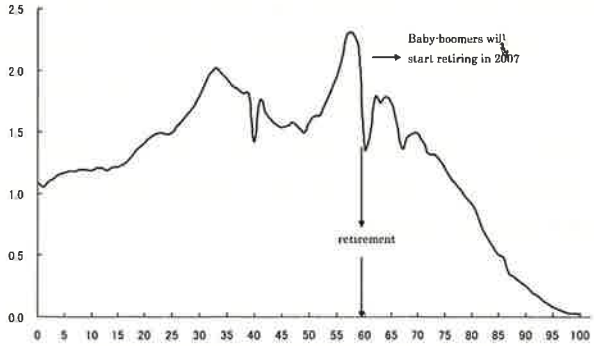
	2002	2003	2004
Total Income	42	41	42
contributions	36	31	33
taxes	2	6	6
investments	4	3	3
Total Expenses	39	41	42

Source: Ministry of Health, Labor and Welfare

In the next four years the financial situation of the Social Security System will became more serious as it can be seen from the figure below. In that figure it is represented the distribution of the total population by age in 2006. Between 2007 and 2010 more than 2 million additional persons will be retiring each year. These are the baby-boomers born after the end of the Second World War (1947-1949). The new additional pensioners are more than 40% above the average of the last ten year. As a consequence of the continuous reduction in the birth rate in the last decades, the young population is expected to continue falling too.

Figure 13: Distribution of the population by age (million persons) in 2006

In the next four years the baby-boomers will start retiring imposing more pressures on the Social Security Finances.



Source: Statistics Bureau

Some of policies that have been proposed to mitigate the problem generated by the shrinking and aging population have been 1) increase taxes or the contributions to the pension system, 2) extend the mandatory retirement to 65 years old or even eliminating it completely, 3) facilitate an expansion of women labor force, 4) give better financial support to raise children, 5) facilitate selected immigration and 6) increase in productivity.

2.2. Working conditions

The strategy of growth based in an expansion of the volume of exports requires that those companies remain competitive in the international market. While a cheap yen has contributed to this, lower labor income also played an important role. Both the number of workers and wages has been cut. Although unemployment has been falling in the last years new working positions have been mainly for cheaper part-time and dispatched workers.

a. Employment

The unemployment rate has been reducing as a consequence of the economic expansion. In July of 2007 the unemployment rate fell to 3.6%, the lowest level since the recovery started. In the following month it increased again and by November (last data available) stood at a 3.8 %. The higher unemployment rate is for young workers of between 15 and 24 years old, reaching 7.7% and 6.2% for male and female respectively.

Figure 14: Unemployment rate (%)

The unemployment rate has fallen during the economic expansion, but it is still high if compared with previous performance

Source: Statistic Bureau

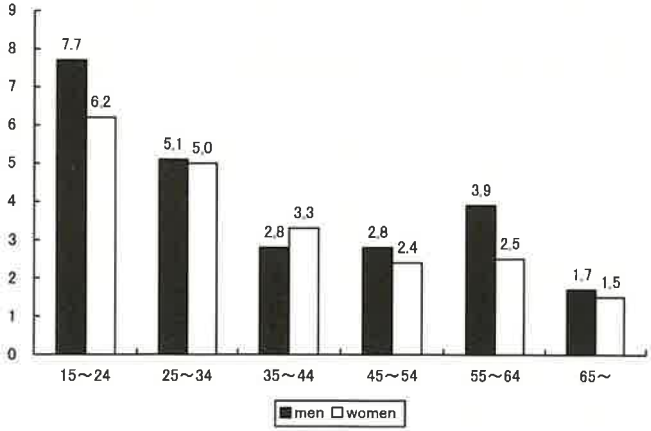
Table 33: Unemployment (last data available: November 2007)

	Unemployed persons (millions)	Unemployment rate (%)
TOTAL	2.52	3.8
MALE	1.51	3.9
FEMALE	1.01	3.6

Source: Statistic Bureau

Figure 15: Unemployment rate by gender and age (%)

Young workers have the highest unemployment rates



Source: Statistic Bureau.

Some kind of improvement can be seen in the labor market if we observe the proportion of unemployed by cause. The government publishes the data of "involuntary unemployed", "voluntary unemployed", "unemployed students" and "other". The first category corresponds to those workers who have lost their job as a consequence of a decision taken by the enterprise. The second category includes those workers that may be unemployed because they decided to quit their previous job. From the Table below we can see that since 2002, the proportion of involuntary unemployed has been falling while the proportion of voluntary unemployed has increased. By 2005 voluntary unemployed surpassed voluntary unemployed. This may be indicating that workers are more capable of choosing the kind of job the take which may be seen as a positive development.

Table 34: Unemployment rate by cause (% on total of unemployed)

The reduction in the involuntary unemployment alleviates the situation of unemployed workers.

	Involuntary	Voluntary	Graduated	Other	total
2002	43	32	5	20	100
2003	42	33	6	20	100
2004	38	34	6	22	100
2005	34	38	5	22	100
2006	33	39	5	23	100
2007	33	39	5	24	100

Source: Statistic Bureau

Although the unemployment rate has fallen and workers are more capable of choosing new jobs positions, the ratio of irregular workers has increased again in the first quarter of 2007 reaching almost 34% of total workers. As these irregular working positions are paid lower wage rates, the average wage rate continues to fall in the first semester of 2007. The average nominal wage rate in the first semester of 2007 fell 0.4% with respect to the same semester of 2006. We analyze the trend of the real wage rate in the following section.

Table 35: Regular and irregular workers (million workers)

	total	regular	irregular	irregular/total (%)
average 2006	50.9	34.1	16.8	33.0
1st quarter 2007	51.2	33.9	17.3	33.7
2nd quarter 2007	52.2	34.8	17.3	33.2

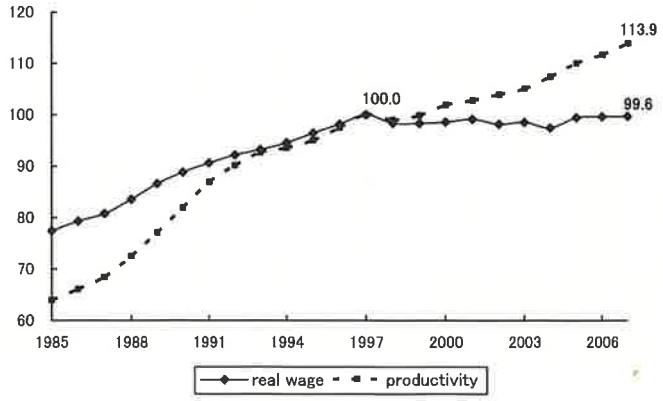
Source: Ministry of Health, Labor and Welfare

b. Low real wage rates

The real wage rate reached its historical peak in 1999, then contracted and stayed below that level until 2005. In that year there was a 2% but since then remained practically unchanged. In spite of the economic recovery, in October 2007, the real wage rate was still below its peak of 1999. The sluggishness in the real wage rate contrasts with the improvement in labor productivity. Normally, the real wage rate accompanies more or less the evolution of real productivity. Notice however, that since 1999 the two indices diverge from each other (see figure below). There is a 14% gap between real wage and productivity if computed from 1999.

Figure 16: Labor productivity and real wage rate indices

The evolution of the real wage rate has been well below the labor productivity



Source: Ministry of Labor and Cabinet Office.

Two more important problems related to the working conditions are the disparity between the wage rate received by part ?timers and full-timers and by male and female. Part- timers receive half of what full-timers

receive and females 70% of what males receive (see Table 16).

2.3. Consumption is still weak

Consumption is still weak and has been increasing at a lower rate than the GDP. The sluggishness in consumption is basically due to the slowly recovery in the working conditions mentioned in previous sections. Disposable income (DI=income ? taxes + transfers from the Government) has not improved much. This is basically due to the reduction in the wage rate already described in section 1.6, and perhaps aggravated by the elimination in 2007 of the income tax and inhabitant tax exemptions which translated into an effective tax increase.

Table 36: Real growth rates of Consumption, GDP and Disposable Income

Consumption is still weak because disposable income improvements are not important enough

	Consumption	GDP	DI
2002	1.3	1.1	0.6
2003	0.8	2.1	-1.0
2004	1.5	2.0	0.9
2005	1.8	2.4	0.8
2006	0.7	2.1	0.7
2007*	1.5	2.6	1.9

Source: National Accounts
* January-September estimates (change rate with respect to the same period of the previous year)

Notice that consumption has performed better than disposable income. This may be due to the increase in the value of several assets like the price of land and the value of stocks that has been observed in the last years. Owners of stocks and land feel wealthier and more willing to spend. The price of land which has been falling continuously since 1992,

is still falling. However data of the price of land in the six major cities (Tokyo, Yokohama, Osaka, Nagoya, Kobe and Sapporo) have been increasing above the national average in 2006 and 2007.

Table 37: Nikkei Index and Price of land

The price of stocks have improved since 2004

but the price of land is still falling.

	Nikkei Index	INDEX OF THE PRICE OF LAND	
		National average	6 major cities
2001	10,543	100	100
2002	8,579	93	92
2003	10,677	87	84
2004	11,489	79	78
2005	16,111	74	75
2006	17,226	70	78
2007	15,308	69	86

Source: Nikkei Newspaper and the Japan Real Estate Institute.

2.3. Increase in poverty and inequality

During the economic expansion unemployment has fallen and real wages have started to improve. However some indicators suggest that poverty is still increasing and inequality in the income distribution has also worsened.

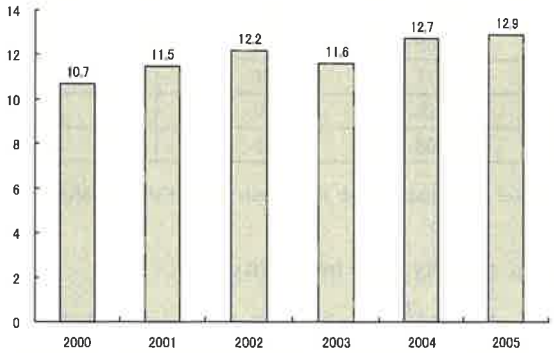
Several countries compute the "Poverty Line" which is a measure of the level of income that guarantees a minimum level of consumption and welfare. The Government of Japan does not publish the level of the Poverty Line, but it can be estimated using for example the level of the minimum wage or using the level of income below which the Government gives Public Assistance, that is subsidies to poor households. According to the estimations, the present level of the poverty line in Japan for an average household would be around 1.5 million yens of annual income ($13.000). Taking this

level of Poverty Line as a benchmark, the proportion of households below the poverty line is estimated to have increased and has reached almost 13% of the total.

The increase in income inequality can also be analyzed from the "relative poverty rate" (defined as the level of income that is less than 50% of the median) which increased from 22% in 2000 to more than 25% in 2005.

Figure 17: Proportion of households below the Poverty line

Poverty has increase between 2000 and 2005.



Source: computed using data by the Ministry of Health, Labor and Welfare

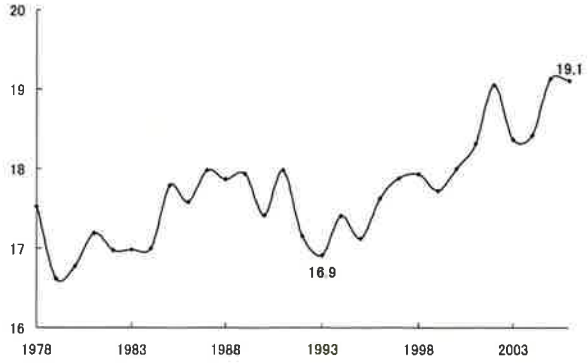
Inequality in the income distribution can be studied through the GINI coefficient. The GINI coefficient can take any value between 0 and 1. When it is close to 0, equality is almost perfect (all households receive the same amount of income). When the GINI is close to 1, inequality is high.

The international comparison of the GINI coefficient given by the statistics of the United Nations place Japan in one of the best position in the world jointly with the other North-European countries. However, as can be observed from the graph below, the level of the index has increased in recent years showing a worsening in the situation.

The increase in poverty and inequality in the income distribution could be seen as the result of two main forces. First the worsening in labor conditions, especially the increase in non regular labor contracts which pay lower wages. Secondly, the aging population phenomenon increases the proportion of retired households which tend to earn a lower level of income.

Figure 18: Evolution of the GINI coefficient

In spite of the economic recovery, inequality has increased



Source: Ministry of Health, Labor and Welfare (computed from Households Survey)

2.4. Debt of the Government

As mentioned in section 1.7, the economic recovery resulted in a higher collection of taxes which jointly with important reductions in public investment resulted in a significant improvement in the government's deficit. However, as the balance of the government remains negative, the debt continues to increase.

The gross debt of the General Government has continued to increase and reached 939 trillion yens by the end of last year and the net debt (liabilities-financial assets) to 489 trillion yens. The net debt of the General Government measured as a percentage of the GDP reached 96% in 2006, becoming one of the highest within the developed countries, only surpassed by Italy (105%). As can be inferred from the Figures below, the high level of the Government debt is not a recent phenomenon but a legacy of the one-decade-long recession that started by 1991.

Figure 19: Gross and net debt of the government (trillion yens)

The increase in the debt of the government started by the 1990s

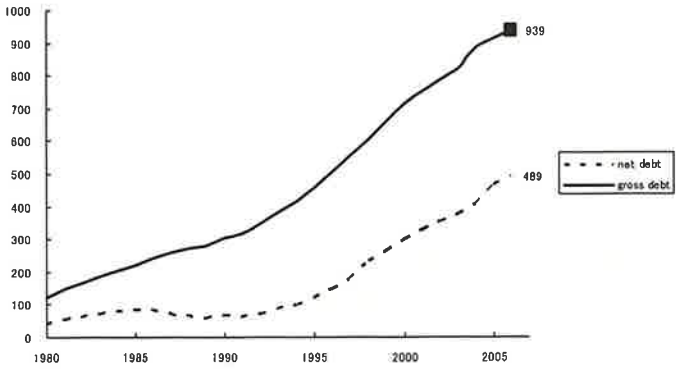
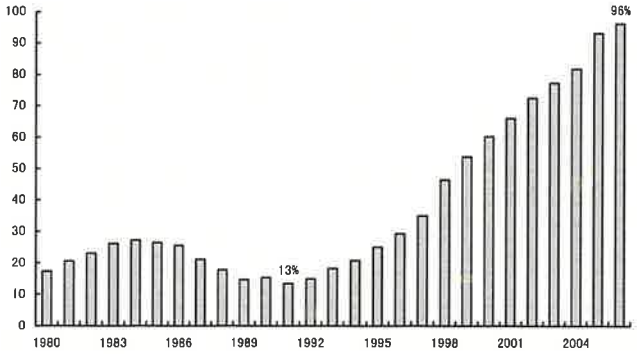


Figure 20: Net Debt/GDP (%)



The improvement observed in the deficit of the Government in recent years is the result of two factors: 1) a reduction in the current expenditures and the net investment and 2) an increase in the collection of the three main taxes the consumption tax, the income tax and corporate tax which in turn was due to the increase in the economic activity. Expenses on pensions and education continue increasing each year suffering the consequences of an aging population.

In the Table below we present a detail of the accounts of the General Government (Central Government, Local Government and Social Security Agency). The tax collection has improved due to the economic recovery and the Current Expenditure and Investment has been reduced. However, expenditure in pension and health has been increasing continuously basically due to the aging population phenomenon.

Table 38: Income and Expenditure of the General Government (trillion¥)

	2002	2003	2004	2005	2006
TOTAL INCOME	127	125	130	137	143
Taxes	75	74	78	84	88
Contribution to Social Security	52	52	52	53	55
TOTAL EXPENDITURE	168	163	157	168	160
Total expenditure on goods & services	47	46	43	42	40
Pensions, health and education	103	104	106	108	109
Interest of the debt	6	6	5	3	3
Land Purchases + capital transfers	10	7	3	15	8
BALANCE (includes interests)	-41	-38	-27	-31	-17
PRIMARY BALANCE					
Central and Local Governments	-28	-28	-20	-24	-9
General Government	-34	-32	-22	-28	-14
PARIMARY BALANCE/GDP (%)					
Central and Local Governments	-5.7	-5.7	-4.1	-4.8	-1.7
General Government	-7.0	-6.4	-4.5	-5.5	-2.7

Source: Cabinet Office

How long would it take to achieve a balanced budget?

The debt of the Government cannot be increased indefinitely and pressure is mounting to achieve a budget surplus in the next five years. The government has expressed its intention of achieving a surplus in the primary balance of the aggregated accounts of the Central Government and the Local Governments by 2001. Consider the most optimistic projection of the Government that assumes that the economy will continue to grow at the present pace of 2% per year. Then, the income tax, the corporate tax and the consumption tax would increase too. As the GDP is ¥510 trillions and total tax collection of the General Government is around 16% of the GDP,

it can be expected an approximate ¥1.6 trillions increase in tax revenue per year. In the five years from 2007 to 2011 this would represent a total of ¥8 trillions. If public investment is contained as in the last five years the surplus could be achieved as programmed without raising tax rates.

However notice that the deficit of the Social Security fund which is already above ¥5 trillions in 2006 is expected to rise in the following years as the baby-boomers start retiring. Therefore, a balanced budget excluding the Social Security account will not stabilize the level of the debt/GDP ratio.

Income from contributions to the Social Security System is expected to remain almost unchanged. This is because, even if contributions or premiums have already been scheduled to rise until 2017 by about 1% per year, the number of contributors its expected to fall at an annual rate of about 1% as a consequence of the reduction of new entrants to the labor market.

On the other hand, the expenditures of the pension and health system will continue to grow. In the next five years the number of pensioners may rise by more than 3.5% each year. It can be computed that the Social Security Accounts deficit will be above $13 trillions in 2011.

From the above it can be inferred that the fiscal situation will not improve by the natural effects of higher collections of taxes derived from the expansion of the economy. In order to stabilize the debt/GDP ratio, taxes should be increased. There has been some discussions about the possibility of an increase in the consumption tax. However, considering that in the last five years the income gap as well as poverty has increase, it will be difficult for the government to relay solely on the consumption tax to cover the social security deficit. More plausible is a combination of further reduction of the government expenditures with a broadening of the income and corporate tax.

The delicate fiscal situation imposes an important constraint to solving the problems generated by the aging population on the financing of the Pension and Health system. For the same motive the possibility of extending the Social Welfare Benefits to reduce poverty and reduce the inequality in the income distribution will be limited. Some sort of social consensus is required to support a reduction in expenditure and increase in tax collection.

It is also important to remember that interest rates are very low in Japan in the present moment but as long as the economic recovery continues, rates are expected to increase slowly but continuously in the next years. This means that it is important that fiscal consolidation is achieved before interest rates increase too much.

3. Prospects and risks to the continuity of the economic expansion

Several risk factors from either abroad and from inside the economy are threatening the continuity of the present economic expansion.

3.1. Risks form abroad

3.1.1. Increase in oil prices

Oil, natural gas and coal represent almost 75% of total consumption of energy in Japan. Imports of coal, oil and natural gas are 100%, 99% and 96% of total consumption respectively.

At present, the price of oil is almost 3 times higher than what it was in 2002 when the present economic expansion started. The price of natural gas and the price of coal have both multiply by more than 2. The basic cause of the high energy prices relies on the high rates of economic growth

of the global economy and the increasing consumption of fossil fuels that is required to sustain this economic growth.

If the world economy continues growing at the present pace of 4% to 5%, the price of energy will continue its upward trend, especially because the OPEC plans no significant increases in the supply of oil. Furthermore, any additional geopolitical perturbation in the Middle East the main origin of imports of energy of Japan will mean even higher oil prices.

Higher prices for oil, coal and natural gas imply higher costs which erode profits of enterprises or if prices are passed to consumer, it means a lower purchasing power for them.

3.1.2. Sub-prime mortgage loan problem in the USA and the risk of a slowdown in the economic growth

The real state boom that started around 2001 in the United States started to fade away by 2006 as the Federal Reserve increased the interest rates. This has made more expensive to borrow and buy new homes, prices have been falling and several investors have been caught between higher interest payments and lower home prices. The burst of the real state bubble produced the so called the sub-prime mortgages loans problem. These are loans that are given to consumers with a poor credit history and low level of income. Those investors who took loans with variable interest rate have been badly hurt. The number of defaults has increased spreading uncertainty around the world because investors of several countries have bought assets backed by those sub-prime mortgages. Some of the biggest banks have disclosed the amount of losses derived from sub-prime loans but it is not clear yet how big the problem is and which banks and financial institutions could face further losses. Investors have shift their investment positions away from risky assets and have been buying more secure

bonds of the government. Besides, banks became wary of extending credit to other banks: this is what has been called the "credit crunch".

To face the fall of the stocks markets the Federal Reserve, the Bank of Japan and the Central European Bank have been providing liquidity to avoid a credit crunch. The Federal Reserve has also reduced its discount rate which is the rate at which lends money directly to banks and it has reduced its target of the federal funds rate. This has given a relief to the markets. Although some of the biggest banks around the world have partially disclosed he losses associated to the mortgage loans, it is not known exactly how far the losses will spread. This means that volatility will continue in the market. One of the main concerns is that the mortgage may extend to others sectors and the United States economy slows down. This may affect negatively Japan's as exports to the United States imports represents 25% of the total. So far, the reduction in the interest rate has produced a fall in the value of the dollar what has stimulated exports from the United States. The question is whether the increase in exports is enough to compensate the reduction in the housing investment and the slow down in consumption expenditure.

3.1.3. The increase in the interest rates in USA, EU, China, UK and the risk of a global slowdown

The accelerated expansion in the world economy has put pressure in the cost of world resources with the prices of oil and several other commodities increasing each year. Observe on the Table below that not only price of energy related commodities have increased, but other commodities have become more expensive too. Copper has multiplied by 4, aluminum by almost 2, iron ore by 3 and uranium by more than 10. Prices of agricultural products have also increased significantly (wheat: 48%, corn: 57% and

rice 67%). According to the FAO, the increases in agricultural products is partly due to droughts and floods linked to climate change, as well as rising oil prices boosting demand for bio-fuels. Although world inflation is still moderate, the increase in prices will pick up at some point of time.

Table 39: World Prices of Commodities

Prices	2002	2003	2004	2005	2006	2007
Crude Oil (1)	25.0	28.9	37.8	53.4	64.3	68.5
Natural Gas (2)	124	140	166	198	226	220
Coal (3)	70	74	146	130	136	150
Wheat (4)	84	83	89	86	108	124
Corn (5)	80	85	91	80	98	126
Rice (6)	60	62	77	90	95	100
Copper (7)	53	61	98	125	230	232
Aluminum (8)	75	79	95	105	143	147
Iron Ore (9)	103	113	134	229	273	298
Uranium (10)	84	96	155	239	409	883

Notes:
(1) Crude Oil (petroleum), Simple average of three spot prices (APSP); Dated Brent,West Texas Intermediate, and the Dubai Fateh,$rrel
(2) Natural Gas, Price index Indonesian Liquefied Natural Gas in Japan
(3) Commodity Coal Price Index includes Australian and South African Coal
(4) Wheat, Price index No.1 Hard Red Winter, ordinary protein, FOB Gulf of Mexico
(5) Maize (corn), Price Index U.S. No.2 Yellow, FOB Gulf of Mexico, U.S. price
(6) Rice, Price Index 5% broken milled white rice, Thailand nominal price quote
(7) Copper, Price Index grade A cathode, LME spot price, CIF European ports
(8) Aluminum, Price Index 99.5% minimum purity, LME spot price, CIF UK ports
(9) Iron Ore, Price Index 67.55% iron content, fine, contract price to Europe, FOB Ponta da Madeira
(10) Uranium, Price index u3o8 restricted price, Nuexco exchange spot
Source: International Monetary Fund, World Economic Outlook Database

Since the credit crisis became more evident since August of this year, some Central Banks have considered that the risks of an economic slow down have surpassed the risks of inflation. This is why the Federal Reserve, the Bank of England and the Bank of Canada have reduced their

target interest rates. The European Central Bank has been more cautious and has kept its interest rates unchanged. In China and India inflation has picked up and the monetary authorities have been pushing for restrictionary monetary policies in order to stop the inflationary pressures. In the United States the Consumer prices increased 4.3 percent in the 12 months to November what may be indicating that the Federal Reserve may not be able to cut interest rates again in the next months. Similarly in the United Kingdom prices have increased 4.5% in November and in the European Union 3.1% both above the comfort zone of the respective Central Banks.

While higher interest rates can reduce inflation in those countries, it may also slow down economic growth. This would mean a reduction in imports from Japan. This is why several economists have been calling for a gradual shift of the source of growth from exports to consumption as a mean to maintain the continuity of the economic expansion.

3.2. Risks from inside Japan

A sudden reverse of the carry-trade operations

The so called carry-trade operations are transactions by which investors borrow yens at a low interest rate and buy assets in other countries where the interest rate is higher. In the last three years there has been a continuous flow of funds to other countries where the interest rate is higher (Australia, New Zealand, United States, United Kingdom, etc.) A reverse of the position of the investors is another risk for the continuity of the economic expansion because it could induce to a sudden appreciation of the yen which would hurt exports and economic growth.

As we showed in section 1.7, since August, due to the uncertainty generated by the problems of the sub-prime mortgage loans in the United States, carry-trade operations have shown how the reversing of the inves-

tors' positions may produce a yen appreciation and hurt export activities. The decision of the Bank of Japan to keep the interest rate unchanged since the beginning of the loan crises has given some relieve to investors and exporters that do not want to see a prompt appreciation of the yen. However, the yen appreciation could continue and extend further if deflationary pressures subdue making the Bank of Japan increase the interest rate in the near future.

4. Final remarks

The economic expansions that occurred in the last six years has been mostly dependant on the increase in export. Investment also increased but it has been to support the increase in production to sell abroad. This pattern of growth based in an increase in production oriented to satisfy the external demand has been supported by external and internal factors.

The main external factor that helps explain the important increase in exports is the acceleration in the economic growth in Japan's main trade partners (United States, China, EU, Korea and other South Eastern countries). Higher growth rates produced higher demand of Japanese products.

On the other hand, there are three main internal factors that have been supporting the expansion in exports: the expansionary monetary policy, the persistence of deflation and the reduction in labor costs. The continuation of the ultra loose monetary policy during several years made interest rates fall to levels very close to zero and produced a continuous outflow of funds to countries that pay higher returns. This has produced yen depreciation which favors exports. On the other hand, prices have been falling almost continuously since 1999 as a consequence of the long recession and sluggish demand, making Japanese goods even cheaper.

At the same time, the low interest rates has favored the expansion in investment in new equipment and machinery which was required to expand production and satisfy the increased demand from abroad. Enterprises have also started a strategy of labor restructuring by which labor costs were slashed significantly. This was achieved by for example increasing the amount of part-time and dispatched workers who are paid lower wages. The average real wage rate, after reaching its historical peak 1997, has been falling since then. Although recovered in 2005 it has remained practically unchanged since then. The deterioration in the working conditions made consumption of the households remain weak during the last six years. As a consequence poverty has increased and income inequality has widened.

As the population continues to age and starts shrinking, a reduction in the labor force is expected. This will make labor costs rise. However, higher wage rates may not translate in an increase in the disposable income of the ordinary working household because taxes should be raised in order to pay for the augmented pension bill. Furthermore, higher labor costs will reduce the competitivity of the exports companies which may reduce economic growth.

Growth could be expected to continue if a more balanced model of economic expansion could be achieved. This would require that the engine of growth falls not only on exports but on both on exports and on consumption. We see the increase in productivity as a necessary condition for an increase in wages significant enough to induce an expansion on consumption and at the same time allow companies to compete in the international markets. Other policies like extending or eliminating the compulsory retirement age, supporting women participation in the labor market, giving financial support to raising children, etc. may also help to retard the population to start shrinking.

In order to achieve an increase in productivity specific policies oriented to stimulate technological change and innovation should be implemented. This will require additional investment in research and development activities as well as an improvement in the level of education of the population. Just to take one measure, consider that Japan public expenditure on education in 2004 it was only 3.5% of the GDP, the lowest percentage among developed countries. If private expenditure was also to be included, the ratio is low too: 4.5% of the GDP. Additional public spending to stimulate productivity or to tackle the aging and shrinking population problem or to build a safety net for the poor are in jeopardy because of the huge debt of the Government. Some sort of compromise between enterprises, workers and the government should be achieved sooner than later in order to face those problems efficiently.

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