

**The 32nd Medium-term Forecast
of the Japanese Economy
Fiscal Years 2005-2015**

**Longer Work, Global Division Of
Labour
Key To Growth**

December 2005

Japan Center for Economic Research

Japan Center for Economic Research

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The 32nd Medium-term Forecast of the Japanese Economy (FY2005 - 2015) **Longer Work, Global Division Of Labour Key To Growth**

- Society Continues Aging Amid Globalization -

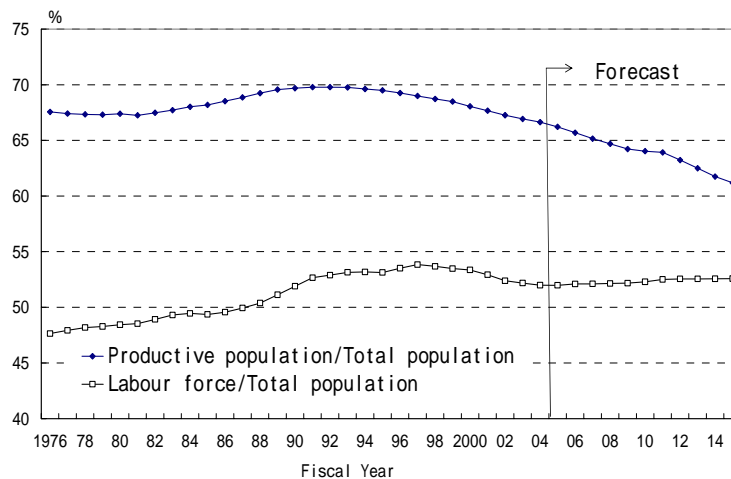
Research Director: Masaaki KAWAGOE
Release Date: December 1, 2005

1 . Summary

The Japanese Economy to Fiscal 2015

In this forecast, we provided an outlook for the Japanese economy to fiscal 2015. The ongoing aging of the population -- through a decrease in labour input amounts -- will result in a lower potential growth rate. However, in this forecast, though the size of the productive age population (from 15-64 years) will decline, the actual drop in the labour force will be quite moderate (Figure 1) .

Figure 1. Productive population and Labour Force



Notes: 1 . Population as of October 1 each year.

2 . Population estimates with "Population Projections for Japan(Medium Variant)".

Sources: "Population Census", "Population Estimates", Ministry of Internal Affairs and Communications,

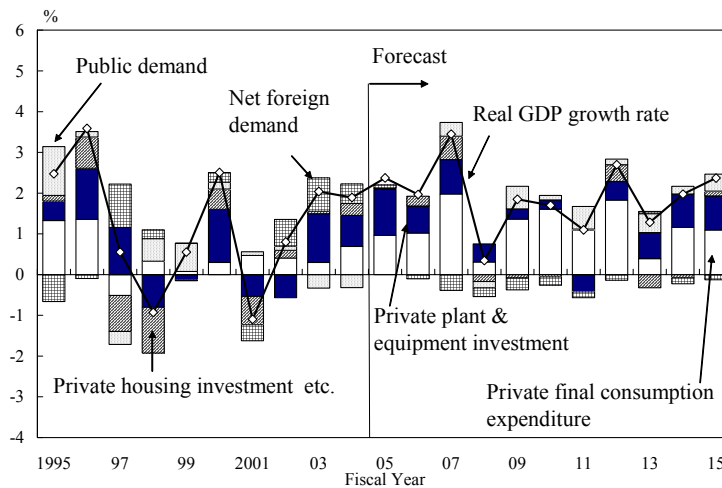
"Population Projections for Japan:2001-2050", The National Institute of Population and Social Security Research

Our assumptions in compiling this forecast were as follows: 1) that the world economies grow at a rate of about 4% per year, 2) that oil prices would fall to between \$35 and \$40 per barrel, 3) that the exchange rate would rise by about 13%, 4) that the terms of trade (that deteriorated greatly this fiscal year) would gradually improve, and 5) that in addition to civil service reform and a reduction in public investment, the consumption tax rate will rise 3 percentage points in fiscal 2008 and another 2 points in fiscal 2013 to rebuild public finances. Under these assumptions, Japanese economy was forecast to grow by an average of just under 2% per year.

In the first part of the forecast period (fiscal 2005-2006), the economy will

maintain its path of gradual growth as the increase in corporate profits has positive ripple effects into the household pocketbooks. The steady growth in the overseas economies as well as the upturn in the silicon cycle will help the economy stay on this path. The consumer price index will turn to grow in fiscal 2006 due to the narrowing of the gap of supply and demand, and the continuing decline in real interest rates will also help prop up the economy(see Figure 33- ,pp.34).

Figure 2. Breakdown of Contribution Rates to Real GDP Growth Rate



Notes: 1. Private housing investment etc. = Private housing investment + Private inventory investment
 2. Public demand = Government final consumption expenditure + Public fixed capital formation + Public inventory investment
 3. Net foreign demand = Exports of goods & services - Imports of goods & services
 Source: " Quarterly Estimates of GDP", Cabinet Office

In the mid-part of the forecast period (fiscal 2007-2010), the economic expansion led by domestic demand will continue. In fiscal 2007 when the consumer price index will rise by about 1%, and the zero interest rate policy will be put to an end, the financial markets will be back to "normal". As business confidence improves when deflation is eliminated, the corporate sector will be more active. However as management will be driven more by profitability, the growth in compensation of employees will be limited. Despite this, however, consumption will expand by an average 2% per year due to increases in property income.

In the late part of the forecast period (fiscal 2011 to 2015), growth will be led by domestic demand at a rate of just under 2%. This will be led by consumption and business fixed investment in the non-manufacturing.

On the distribution side, the labour share will gradually decline due to the efforts of private enterprises to improve profitability ratios. The property income portion of national income will increase by about 8 percentage points to 11% due to the rise in interest rates.

As for the household purse, the propensity to consume is expected to be on a rising trend due to the effects of an aging population. However the pace at which it will rise is expected to be relatively moderate. This is because due to the

deteriorating income environment, there are likely to be many households without adequate savings to retire, and with more older people continuing to work, savings will not be withdrawn until later. With the above factors and the shrinking of the fiscal deficit, the excess savings environment of the nation as a whole is not likely to change much, and the surplus in the current account as a share of nominal GDP (gross domestic product) is likely to be in the 3-3.5% range.

One of the factors that could take the economy off track of this forecast is first, the performance of the US economy. The current account deficit of the US as a share of its nominal GDP is 6%, and half of this is financed by the foreign reserves of Asian countries. The fact that these funds are keeping US housing prices up is not a healthy situation. In this forecast, we make the following assumptions: 1) that China's and other Asian countries' currencies appreciate in value by an aggregate 20% 2) that Bush's tax reductions are not continued and 3) the housing bubble will gradually cool. As result, we forecast that the current account deficit will gradually fall to about 4% of nominal GDP by 2015. However, there is great uncertainty in what kind of mechanism will work to correct the imbalance.

The second factor that could take the economy off our course is the higher oil prices. The income transfer effects that will take the form of higher payables for crude oil are expected to be limited. There are views that the effects of oil prices on the US and China will not be an issue because the higher oil prices are in themselves a result of the growth in these countries. However, since the oil producing countries will not be increasing their production capacities, the possibility remains that the effects could be just as great.

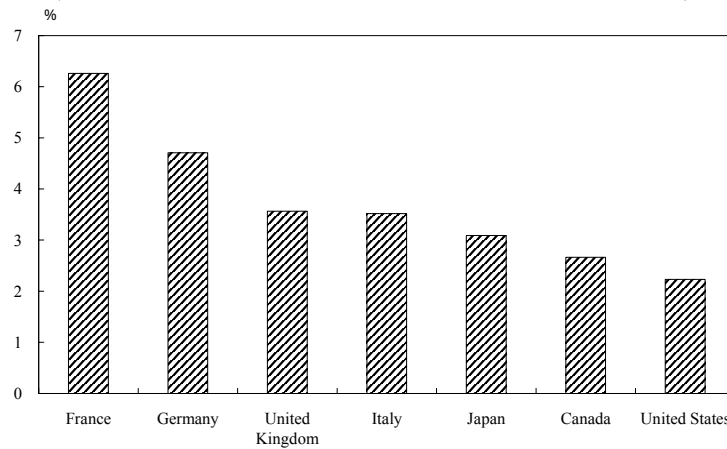
In order to eliminate deflation, the macro economic policies of the next few years will have to be carefully managed. Fiscal policies are expected to be gradually tightened. As for monetary policies, in fiscal 2006 the quantitative easing is expected to be lifted for the zero interest rate policy, and in fiscal 2007, zero interest rates are also expected to be abandoned. However it is important that monetary easing is maintained. Though there is the possibility that the economy will upturn due to lower real interest rates resulting from a smaller decline in prices, the cost of this occurring will be smaller than the cost of the economy declining and deflation returning.

Employment of Older Persons to Support Growth

Eliminating deflation is not the panacea of all problems. The Japanese economy will be revitalized despite an increasing aging population and globalization by efficiently using the markets, everyone working together and effectively using the skills that they excel in.

In an increasingly aging society, the key to a vibrant economy is how much the aged are participating in the work force. Though there are concerns about the effects of the baby boomer generation heading into retirement, the desire of those in their early 60s to continue to be employed is strong. We estimated the effects of the retirement of the baby boomer generation (that will be taking place at about the same time for all the major industrialized countries), and find that the effects in Japan will be smaller compared with the other European countries (Figure 3).

**Figure 3. Effects of Retirement of Baby Boomer Generation in the G7 Countries
(Decline in labour force as a share of total labour force)**



Note: Number of retirees for 2009 estimated as follows: Population in the 55-59 age cohort multiplied by the difference in the labour force participation rate of the 55-59 age cohort and the 60-64 age cohort.
Source: "Labour Force Statistics", OECD

It does not make sense to worry about the effects of the retirement of the baby boomer generation while not utilizing workers who have both the will and the skills to work simply because they have reached a certain age. It is, at the same time, wasteful not to utilize female workers whose human capital have been invested in at high cost. By effectively utilizing older persons and women, the decline in labour input can be kept to a minimum. In order for this situation to materialize however, regulatory reform must be implemented so that new employment opportunities can be created, and employment practices must be reviewed so that the country can be more open to more flexible employment models.

Companies are required to make efforts to keep people employed until they are 65 years old. If this has full effect, then the number of male workers who had been retiring in the first half of their sixties will fall to about half its current level. Given that people are living longer than in the past, it is logical to do away with mandatory retirement age altogether in the decade starting from 2010. If this is done, then the number of men working in the latter half of their sixties will rise from an average 4.5 to 5 out of ten.

In any event, it is certain that labour will become a more valued commodity. At the same time as the experience of older workers is put to good use, the country should ensure that human resources are concentrated in the sectors where Japan has a comparative advantage. For this to happen, labour needs to be able to move freely, and allowing market forces to reallocate resources will be most efficient.

Furthering Division of Labour with China

By 2015, Japan will have a neighbour with an economy on par in scale with Japan, with a high rate of openness (sum of imports and exports as a share of nominal GDP), and with a rich labour force. We refer, of course, to China and in the beginning of the decade starting in 2010, China will be the number one destination of Japanese exports. China will likely account for about a quarter of all of Japan's exports and a third of its imports on an actual customs-clearance basis in

fiscal 2015. In some industrialized countries, we are seeing an increased level of openness while the countries' industrial structure leans towards a higher degree of specialization. For Japan as well, it is important that we further develop the international division of labour with China and with other Asian countries, and to concentrate our efforts on those sectors in which Japan does well, thereby enhancing productivity. As a result of this, the growth in employed persons will differ widely by sector.

Improving the Fiscal Balance will be Difficult

Even if the economy does revitalize, rebuilding the fiscal balance will be a difficult endeavour. The fiscal deficit of the general government as a share of nominal GDP in fiscal 2015 will be 2.2%, while interest payments will amount to over 3% and fiscal rigidity will result from increases in mandatory spending.

Regarding the fiscal reconstruction, as we can see in Table 1 showing the factors of change in the primary balance, we predict the structural factor to contribute over 5% of the nominal GDP. We forecast the reduction in public investment to continue and the civil service reform to lead to a reduction in expenditure of about 2%. We also forecast the net increase in taxes (the elimination of the special tax reduction and an increase in consumption tax to 10%), and the net increase in the social insurance premiums to be 3% and 0.6%, respectively.

Table.1 Factors that will Improve the Fiscal Balance from FY2005 to FY2015

(Share of Nominal GDP, percentage points)

Fiscal Deficit	4.3
Interest Payments (Net)	▲2.0
Primary Balance	6.3
Cyclical Factor	1.0
Structural Factor	5.2
Tax Increase (Cut in Special Tax Reduction, Increase in Consumption Tax Rate)	3.0
Reduction in Human Resource Expenses as a Result of Civil Service Reform	0.9
Reduction in Public Investment	1.0
Social Insurance (Net Effects of Increase in Premiums and Increase in Benefits)	0.6

Note: 1 . Positive figures denote factors of improvement, while negative figures denote factors aggravating the fiscal balance.
 2 . An "Others" item is included in the Structural Factors and so the sum of the components do not add up to the total.

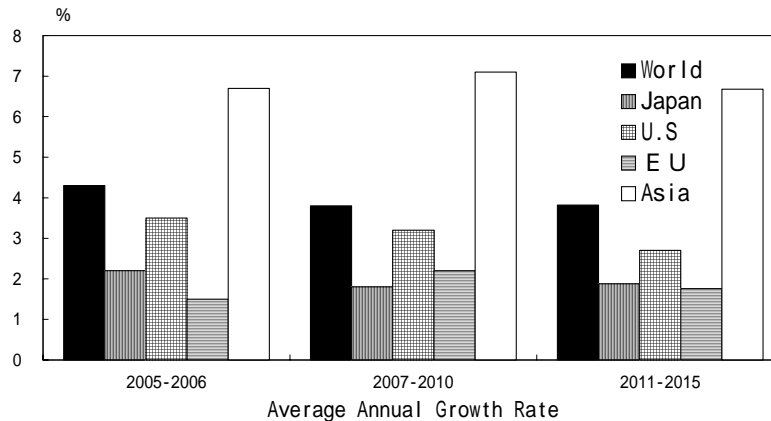
However, this is an optimistic view in that the human resource expenses that will be eliminated as a result of the civil service reform is slated to directly reduce expenditure by the same amount. If the operations are privatized then the reduction in civil servants may directly translate to a reduction in spending, but in the case of outsourcing, only the difference in productivity between the government and private sector would be the amount that expenditure would actually be cut.

Even with this scenario, we are not able to attain the 1% surplus in the primary balance needed to stabilize the net debt of the government to the fiscal 2015 standard (about 90%). It is imperative that none of the public sector is considered too sacred and each area is reviewed accordingly.

2 . Overseas Economies

The world economy grew at a very robust rate of between 5-6% in the year 2004. This rapid growth has highlighted, through the skyrocketing oil prices, the finite energy supply, and at the same time has expanded the US current account deficit. Though there are great uncertainties looming in the future with these issues, in our main scenario, we have the current account deficit of the US heads towards improvement through the following mechanism: The US and Chinese economies slow down to have a successful “soft landing”, and the excessively high oil prices will gradually be corrected. The currencies of China and other parts of Asia will appreciate by 20% during the forecast period, thereby improving the US current account deficit. In concrete numbers, we forecast that the world economy would grow by 4.3% in the first part of the forecast period, and it will grow by just less than 4.0% in the mid and last parts (Figure 4) . Thus, the economies will continue to grow at a steady rate, but more moderate than in the past.

Figure 4. Annual Real GDP Growth Rates by Geographical Region

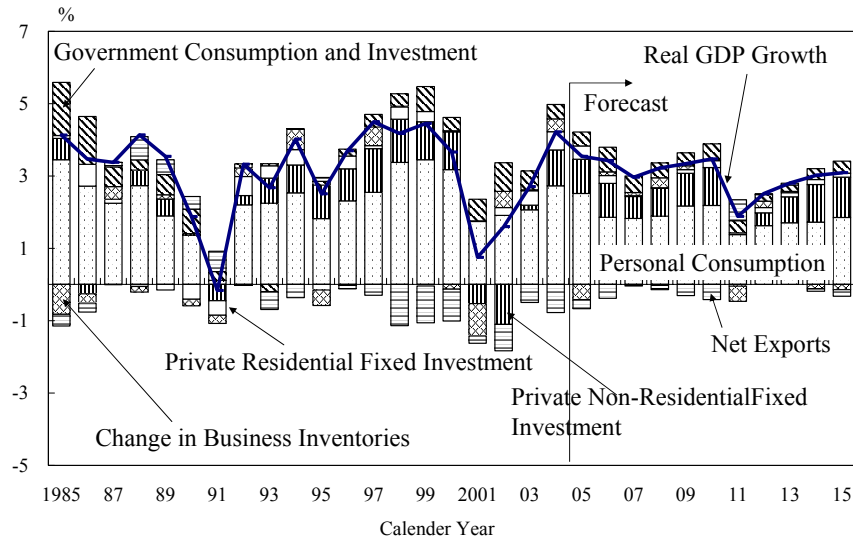


Note: The average annual growth rates for the EU denote the growth rates for the 15 countries in the EU.
 The average annual growth rates for the Asia denote the growth rates for China, NIEs and ASEAN.
 Source: “Annual Report on National Accounts” Japan Cabinet Office, “NIPA”, U.S.Department of Commerce, EUROSTAT, etc

The US economy will slow in 2005 from a 4.0% growth in 2004, but thanks to healthy personal consumption and a rapid growth in non-residential fixed investment, it will still grow a steady 3.5% in 2005. After this, the economy should expand at a rate of 3.0-3.5% in the mid-part of the forecast period, while it is expected to grow about 2.5-3.0% in the last part, thus cruising at the potential growth rate (Figure 5) . The soaring crude oil prices have not yet at this point had grave effects on the economy. Though the favourable effects of the previous tax reduction are dissipating, healthy corporate profits have led to improvements in the employment and income environments. During the forecast period, if the residential real estate bubble deflates slowly, this virtuous circle should continue, and non-residential fixed investment and consumption will continue to grow at solid rates. The Federal Reserve Board (FRB) has been raising short-term interest rates since June of 2004, and they are now at 4.0%. Under the

current economic environment, if the FRB raises them to 4.5% by mid 2006, we expect the economy to head towards a soft landing.

Figure 5. Contributions to Real GDP: USA

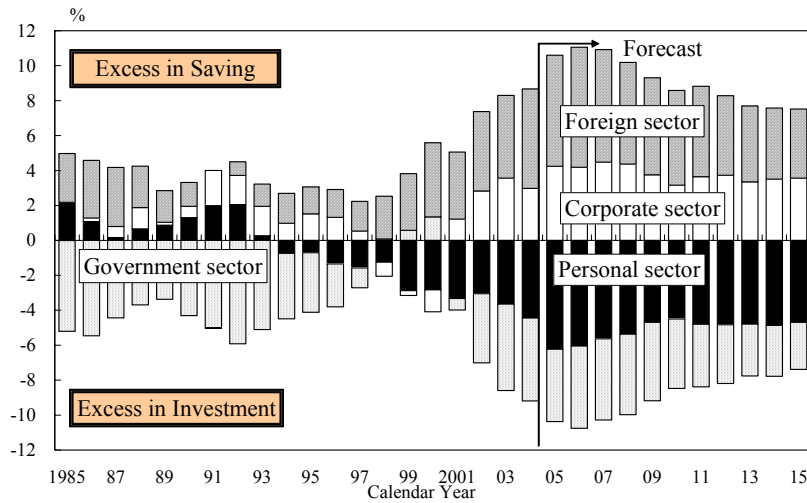


Source: "NIPA Tables" U.S. Bureau of Economic Analysis

The budget deficit ballooned to 3.5% of nominal GDP in 2004, marking a historical high. This is expected to shrink temporarily in 2005, but we do not expect to see any remarkable recovery in the deficit in the period up to 2010. On the spending side, under the Bush administration, defense and anti-terrorism expenditure will not be reduced, while on the revenue side, the additional tax revenue the government had been enjoying from capital gains is expected to decline. However, in the last part of the forecast period, the factors lowering the deficit -- such as the end of the large-scale tax reductions (in 2010) that had been in place over the past, and the natural increase in tax revenue from economic growth -- are expected to be stronger than those factors increasing the deficit -- such as higher social security benefits to retiring baby boomers, and inflated interest payments due to a rising interest rate. Thus, the budget deficit will fall to 1.6% of nominal GDP in fiscal 2015.

The current account deficit is also expected to improve from 6% of nominal GDP in 2005 to 4% in 2015. This will be as a result of exports growing at a more rapid rate than imports, thanks to greater competitiveness leading from the lower dollar, and the gradual slowdown in domestic demand. From an investment-savings balance perspective, the personal sector will increase its savings in the mid-part of the forecast period, and the government sector in the last part, thus leading to a reduction in the current account deficit (Figure 6). The household saving rate will recover to pre-2003 rates of 2% thanks to the reduction of the capital gains tax. However in the last part of the forecast period, it will again gradually fall as the baby boomers retire.

Figure 6. Balance of Saving and Investment: USA



Note: Figures indicate the percentage ratio of nominal GDP.

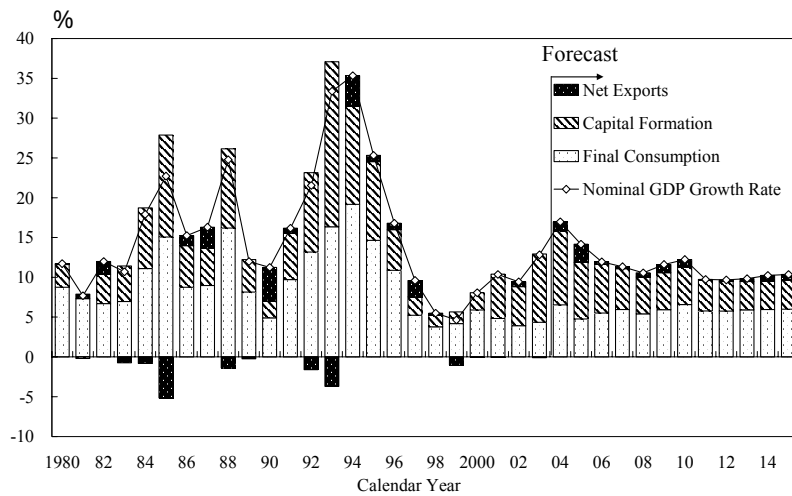
Source: "NIPA Tables", "U.S. International Transactions Accounts Data", Bureau of Economic Analysis

In the EU15, economies are recovering, as they have been supported by firm external demand. The improvements in the world economies and the weakening of the Euro will help sustain this recovery, and we anticipate that the growing exports will boost corporate profits, lead to better investment and employment figures, and eventually ripple into an expansion in personal consumption. In the mid-part of the forecast period, economic growth will return to a 2% growth path, but in the last part, the potential growth will decline as a result of the aging of the population and the accompanying decline in the potential growth rate. Growth will be at 1.5-2.0%.

China is expected to expand between 9-10% in 2005, marking the third consecutive year that the economy has grown in excess of 9%. Though the authorities are trying to keep the economy from overheating, their hands are tied by the following issues: the domestic issue of large inequalities in income and harbouring over a 200 million potential unemployed, and the conflicting needs to maintain the policy of monetary easing while keeping the Yuan at an undervalued level. It is very difficult to keep the economy stable under these conditions. Thus in this forecast, we made the assumption that building upon the July 2005 reform of the Yuan system, the currency would be increased in value by 2% per year and by 2015 would be 20% higher. With the help of this revaluation, the economy would be on a stable (real) growth path of about 8%.

As a result of the above, the economy would evolve from an (mainly foreign) investment and export led economy, to one that has a more balanced model of growth with a surge in consumption as well (Figure 7). What we will see in the domestic Chinese economy from this economic growth is the excess labour from the rural, agricultural parts of China migrating to the urban areas. It is this population that will stimulate consumption demand, much like what occurred in Japan in the 1960s.

Figure 7. Contributions to Nominal GDP: China



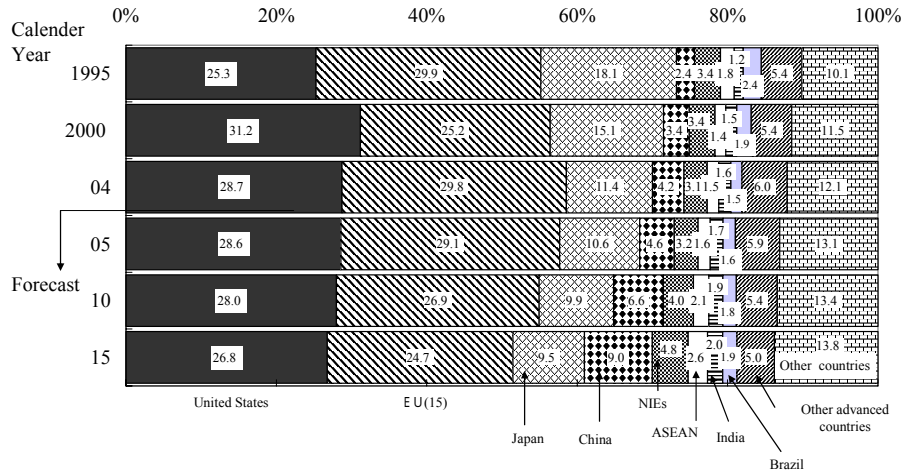
Sources: "China Statistical Yearbook-2005", National Bureau of Statistics of China, "The Overseas Economic Data", Japan Cabinet Office

The largest export destination of the NIEs (Newly Industrialized Economies) and ASEAN had traditionally been the US. Now for the NIEs, China is the largest importer of their goods and for ASEAN, it is the NIEs. This is because a production process has been established where parts are procured and goods produced within the Asian region and finished goods exported outside the region, thus resulting in a higher degree of intra-regional dependency. In the forecast period, the rapid growth of the Chinese economy will lead to more active intra-regional trade, and the NIEs and ASEAN countries will grow at rates of 5-6%, 6-7%, respectively, outperforming the average growth rates of the world economy.

In this scenario, the total scale of the global GDP (measured as the aggregate total of nominal GDPs) will be about US\$75.6 trillion in 2015, and 1.7 times the \$43.7 trillion value of 2005. Japan's share of the world economy will fall by about 1 percentage point to about 9.5% in the same period (Figure 8). In 1995, Japan accounted for 18% of the world economy and by 2015, its share will have fallen to about half. The US's share will fall by about 2 percentage points in the same period, but will still amount to over one quarter of the world economy by 2015. The share of the industrialized economies in the world economy will fall from three-quarters to two thirds.

China will greatly increase its presence in the world and will account for 9% of the world economy by 2015, from less than 5% in 2005. However, the per capita nominal GDP in 2015 will still be only US\$4,900 and will be only about 9% of Japan's (at US\$56,900). The NIEs and ASEAN regions together will see their share of the world economy increase from less than 5% to 7%. We add Japan and China to these numbers to estimate the entire Asian region's share of the world economy, and find that it will be over one quarter in 2015, and about the same as the US or the EU15.

Figure 8. Share of Global GDP



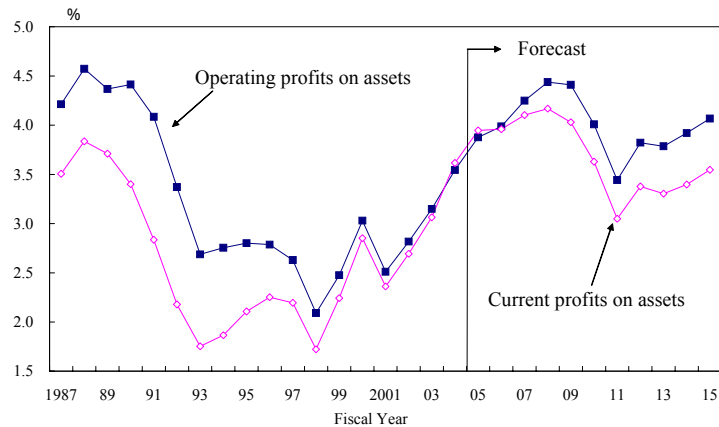
Sources: "World Economic Outlook DataBase" , "International Financial Statistics" IMF, EUROSTAT, "NIPA Table" U.S.Bureau of Economic Analysis, "China Statistical Yearbook-2005" National Bureau of Statistics of China, " Quarterly Estimates of GDP", Cabinet Office

3 . The Corporate Sector

Despite the slowdown in export growth and the higher crude oil prices, corporate profits in fiscal 2005 are expected to grow by 9-10% over the previous year ("Financial Statements Statistics of Corporations by Industry", Annual, All companies basis). Across all industries and by company sizes, the current economic expansion is strong. The growth in corporate profits may slow slightly in fiscal 2006, but in the mid-part of the forecast period when we expect deflation to be eliminated, and the economic activity to be robust across all economic agents, the trend towards rising revenues and profits should continue. However, with the end of deflation, personnel expenses will begin to rise and so we do not expect operating income to grow at as high rates as in the first part of the forecast period (2.6% average annual growth). Moreover, with higher interest rates, growth in current profits will slow down further (0.3% average annual growth). Yet, by the last part of the forecast period, the economy will be moving from its bottom (in 2011) to its peak (2015), and so profits will be on a growing trend (annual averages of operating and current profits growth, 4.1% and 3.3% respectively).

From the ratio of operating profits as a share of total assets, we see that efforts to increase profitability -- such as the restructuring of businesses to cost cutting -- have paid off, and ratios will continue to rise in the forecast period (Figure 9) . In 2009, it will just about regain those levels of the peak of the bubble period at the end of the 1980s. From then, due the cyclical factors, it will again fall temporarily, but should maintain levels of the first half of the 1990s. However, the ratio of current profits to sales will, from increased interest payments, not be at the high levels of the ratio of operating profits to sales. This trend to raise profitability is consistent with the increased globalization.

Figure 9. Change in Profit Rate (All Industries)

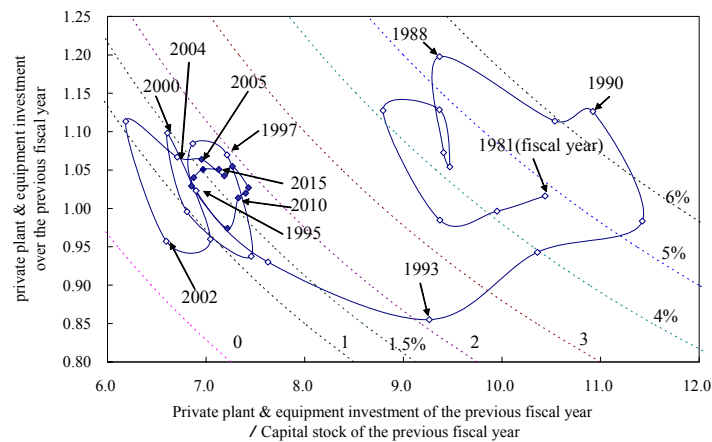


Source: " Financial Statements Statistics of Corporations by Industry ", Ministry of Finance

By industry sector, since from the mid-part of the forecast period growth will be led by domestic demand, all industries should benefit more or less evenly and growth will be more balanced. However, since the manufacturing industries are already quite lean in their debts and in their personnel expenses, they should be able to garner higher profits than the non-manufacturers in the mid-part of the forecast period. Yet, in the last part of the forecast period, we foresee the non-manufacturers also earning high profits because their revenues will increase as the share of services in the economy grows. The greater share of services in an economy will be a result of the aging of the population, and the effects of productivity improvements from a more active use of IT and further deregulation.

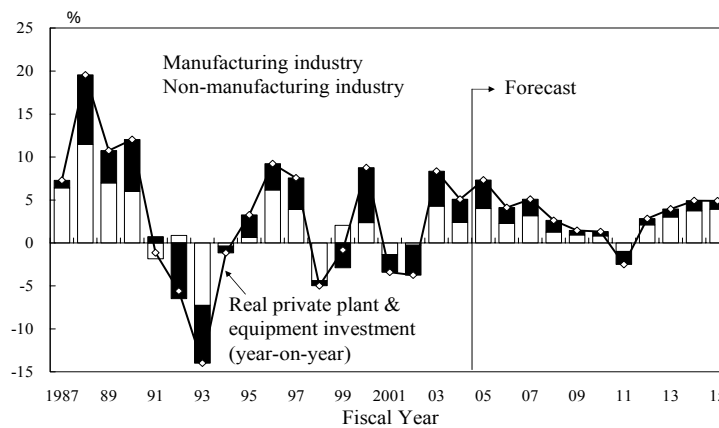
Non-residential fixed investment(private plant and equipment investment) will maintain its current upward trend, benefiting from higher corporate profits. Companies had been using its profits to repay loans and to reduce its interest bearing debt. However, companies are gradually becoming more aggressive in their business outlooks, and since there will be more investment opportunities as deflation will be eliminated in 2007 and deregulation will have progressed, we forecast the expected rate of growth to be raised to 1.5%. As a result, non-residential fixed investment will continue increasing to fiscal 2008. In fiscal 2009, however, interest rates will rise and profit growth will suffer, some stock adjustments will ensue and the next recovery will not be until fiscal 2012 (Figure 10). By industry, until the mid-part of the forecast period, the manufacturing industries will show high levels of investment, while in the last part of the period, investment will grow at higher rates in the non-manufacturing industries (Figure 11). Though the excess savings will continue in the corporate sector as a whole, we expect companies to begin investing even if they have to borrow the funds to do it. While the manufacturing sector will increase its overseas production ratios, the vintage of their domestic capital is peaking, and in order to maintain competitiveness, investment for maintenance and renewal should be more active.

Figure 10. Capital Stock & Potential Growth Rate



Note: Potential growth rate curve (dotted line) shows the level of potential growth rate corresponding to the increase of capital stock.
 Sources: "Quarterly Estimates of GDP", "Private Enterprise Capital Stock Statistics", Cabinet Office

Figure 11. Real Private Plant and Equipment Investment (by Industry)

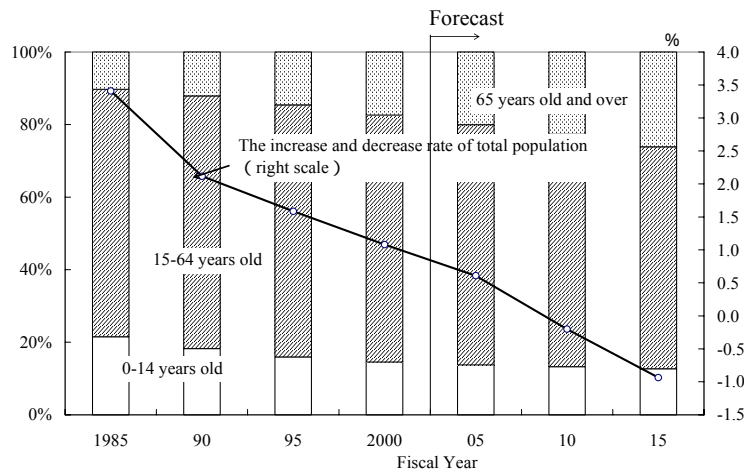


Note: Figures from the SNA were distributed by manufacturing and non-manufacturing ratios using data from "Private Enterprise Capital Stock Statistics".
 Sources: "Annual Report on National Accounts", "Quarterly Estimates of GDP", "Private Enterprise Capital Stock Statistics", Cabinet Office

4 . Employment and Wages

The population of Japan in fiscal 2005 (As at October 1, "Monthly Report of Population Estimates", Ministry of Internal Affairs and Communications) grew slightly by 0.01% over the previous year. With a birthrate declining at a faster pace than expected, this is lower than the estimates of the medium variant of the "Population Projections for Japan" of the National Institute of Population and Social Security Research (January 2002). However, aside from any adjustments based on recent data, we utilized the estimates in these projections for our forecast purposes. The share in the total population of the 65 and older age group will grow to 26.1% in fiscal 2015 from 20.0% in fiscal 2005 as the baby boomers will be included in this group by then (Figure 12).

Figure 12. Total Population and the Composition Ratio by Age Group



Note: The line graph shows the average growth rate of the five years. The bar graph shows the ratio of the age group in the total population.

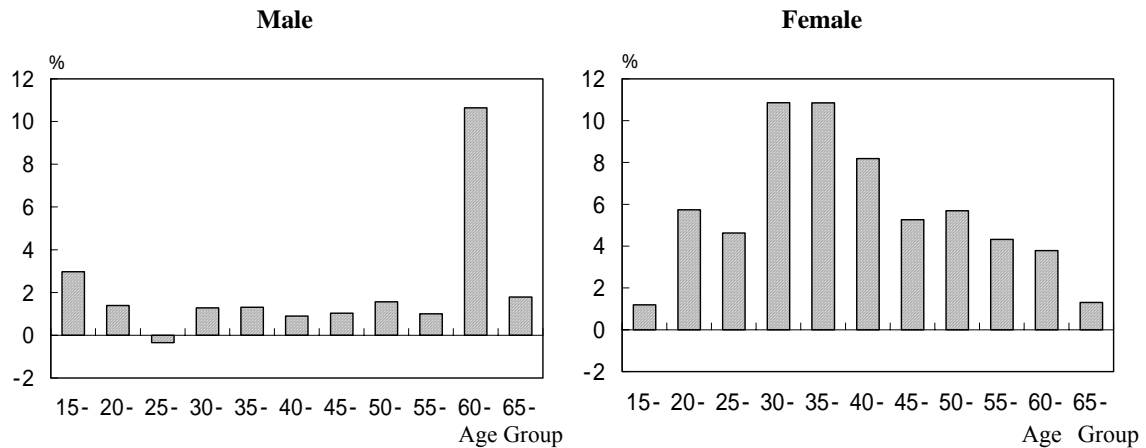
Sources: "Population Estimates", Ministry of Internal Affairs and Communications,

"Population Projections for Japan:2001-2050", The National Institute of Population and Social Security Research, January 2002

Overall, the aging of a population will work to lower the labour force participation rate of the country. In particular there is concern over the labour force participation rate from 2007 when the baby boomer generation will turn 60. However, if we take into account the following two points: 1) persons retiring will not have as much in savings as the previous generations did (see Figure 18), and will have a strong desire to stay employed and 2) there will be better systems in place to deal with older workers such as the Law for Stabilization of Employment for Older Persons (to be implemented in April 2006), we need not overestimate the effects of aging. We expect the labour force participation rates of the baby boomer generation to be higher than that of previous generations, and this alone should offset these aging effects by one fourth. Moreover, as we anticipate the labour force participation rates of other age groups to increase, we expect the labour force to be flat in the mid-part of the forecast period. The labour force population is not expected to begin to decline until the last part of the forecast period when we foresee a 0.1% annual rate of decline.

We show in Figure 13 the trends in the labour force participation rates by age group, that bring to light future trends in the size of the future labour force. Throughout the forecast period, the labour market will be tight. If we take into consideration the effects of the regulatory reform, then we can expect women and older persons -- those with a latent desire to work -- to enter the labour force. The labour force participation rate of men will fall by 1.4 percentage points to 72.0%, but for women it will rise by 1.2 points to 49.4%. As a result, the drop in labour force participation for women at certain stages of their lives -- resulting in the M-shaped curve of women's labour force participation by age -- will improve by just under 60%.

**Figure 13. Labour Force Participation Rate by Sex and Age Group
 (Shows the difference between 2004 FY and 2015 FY)**

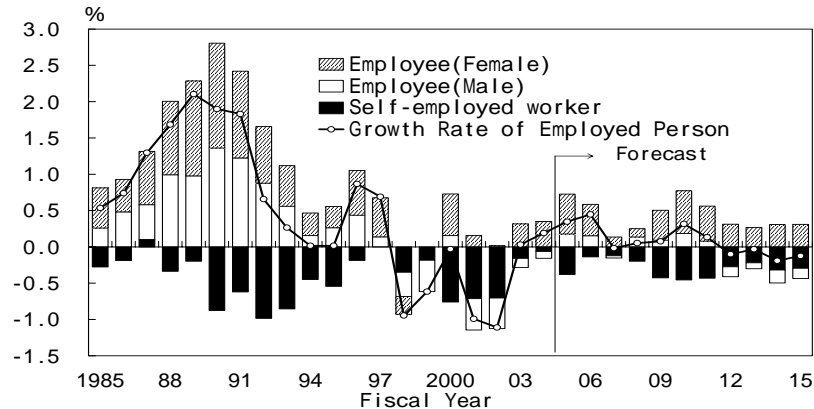


Note: The labour force participation rate is the labour force population of each age group divided by the population of each age group.

Source: "Labour Force Survey", Ministry of Internal Affairs and Communications

Faced with an expanding economy and the retirement of the baby boomer generation, companies are beginning to have a more aggressive stance regarding employment. In fiscal 2005 we forecast the number of employees to increase by 0.6% and it to be the first year since fiscal 2000 that this number grows. In the mid-part of the forecast period, growth will be restrained as the baby boomer generation reaches retirement age. However, in the mid and last parts of the period, the number of employees will grow an annual 0.5%, driven by the participation of women, and reflecting the more robust economy. Though the growth in employed persons will only be marginal, this is because we foresee a decline in the category "self-employed persons and family" (Figure 14). Though this category will decline due to structural reform, this is a category that may still grow as it is one that the baby boomer generation may fall into. We, however, assume that the force of the former will be stronger than the latter. The increase in female workers will be a result of 1) a better childcare environment due to an increase of daycare facilities 2) an increase in demand for part-time and temporary workers due to the expansion of the economy and 3) expansion of service industries (that have more employment opportunities for women).

Figure 14. Breakdown of Contribution Rates to the Growth Rate of Employed Persons

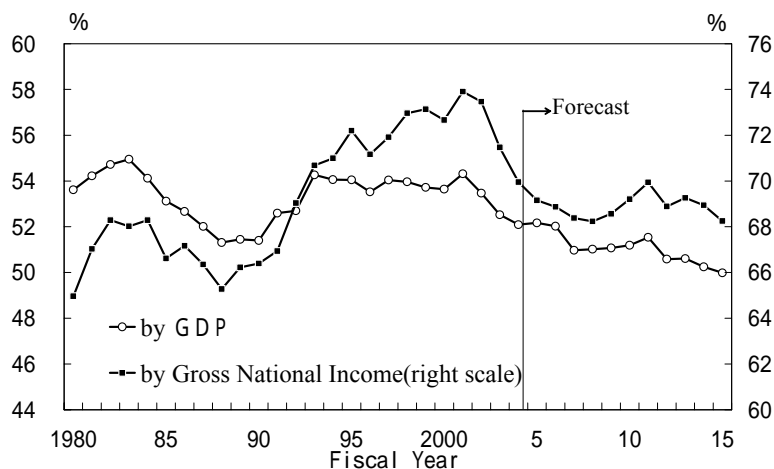


Note: Employed person = Self-employed worker + Family worker + Employee
 Source: "Labour Force Survey", Ministry of Internal Affairs and Communications

As a result of this picture where demand for labour increases and the size of the labour force slightly declines, the unemployment rate will gradually fall throughout the forecast period. In fiscal 2015 it will be at 3.8% and lower than the structural unemployment rate. The active opening rate (the effective ratio of job offers to applicants) will be above 1.0 in the last part of the forecast period as the economy expands.

The recovery of corporate profits will lead to a decline in the ratio of part-time workers and as a result, wages will increase over the previous year in fiscal 2005 for the first time in five years. With the elimination of deflation and the increase in productivity, nominal wages will grow by about 2.5% from the mid-part of the forecast period. However, as we transfer from the traditional seniority-based wage structure to one more based on the productivity of the individual, and as globalization results in capping the wage growth of the less skilled worker, the wage differential will widen.

Figure 15. Labour Share



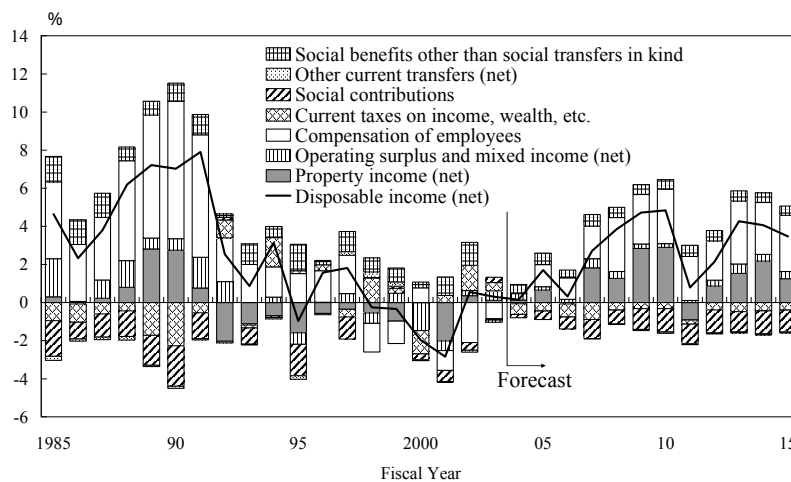
Source: "Annual Report on National Accounts", Cabinet Office

We expect employee compensation to grow by 3-4% from the mid-part of the forecast period onwards, as the number of employees and nominal wages are both on an upward trend. Of these labour costs, the higher pension premiums will lead to the social contributions of employers increasing to 17.8% in fiscal 2015. The GDP-based labour share (employee compensation as a share of nominal GDP) will continue to fall from about 52% in fiscal 2003 to 50% in fiscal 2015 (Figure 15). Though this is because real wages will grow at a slower rate than productivity, Japan's ROA (return on assets) will increase by 1.4 percentage points to 5.6% during the forecast period as a result, and will reach the approximate level of the first half of the 1990s of the US, just before the start of the new economy boom.

5 . Personal Consumption

From the increase in corporate profits, the employment and income environments have been improving, and employee compensation should begin to increase from fiscal 2005. We forecast employee compensation to grow a healthy 3-4% on average from the mid-part of the forecast period when deflation will be eliminated. Thus, during the forecast period when there will be such negative factors as the fixed rate tax deduction being abolished and insurance premiums rising, disposable income will still increase by an annual average of about 3% (Figure 16) . From the mid-part of the forecast period when the zero interest rate policy will be lifted, the rapid increase in property income as interest rates rise will be a positive factor to income (Figure 19) .

Figure 16. Breakdown of Contribution Rates to the Disposable Income Growth Rate



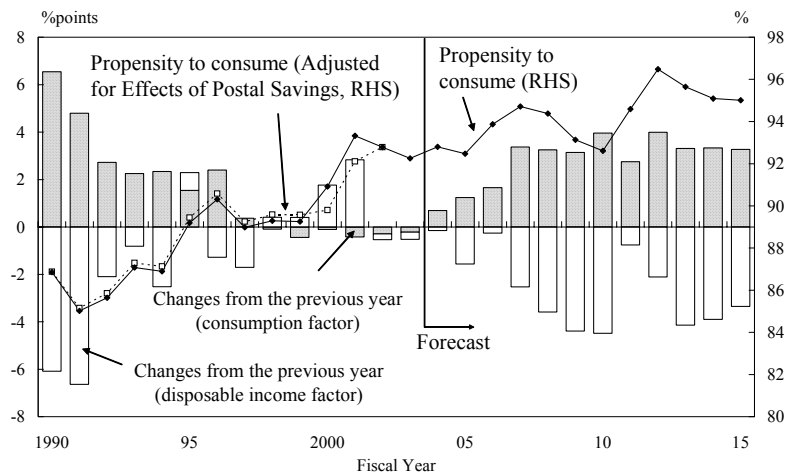
Source: "Annual Report on National Accounts", "Quarterly Estimates of GDP", Cabinet Office

With this increase in disposable income -- though there will be such spikes as a rush demand ahead of a consumption tax hike, and a decline afterwards in reaction centred on durable goods -- personal consumption will increase by about 2% on a real basis and 3-4% on a nominal basis. Though consumption will increasingly become centred on the services (i.e., the rate of consumption on services in

overall consumption expenditure will rise), the pace of this will be moderate. This is because if we examine the breakdown of goods and services in the spending of older persons, we see that the share of services is lower than that of younger people. The income elasticity of consumption on services is higher than 1, and so the share of consumption on services will rise as income increases, but the effects of an aging population will offset this to some degree. From the composition of final consumption expenditure (on a nominal basis) we see that the shares of consumption on service items such as recreation and culture, communication are increasing, and growth of consumption into health will also grow rapidly as the population ages and the co-payment rate increases.

The propensity to consume (that in fiscal 2001 rose to 93.3% when a large amount of postal savings deposits matured) will fall in fiscal 2003 to 92.3% and a level where the effects of these temporary factors will have dissipated (Figure 17) .

Figure 17. Propensity to Consume

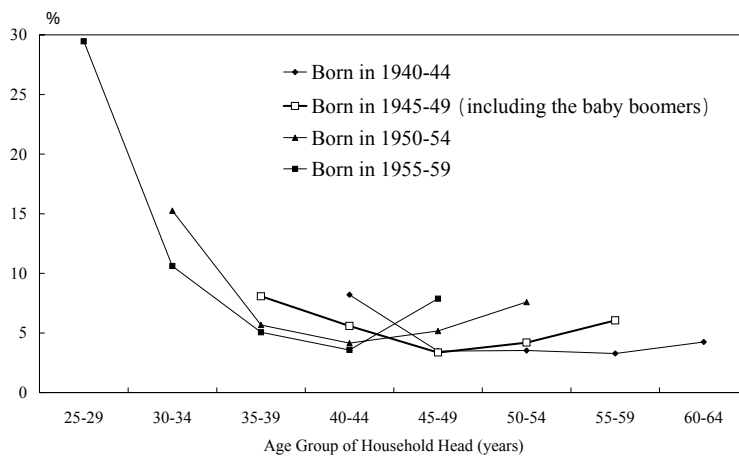


Note: Propensity to Consume (adjusted for effects of postal savings): In this case, the amount of interest taxation in FY2000 and FY2001, (years when there were the mass postal savings maturities), is distributed into each deposit period age.
 Sources: "Annual Report on National Accounts", "Quarterly Estimates of GDP", Cabinet Office

Although the aging of the population should be a factor to raise the propensity to consume, the pace will be quite gradual. One factor behind this is that many households have not been able to accumulate enough savings and they will continue to save as their income increases. Currently, households with low savings are on the rise, and since these are not limited to aged person households, we feel this is due to the poor income environment. The savings of those in their late 40s to early 50s are also less than those of the previous generation at that age (Figure 18) . Since this age group will need the savings as they head into retirement, they will not only continue to save some of the excess funds they will have from the improved income environment, but will also stay in the labour force longer and continue to work. In fact, in this forecast, we assume an increased labour force participation rate of older persons, and a greater number of older persons working translates into a more moderate withdrawal of savings. In the period to fiscal 2010, there will be factors for volatility such as the fixed rate tax deduction

being abolished, the consumption tax hikes causing rushed buying in one period and then a reactionary decline in the next, and increases in property income due to the lifting of the zero interest rate policy (Figure 19) . However, in fiscal 2010, we expect the propensity to consume to have returned to levels of about fiscal 2005. After this, in the last part of the forecast period, due primarily to the aging factor, the propensity to consume should rise gradually to about 95-96%.

Figure 18. The Share of Households with Savings of Less Than 1 Million Yen (by Generation)



Note: Figures by ages of households head in 1984, 1989, 1994, 1999 and 2004,
 Source: "Family Income and Expenditure Survey", Ministry of Internal Affairs Communication

Figure 19. The Share of Balance of Primary Incomes by Items (nominal)



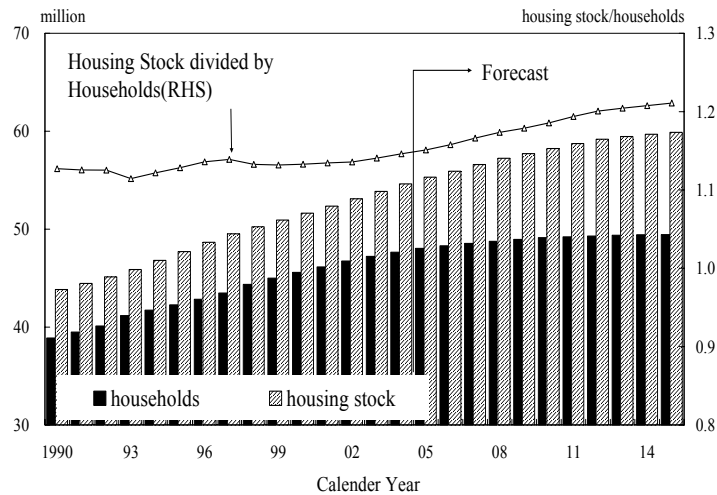
Source: "Annual Report on National Accounts", Cabinet Office

6 . Housing, Real Estate Prices

New housing starts that have been increasing since fiscal 2003 will continue to rise in the first part of the forecast period, supported by the increase in the homes for rent and sale in the large metropolitan areas. For the mid-part of the forecast period and beyond, though there will be the favourable condition that the second generation baby boomers will reach their mid to later thirties in age --

the peak age group to buy housing -- a strong surge is not likely. This is because 1) the housing stock figures are already at 1.14 per household in fiscal 1996 and this is likely to rise further (Figure 20) , and 2) with the lower birth rate, the growth in households will slow. As a result, we forecast the growth of the new housing starts to be flat.

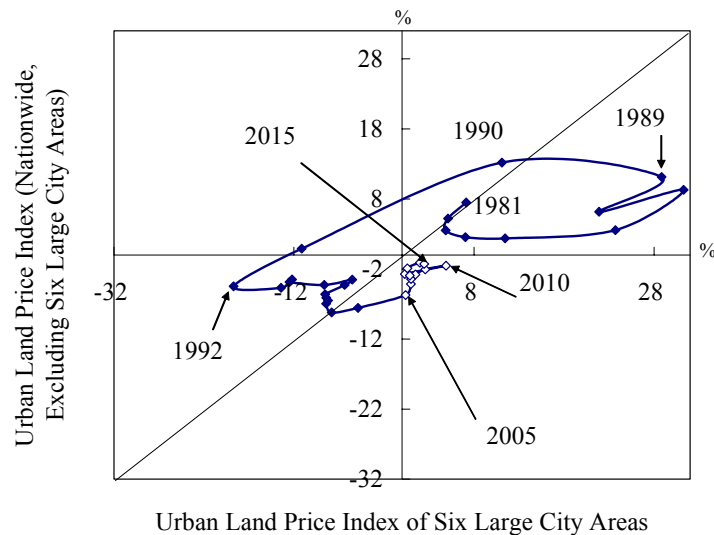
Figure 20. Increase of Housing Stock



Note: "The Housing and Land Survey" is conducted every 5 years. So we estimated housing stock of interim years from construction statistics, and the number of households from "Report on Internal Migration in Japan".

Sources: "Monthly of Construction Statistics", Ministry of Land, Infrastructure and Transport; "Housing and Land Survey of Japan" and "Report on Internal Migration in Japan", Ministry of Internal Affairs and Communications

Figure 21. Polarization of Land Prices



Source: "Urban Land Price Index", Japan Real Estate Institute

However, as the per house floor area is on the rise due to improvements in living standards and additionally there is new construction and reconstruction of condominiums, real residential investment will show moderate growth of about 1.0% on average through the forecast period.

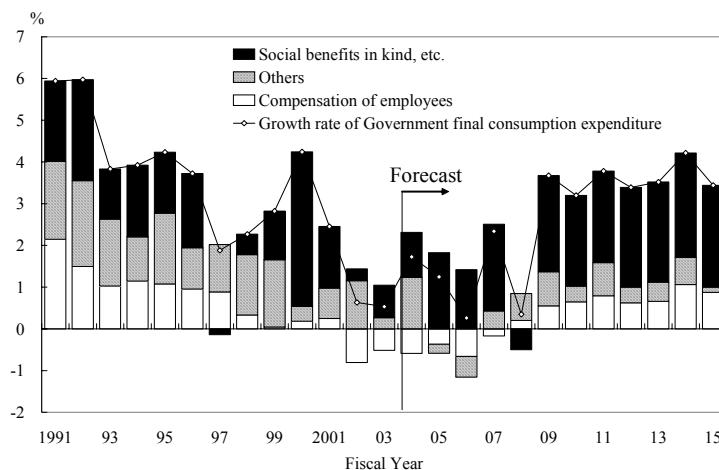
Regarding land prices, the reversal of the decline is becoming very pronounced in the urban areas. According to the Urban Land Price Index released by the Japan Real Estate Institute, in the six major cities, the commercial real estate prices hit their bottom in March 2005, and residential real estate in September of the same year. If we include industrial real estate, the total average turned to rise in September 2005. However, outside the six major cities, the decline continues and so on a national average, the fall is ongoing. If we estimate the "equilibrium land prices", it is not clear that land prices in Japan overall have fallen to their equilibrium levels, and so we anticipate that the current trends polarizing land prices should continue (Figure 21) .

7 . The Government Sector

The investment-savings balance of the general government is expected to mark a deficit of about 6.5% of nominal GDP in fiscal 2005, and be steadily improving from the 8.2% marked in fiscal 2002. In this forecast, we anticipate some aggressive reform measures being adopted on both the expenditure and revenue sides to gain fiscal health.

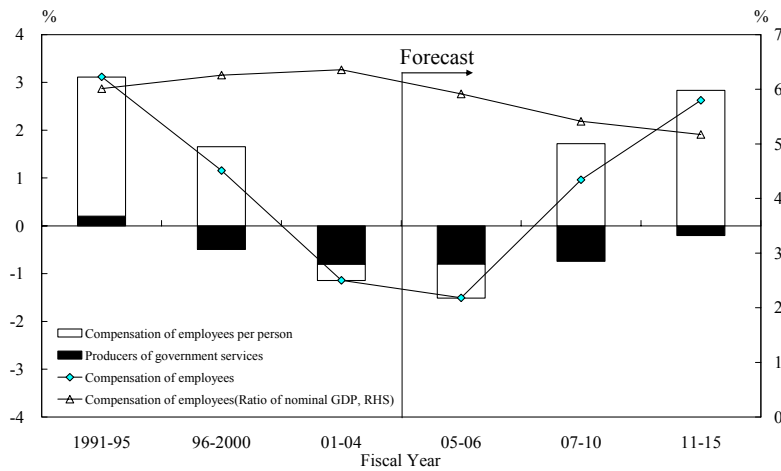
On the spending side, public investment will continue to shrink and in fiscal 2007 it will be lower than consumption of fixed capital (which is the equivalent of the maintenance and renewal of capital stock). From then we expect only maintenance and renewal investment and no new investment to be made. As a result, from the mid-part of the forecast period, nominal public fixed capital formation will grow only marginally at about 0.7% per year. By fiscal 2015, it will fall to about 3.1% of nominal GDP and around average levels of the industrialized countries of Europe and the US.

Figure 22. Contribution to Government Final Consumption



Source: "Annual Report on National Accounts", Cabinet Office

**Figure 23. Compensation of Employees
 (Average Year-on-year Changes)**



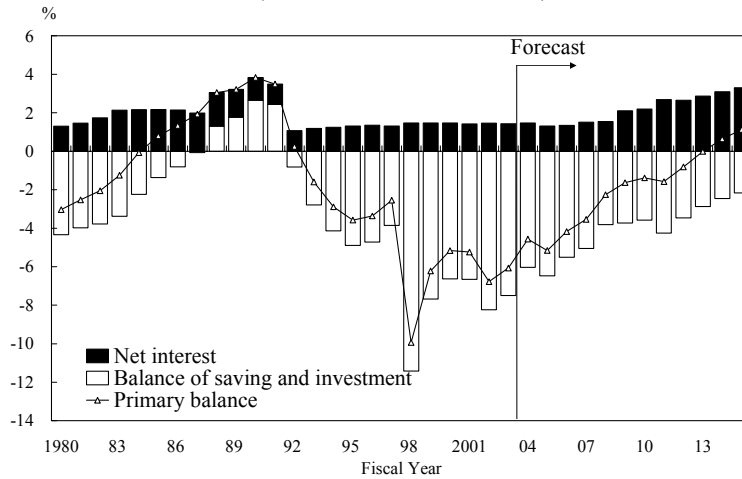
Source: “Standard Plan of Labour Costs Reform” Nov14th 2005, Council on Economic and Fiscal Policy
 “Annual Report on National Accounts”, Cabinet Office

Nominal public final consumption expenditure will grow an annual 2.4% on average during the mid-part of the forecast period and will pick up pace to grow by 3.7% in the last part of the period (Figure 22). The main factor behind this is that with an aging population, there is strong upward pressure on expenditure related to health and long-term care, and social benefits in kind is expected to increase by a rapid rate of just under 5%. Employee compensation will grow at a low rate of under 2% and will restrain overall growth. In particular, in line with the guideline on reforming government personnel costs (as called for by the Council of Economic and Fiscal Policy on November 14, 2005), in the mid-part of the forecast period, employee compensation will grow only about 1%. However in the later part of the forecast period, per capita wages are expected to increase in line with the private sector, and employee compensation should begin to increase more rapidly (Figure 23). As a result of this, employee compensation will be 6% of nominal GDP in fiscal 2005, but will fall to 5% of GDP in fiscal 2015.

As for the revenue side, we made the following three assumptions: 1) In fiscal 2005-2007, the fixed rate tax deduction will be eliminated (leading to an additional 3.3 trillion yen for the central and local governments), 2) the consumption tax rate will be raised by 3 percentage points in fiscal 2008, and another 2 points in fiscal 2013 and 3) there will be a graduated reduction in the preferential tax system for housing loans. As nominal growth rates will be an average 3% over the forecast period, tax revenues (the sum of “taxes on production and imports” and “taxes on income and wealth”) are expected to rise an average 5-6% from the mid-part to the end of the forecast period.

Looking at the balance of the revenues and expenditures expected above, the deficit in the primary balance of the central and local governments (the investment-savings balance less net interest payments) will steadily shrink, and will, in fiscal 2012, mark a surplus. In terms of the general government primary balance – central and local governments and social security funds – this will also turn to mark a surplus in fiscal 2014 (Figure 24).

**Figure 24. Primary Balance of General Government
 (Ratio of Nominal GDP)**



Source: "Annual Report on National Accounts", Cabinet Office

The deficit in the primary balance of the general government in fiscal 2005 is negative 5.2% of nominal GDP (i.e., a deficit of 5.2%). We break this down into cyclical and structural factors and find that the structural balance accounts for -4.9% of GDP and so almost the entire deficit is due to structural factors. The deficit will improve by 1.9 percentage points due to spending cuts (civil servant reform, and reduction in public investment), and by another 3.6 percentage points as a result of higher taxes and an increase in social contributions. Thus the structural balance will improve by 5.2 percentage points and will be a positive 0.4% of GDP in fiscal 2015 (see Table.1, pp.8). However, the net interest payments (negative factors to the balance) will increase by 2.0 percentage points due to higher interest rates, reaching the 3% level as a share of nominal GDP in fiscal 2015 and will become a major factor behind the deficit.

The financial liabilities of the general government (gross debt) will reach 180% of nominal GDP in fiscal 2006, after which it will gradually fall to about 150% in fiscal 2015. The net debt will increase up to the beginning of the 2010s, but should remain at about the same level of 90%. The discrepancy between the movements in the two indicators occurs because the financial assets will decline due to such factors as the drawing down of the accumulated amount of pension reserves of the social security funds. In order for the net debt to be stabilized at the 90% level, the surplus in the primary balance needs to be at about 1% of nominal GDP. However, the structural primary balance in fiscal 2015 will only be about 0.4%, and so some additional fiscal restructuring policies will need to be implemented.

8 . Social Security

The investment-savings balance of the social security funds are expected to be in a surplus as a result of the temporary factor that in fiscal 2003 and 2004, there was a transfer to the government of the substitutional portion of pension liabilities. Without this factor, the balance would likely mark a deficit of 1.2% of nominal GDP in fiscal 2005. Though there is deeply rooted pressure for expenses to expand from the increasingly aging of the population, the social security benefits are expected to be stable at about the same 16% share of nominal GDP due to the effects of the system reforms, and additional reductions in benefits that we will explain later in this discussion. As for the social security burden, it is expected to be raised and will amount to 11% of nominal GDP in fiscal 2015, a 1.2 percentage point increase over the fiscal 2005 figure (Table 2) . As a result, and if we take into account the increase in property income resulting from the higher interest rates, the investment savings balance of the social security funds should be flat at about zero in fiscal 2015 (Figure 25) .

Table2. Main Assumptions

Assumptions

	The 32nd forecast	(Cf.) The 31st forecast
Pension	<ul style="list-style-type: none"> • Premium rate of employees pensions insurance is 13.58% (shared equally between the employer and employee) of total remuneration in 2003. After this, it will be raised 0.354 percentage points each year. • Portion of government subsidy begins to be raised in 2004, and is gradually raised to ½ by 2009. 	<ul style="list-style-type: none"> • Same preconditions as 32nd Forecast.
Medical insurance	<ul style="list-style-type: none"> • The premium rate is raised from 2007, making up for the deficit of government contributions less benefits. (See Table 2 -) • The co-payment rate for the elderly 75 years and older will be raised from 10 to 20% from 2008. 	<ul style="list-style-type: none"> • Premium rate doesn't change. • Public subsidies make up for the deficit.
Long-term care insurance	<ul style="list-style-type: none"> • Premium Rate is raised from 2007, and premiums make up for the deficit of government contributions less benefits in 2010. (See Table 2 -) 	<ul style="list-style-type: none"> • Premium rate is raised from 2006.

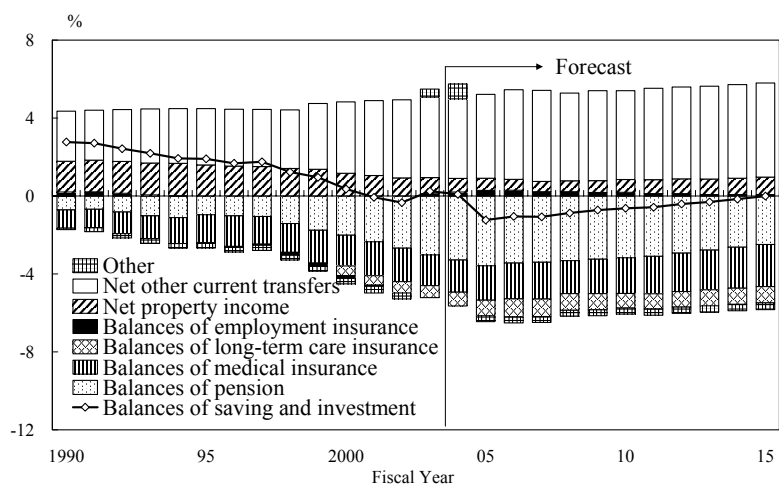
Premium Assumptions

(Ten thousand yen , %)

	2005	2007	2010	2013	2015
Medical insurance	18.6 (4.4)	19.8 (4.6)	21.4 (4.6)	24.6 (4.9)	27.2 (5.2)
Long-term care insurance	2.9 (0.7)	3.5 (0.8)	6.0 (1.3)	6.9 (1.4)	7.6 (1.4)
(Cf.) Wages and salaries per person	419.2	428.2	461.3	497.1	528.1

Note: Figures in parentheses are the ratios of wages and salaries per person

**Figure 25. Balance of Saving and Investment in Social Security funds
 (Ratio of nominal GDP)**



Note: Balances are defined as premium contributions less benefits.

Source: "Annual Report on National Accounts", Cabinet Office

Regarding the public pension plan, we assume in this forecast that the premium rates of public pensions are raised in steps, as called for in June 2004 as part of the pension plan reform, and that the payout of benefits would be kept in control by the introduction of a macroeconomic slide mechanism. Though the number of benefit recipients will obviously increase due to the changing demographics, we have the actual deficit (defined as the burden less benefits, throughout this paper) avoiding an increase thanks to the system reforms and the stable economic growth. Comparing this to the case where the macroeconomic slide were not implemented and premiums not increased (premium rates kept at 13.58%) benefits are lower by 2.4 trillion yen in fiscal 2010 (or by 4.5 in fiscal 2015) and the burden is greater by 3.8 trillion in fiscal 2010 (and 8.5 in fiscal 2015). However, even with these assumptions, there will be deficit of about 18 trillion yen (or 2.5% of nominal GDP) in fiscal 2015, and this will have to be covered by government contributions and investment income. The reserves of the pension (financial assets of the social security funds) accumulated to 237 trillion yen as at year-end 2001 when it began to be drawn down, and will continue to fall to 195 trillion yen at year-end 2015 (about 28% of nominal GDP).

Regarding the finances of the health insurance system, there will again be intense pressure for benefits to rise due to the aging of the population and also the revision of remunerations for medical services that will reflect higher prices in the economy as a whole. Thus, we expect that the co-payment rate for the elderly 75 years and older will be raised from 10 to 20% in the system reform slated for fiscal 2008. This should result in a 2.6 trillion yen decline in benefits in that fiscal year, and 1.1 trillion yen increase in co-payments. Furthermore, we anticipated that the benefits less the government contribution will be financed by the insurance premium burden, and so the insurance premium rates will be raised step-by-step from fiscal 2007. The deficit as a share of nominal GDP will not increase by a wide margin, and rise only marginally from 1.8%

in fiscal 2005 to 2.2% by fiscal 2015.

As for long-term care insurance, we took into account the system reforms that would be taking place gradually from fiscal 2005 in our forecast. That is, we are expecting the following: 1) "hotel" costs of long-term care facilities to be paid by the patient and 2) through "care-prevention", the number of low care level persons being certified as needing long-term care to be controlled. Despite this, benefits will grow by a rapid rate of just under 7% on average from fiscal 2006 due to the aging of the population. To recognize the original purpose of the system that the pressure of the benefits to rise and half of the benefit amount should be covered by premiums, we assumed that from fiscal 2007, insurance premium rates would gradually rise, so that by fiscal 2010 half of the benefit amount would be covered. After this, we assumed that the premium would change in accordance with the benefits. The deficit should fall to about 6 trillion yen and about 0.8% of nominal GDP by fiscal 2015.

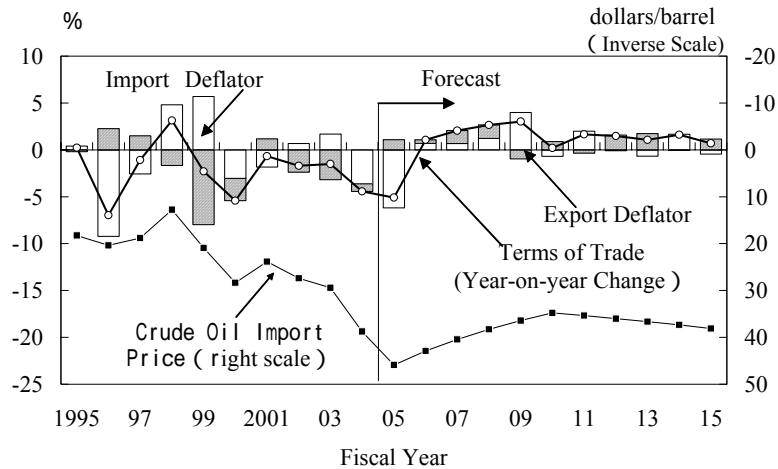
Finally, regarding employment insurance, as the number of unemployed will decline as the economy grows, in fiscal 2006 the accumulated reserves (labour insurance special account, employment) will be greater than twice the benefits. We assumed that the insurance premiums would be lowered in steps from fiscal 2007 in accordance with the continuation of the flexibility clause.

9 . Exports and the External Balance

We expect crude oil prices (average of WTI, Brent and Dubai) in 2005 to rise by 40% over the previous year to \$53/barrel (after rising 30% in 2004). This is over twice the price of 2002 (\$25/barrel), the year that crude oil prices began to skyrocket. We believe the price will fall to about \$34/barrel by 2010 due to the cooling off of speculative demand, the more moderate level of growth in the world economies and the gradual effects of increased production. After this, we forecast the price to be pretty flat on a US producer price index basis and be about \$38/barrel in 2015.

Due to the recent rise in oil prices, the terms of trade in fiscal 2005 will deteriorate by 5%. However, as oil prices will begin to fall after this, and the exchange rate will see a gradual yen appreciation, the terms of trade will head towards a recovery and by fiscal 2015, it will have improved by 15% over 2005. This reflects the companies' more profit-conscious stance and the transfer of increased costs arising from the elimination of deflation to their export prices (Figure 26) .

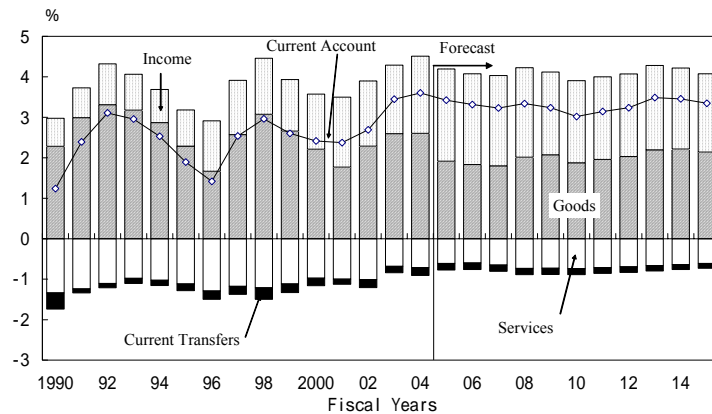
Figure 26. Contribution to Terms of Trade



Notes: 1. Terms of Trade = Export Deflators (goods & services) / Import Deflators (goods & services)
 2. The rise in the Export Deflator shows an upturn in the terms of trade, while a rise in the Import Deflator shows a deterioration in the terms of trade.
 Source: “Annual Report on National Accounts”, Cabinet Office

The current account surplus for fiscal 2005 is expected to be 3.4% of nominal GDP and fall compared to fiscal 2004 due to higher oil prices and to the lackluster export growth in the first half of the fiscal year. As for the rest of the forecast period, the steady expansion of between 6-8% per year of the world and the expected improvement of Japan’s terms of trade will work to expand the surplus, while the rising import penetration rate will work to shrink it. Though the current account surplus will contract slightly during the first part of the forecast period, after this it is expected to be pretty flat at the fiscal 2005 rate of about 3.3% of nominal GDP (Figure 27) . We expect net external assets to rise from 37% of nominal GDP in fiscal 2004 to 56% in fiscal 2015 due to a consistent current account surplus. However, the income account surplus that occurs as a result of this should remain constant at about 2% of nominal GDP because during the forecast period, the yen will appreciate at a rate of about 1% per year.

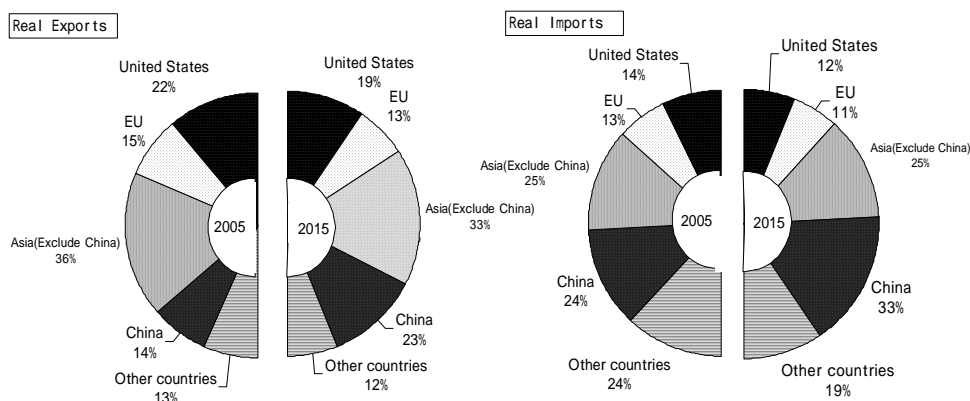
Figure 27. Current Account (Ratio to Nominal GDP)



Source: “Balance of Payments Monthly”, Bank of Japan

By 2015, the scale of China's economy is expected to be greater than 90% that of Japan's. As the country is a very open economy, we also expect China to become an even greater trading partner to Japan. In the beginning of the decade, China should become the destination for the greatest Japanese exports, greater than the US, and by fiscal 2015, it is expected to have a 23% share of Japan's exports (figures here and below on a real customs clearance basis) (Figure 28). Japan already imports more from China than anyone else, but by 2015, China's share of imports is expected to balloon to 33% of the total. By establishing a system of international division of labour within Asia, the share of all Asia including China in Japan's exports and imports is forecast to be from 55-60% by fiscal 2015.

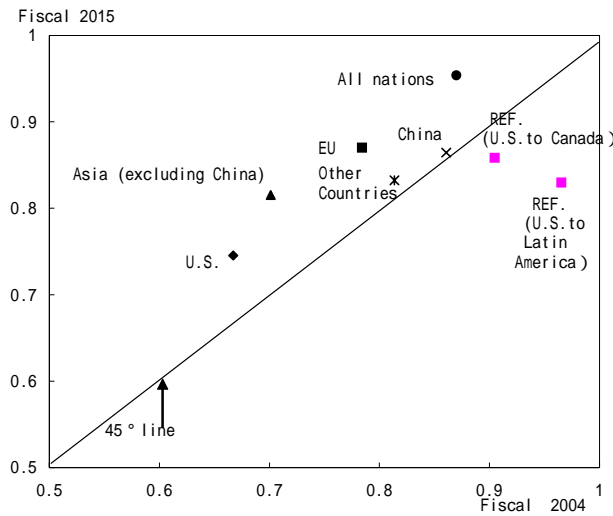
Figure 28. The Share of Real Exports & Imports (A Comparison of 2005 to 2015)



Sources: "Trade Statistics", The Ministry of Finance of Japan, "Price Indexes Monthly", Bank of Japan

A characteristic of this international division of labour in the Asian region is that it is two-way. That is, the gross import and export figures are very high compared to the net numbers. We estimated the Grubel-Lloyd index by trading partner, and we find that though trade with US is one-way, for China and other Asia, it is two-way, reflecting the international division of production processes. This trend will strengthen even further during the forecast period (Figure 29). The nature of the trade being two-way appears to be specific to Asia, as we see that between the US and Central and South America that have been affected by the NAFTA agreement, the index has fallen from 0.97 in 1992 to 0.83 in 2002.

Figure 29. Grubel - Lloyd Index in Japan (Plotted by Trade Partner)

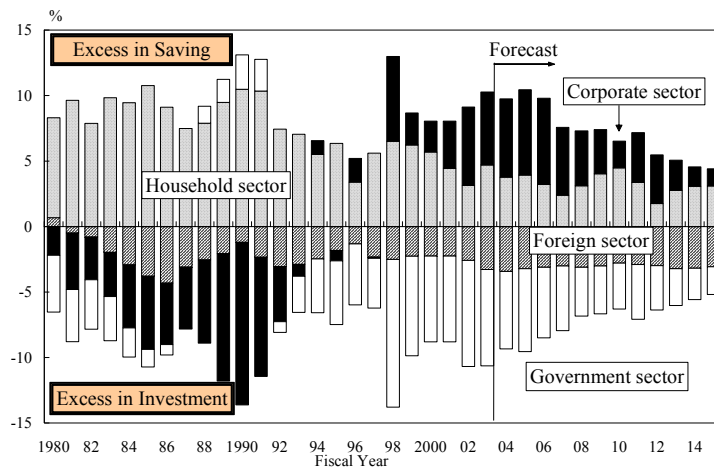


Notes:

- 1 . Grubel - Lloyd Index = $1 - | \text{Real Exports} - \text{Real Imports} | / (\text{Real Exports} + \text{Real Imports})$
 - 2 . When the country is plotted higher than the 45°line, this means that gross imports and exports grew relative to net imports and exports in the period between 2004 and 2015.
 - 3 . "U.S. for Canada" and "Latin America" are actual data from 1992 to 2002.
- Sources: "Trade Statistics", The Ministry of Finance of Japan, "Price Indexes Monthly", Bank of Japan, "Survey of Current Business", U.S. Department of Commerce

The current imbalances (fiscal 2003 figures) we are seeing in the investment-savings balance, with an excess savings in the corporate sector and excess investment in the government sector, should shrink in the forecast period. The corporate sector will become gradually more aggressive in its investment activities and its savings excess of about 5.5% (of nominal Gross National Income) will, by the end of the forecast period shrink to 1.3%. At the same time, in the government sector, expenditures will be reduced and consumption taxes and social security burdens will be raised resulting in the shrinking of the excess investment from about 7.5% to between 2-3%. The excess savings of the household sector will gradually shrink by about 1.6% points. As a result of the above, in the domestic sector there will not be a great change in the scale of the excess savings, and the surplus in the external balance (the excess spending in the overseas sector) should remain at about the 3-3.5% level (Figure 30).

Figure 30. Balance of Saving and Investment by Institutional Sectors



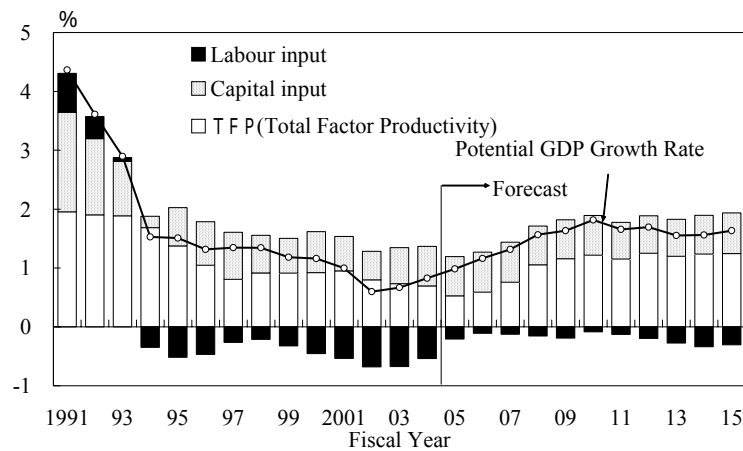
Note: Figures indicate the percentage ratio to nominal Gross National Income.

Source: "Annual Report on National Accounts", Cabinet Office

10 . Potential Growth Rates

To find the potential growth rate, we used the Cobb-Douglas production function that uses the two factors of production – labour and capital. However, as we were not able to use a chain-type deflator for the capital stock at the time this forecast was compiled, we utilized the same estimation method as the Japan Center for Economic Research ("Japan Financial Report No.12", March 2005, Chapter 2, Appendix A). We assumed that total factor productivity (TFP) would depend to a large degree on the scale of the intellectual capital stock created from R&D investment. We forecast the potential growth rate to be an average 1.1% in the first part of the forecast period while in the mid-part it rises to 1.6% due largely to increases in TFP. Though this factor will continue to work in the last part of the forecast period, the effects will be offset by the aging of the population and the lower labour inputs that will result, and so the potential growth rate will be flat (Figure 31). However, we need to be conscious of the fact that the reason the fall in labour inputs are only slight is that in this forecast we assumed that the labour force participation will rise enough to offset most of the effects of this demographic change. From the progressing aging of the population, we forecast that the productive age population would decline an annual 0.7% per year to fiscal 2010, and from them on, 1.1%. Thus if we use 0.71, the share parameter of labour, in estimating the potential growth rate, then it will reduce the potential growth rate by 0.5 percentage points until fiscal 2010, and 0.8 points in the 2010s. Since we assume an increase in the labour force participation rate for the purposes of this forecast, we believe that these factors reducing the potential growth rate will be offset by about 0.3, and 0.5 percentage points, respectively.

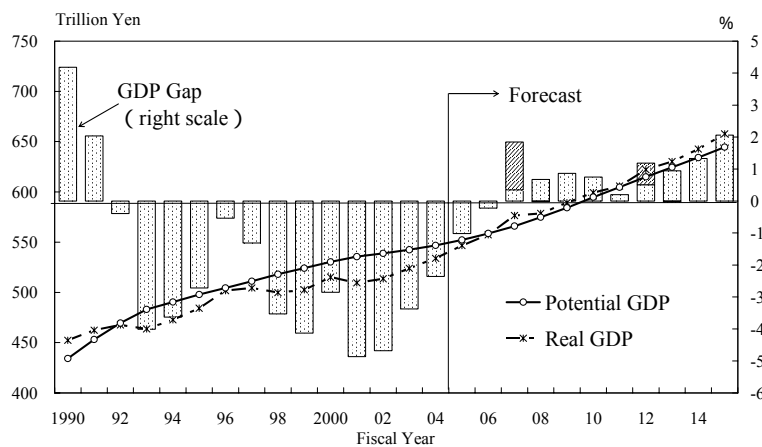
Figure 31. Breakdown of Contribution Rate to Potential GDP Growth Rate



Sources: “Annual Report on National Accounts”, “Annual Report on Gross Capital Stock of Private Enterprises”, Cabinet Office, “Monthly Labour Survey”, Ministry of Health, Labour and Welfare

The GDP gap that was a negative 2.4% in fiscal 2004 will continue to shrink as the economy expands, and in fiscal 2007, even if we average the effects of rush buying ahead of the consumption tax hike in fiscal 2008, the gap will turn to positive (Figure 32). After this, the GDP gap will fluctuate with the business cycle that we estimate to peak in fiscal 2010 and in fiscal 2015.

Figure 32. GDP Gap



Notes: 1. $GDP\text{ Gap} = \frac{(Real\ GDP - Potential\ GDP)}{Potential\ GDP} \times 100$

2. Potential growth rate is the rate of growth that is achieved when existing (potentially available) capital and labour force are utilized to the maximum. To estimate potential GDP, a Cobb-Douglas production function was assumed.

$$Estimation\ Function : Y = C \times RD^\lambda \times (KS)^\alpha \times (EH)^{1-\alpha}$$

Y : Real GDP, C : constant, RD : Research and Development Stock, λ : Research and Development stock parameter, K : Net Capital Stock, S : Capacity Utilization,

E : Number of workers, H : Total labour hours, α = Capital Distribution Rate, $1 - \alpha$ = Labour Share (= 0.712)

Estimation period: 1990-2004 Estimation result: $C = -5.1599$, $\lambda = 0.2518$, $\alpha = 0.288$

Using this production function, potential GDP is estimated by substituting RD stock, potential capital input and potential labour input.

3. For fiscal 2007 and 2012, the effects of the hike in the consumption tax have been considered.

Sources: “Annual Report on National Accounts”, “Annual Report on Gross Capital Stock of Private Enterprises”, Cabinet Office, “Monthly Labour Survey”, Ministry of Health, Labour and Welfare

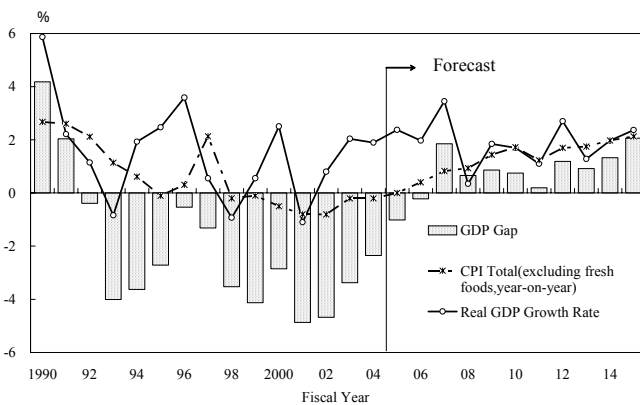
11. Prices

The Domestic Corporate Goods Price Index in fiscal 2005 will rise by about the same rate as fiscal 2004 of 1.4% due to tighter domestic supply and demand and the higher oil prices. After this, the effects of oil prices will fade away, but with the tightness in the domestic supply and demand as the main factor, it will still be positive. This will lead to the consumer price index (excluding fresh foods) turning to a positive figure in the latter half of fiscal 2005, and in fiscal 2006 will show a clearer positive increase of about 0.4% over the previous year. In fiscal 2007, it will rise by about 1%. We expect the zero interest rate policy to be lifted in fiscal 2007, and the financial markets to return to normal.

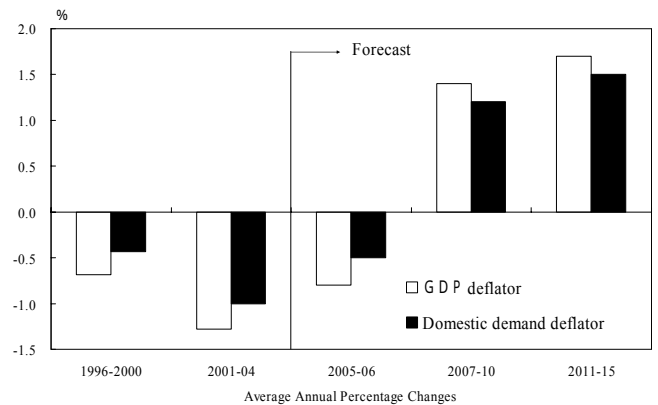
With the consumption tax hikes of 3 percentage points in fiscal 2008 and another 2 points in fiscal 2013, the domestic corporate goods price index and the consumer price index will rise notably in these years. If we exclude the effects of these two tax hikes from our forecast, then prices will fluctuate with the trends in the economy; the average of the forecast period after fiscal 2007 will be increases of 1.3% in the domestic corporate goods index, and 1.5% in the consumer price index (excluding fresh foods). In the consumer price index, the prices of services will rise at higher rates than goods due to differences in productivity increases and their relative shares of personnel expenses.

Figure 33. Price Indices

GDP Gap and Consumer Price Index



GDP Deflator and Domestic Demand Deflator (Effects of the Terms of Trade)



Note: Effects of the hike in the consumption tax have been excluded. For GDP Gap, see the notes of Figure 32.

Sources: "Annual Report on National Accounts", "Annual Report on Gross Capital Stock of Private Enterprises", Cabinet Office, "Monthly Labour Survey", Ministry of Health, Labour and Welfare

Sources: "Annual Report on National Accounts" Cabinet Office, "Annual Report on the Consumer Price Index" Ministry of Public Management, "Price Index Monthly", Bank of Japan

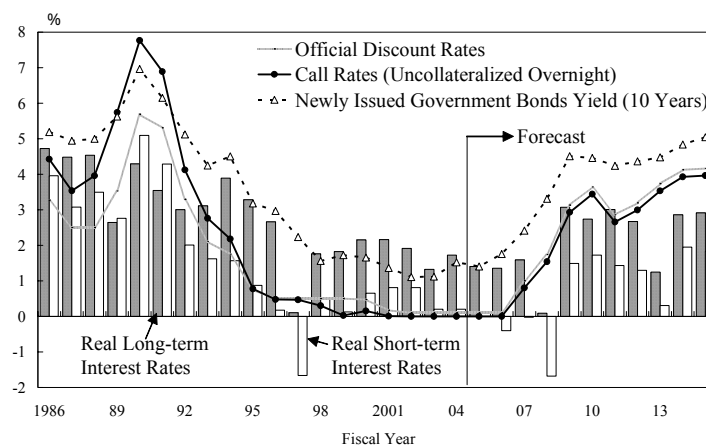
Import prices will fall 1.5% in the mid-part of the forecast period and 0.6% in the last part due to effects of lower crude oil prices and a gradually appreciating yen. This will help to stabilize domestic prices. Thus, the rise in the prices of production goods will be relatively restrained as these goods are sensitive to import price fluctuations. Export prices on the other hand are expected to rise about an average 0.9% over the forecast period. This is because overseas markets are expanding healthily, and we do not feel there will be great changes in the comparative advantage on the cost side and so cost competition with China is not expected to be intense. Therefore, we believe the terms of trade – that deteriorated greatly in 2005 – will in the forecast period improve to levels better than before they began to deteriorate.

The GDP deflator that will fall by 1.2% in fiscal 2005 due to the weakening of the terms of trade (the deflator for domestic demand will fall 0.5%), will turn to rise from fiscal 2007. In the mid-part of the forecast period, it will rise by 1.4%, while in the last part, it will rise by 1.7%. And due to the improvement in the terms of trade, it will grow at a rate faster than the deflator for domestic demand by 0.2 percentage points (Figure 33-).

12. Monetary Policy and the Exchange Rate

The quantitative easing policy will be terminated in fiscal 2006 when the consumer price index (excluding fresh foods) will turn upwards. However the zero interest rate policy will be maintained, and will be lifted no earlier than fiscal 2007. The call rate will increase to 0.8% in fiscal 2007 due to this. Yet, the real interest rate (deflated by the consumer price index, excluding fresh foods) will decline throughout the first part of the forecast period, and support the economic expansion (Figure 34). The call rate will in fiscal 2009 return to more normal market rates. After the long-term interest rates hit bottom in fiscal 2005, they will begin to rise on the expansion of the economy, and beyond fiscal 2009, it will be about 3% in real terms.

Figure 34. The Movement of the Main Interest Rates



Note: Real interest rates are deflated by the "CPI" (Consumer Price Index, excluding Fresh Foods).

"Newly Issued Government Bonds Yield (10 Years)" is a value estimated by using the growth rates of "Interest-bearing Government Bonds (10 Years)" before fiscal year 1998.

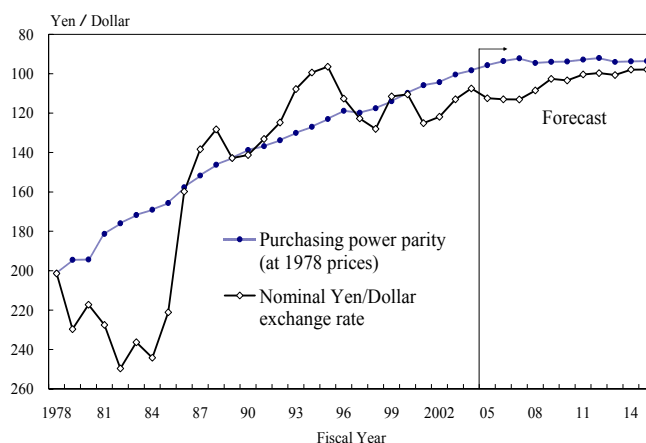
Source: "Financial and Economic Statistics Monthly", Bank of Japan

Once the quantitative easing policy is lifted, the base money will return to previous levels through market operations to absorb the excess reserve sometime in fiscal 2008 (30-35 trillion yen vis-à-vis a currently required 6 trillion yen). The money supply as well has been in excess until now in relation to nominal GDP. However it will gradually return to the trends of the mid-1990s. Once deflation is eliminated, it is expected that there will be an increased demands for funds due to the more active stance of the corporate sector. However, on the other hand, the excess savings of the corporate sector is expected to continue throughout the forecast period, and so we did not forecast a large growth in money supply.

Thus, the financial assets of financial institutions in fiscal 2015 will be about 450% of nominal GDP, and will return to mid 1980s levels. At the same time, we anticipate that the policy financial institutions will reduce their outstanding loans as share of nominal GDP to half their current levels in fiscal 2008, and the private sector financial institutions will gradually lend at rates that are commensurate with the risk of the borrower. The financial assets of the household sector (includes private non-profit institutions serving households) will reach just under 310% of nominal GDP in fiscal 2015, and due in part to the aging of the population, the share of risk assets (i.e., investment trusts + shares and other equities) will rise to twice its current level to about 24%.

As for the exchange rate, it is currently fluctuating towards a lower yen due to the larger interest rate differential between Japan and the US. However, from the mid-part of the forecast period, even though Japan will be out of deflation, US prices will be increasing at a higher rate than Japan, and so from purchasing power parity pressures, we forecast a gradual yen appreciation trend (Figure 35).

Figure 35. Purchasing Power Parity and the Nominal Exchange Rate



Sources: “Annual Report on National Accounts”, Cabinet Office, “Price Index Monthly”, “Financial and Economic Statistics Monthly”, “Balance of Payments Monthly”, Bank of Japan, “Federal Reserve Bulletin”, FRB, “Producer Price Indexes”, U.S. Department of Labour

Appendix Table 1. Japanese Economy in FY2005-2015

		Forecast								Forecast			
		2004	2005	2006	2007	2008	2009	2010	2015	Average annual rate of percent change (*)Average figure			
		2001-2004	2005-2006	2007-2010	2011-2015								
Gross Domestic Production at chained (2000) yen (billion yen)		533,932.2	546,608.1	557,368.0	576,589.2	578,568.8	589,248.4	599,273.9	657,850.4				
(year-on-year percent change)		1.9	2.4	2.0	3.4	0.3	1.8	1.7	2.4	0.9	2.2	1.8	1.9
year-on-year change	Private final consumption expenditure	1.2	1.7	1.8	3.5	0.5	2.4	2.8	1.9	0.8	1.8	2.3	1.9
	Private housing investment	2.1	-1.2	3.3	11.8	-10.0	2.6	-0.3	2.3	-2.1	1.0	0.7	1.0
	Private plant & equipment investment	5.1	7.3	4.1	5.1	2.6	1.4	1.3	4.9	1.4	5.7	2.6	2.8
	Private inventory investment (contribution)	0.2	0.1	0.1	0.1	0.2	-0.2	-0.0	0.0	0.0	0.1	0.0	-0.0
	Government final consumption expenditure	2.7	1.5	2.2	2.3	-0.6	3.3	0.5	2.4	2.3	1.9	1.4	2.0
	Public fixed capital formation	-15.1	-4.6	-9.2	-1.9	-1.2	-0.2	0.5	0.6	-8.7	-7.0	-0.7	0.4
	Exports of goods & services	11.9	6.9	7.2	4.9	4.3	3.8	4.2	5.6	6.2	7.1	4.3	5.0
	Imports of goods & services	9.4	7.3	8.6	8.2	6.1	6.2	6.0	7.0	3.3	8.0	6.6	6.1
Contribution	Domestic demand	1.4	2.2	1.9	3.7	0.5	2.1	1.9	2.5	0.5	2.1	2.0	2.0
	Private demand	1.8	2.2	1.9	3.4	0.6	1.5	1.8	2.1	0.6	2.1	1.8	1.6
	Public demand	-0.3	0.0	-0.0	0.3	-0.2	0.6	0.1	0.4	-0.1	0.0	0.2	0.4
	Net foreign demand	0.5	0.1	-0.1	-0.4	-0.2	-0.3	-0.2	-0.1	0.4	0.1	-0.2	-0.1
Gross Domestic Production at current prices (billion yen)		505,427.8	511,355.7	519,381.5	540,466.4	557,227.1	573,220.7	591,016.8	705,801.2				
(year-on-year percent change)		0.8	1.2	1.6	4.1	3.1	2.9	3.1	4.0	-0.4	1.4	3.3	3.6
GDP Deflator		-1.1	-1.2	-0.4	0.6	2.7	1.0	1.4	1.6	-1.3	-0.8	1.4	1.7
Yen/Dollar exchange rate *		107.5	112.5	113.0	113.1	108.5	102.6	103.4	97.9	116.9	112.8	106.9	99.3
Call rate (Uncollateralized, overnight) *		0.001	0.001	0.001	0.80	1.54	2.93	3.44	3.96	0.003	0.001	2.18	3.42
Newly issued government bond (10-years) *		1.52	1.40	1.76	2.41	3.31	4.51	4.46	5.04	1.28	1.58	3.67	4.59
Current profits (all industries)		23.7	9.3	2.7	6.8	3.0	0.2	-8.3	8.9	5.4	5.9	0.3	3.3
Primary balance of general government to nominal GDP *		-4.6	-5.2	-4.2	-3.5	-2.3	-1.6	-1.4	1.1	-5.7	-4.7	-2.2	-0.1
Current account to nominal GDP *		3.6	3.4	3.3	3.2	3.3	3.2	3.0	3.3	3.0	3.4	3.2	3.3
Propensity to consume *		92.8	92.5	93.9	94.7	94.4	93.1	92.6	95.0	92.8	93.2	93.7	95.4
Unemployment rate *		4.6	4.3	4.1	4.2	4.2	4.0	3.9	3.8	5.1	4.2	4.1	3.9
Consumer price index (excluding fresh foods)		-0.2	0.0	0.4	0.8	3.2	1.4	1.7	2.1	-0.5	0.2	1.8	2.0
Domestic corporate goods price index		1.5	1.4	0.6	1.3	4.8	0.5	1.2	1.5	-0.8	1.0	1.9	1.6
U.S. real GDP (calendar year)		4.2	3.5	3.4	3.0	3.2	3.3	3.5	3.1	2.3	3.5	3.2	2.7

Note: Year-on-year percentage changes (%)

Sources: "Annual Report on National Accounts", "Quarterly Estimates of GDP", Cabinet Office "Economic Statistics Monthly", Bank of Japan, etc.

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Appendix Table 2. Real Output Amount by Industry

Industry	Real Output Amount (1995 prices)					Share of Total					Average Year-on-year Changes				
	1995	2002	2006	2010	2015	1995	2002	2006	2010	2015	1996-2000	2001-2004	2005-2006	2007-2010	2011-2015
Agriculture, Forestry and Fishery	15,816	13,612	12,956	12,362	11,612	1.7	1.4	1.2	1.1	0.9	-2.2	-1.8	-0.9	-1.2	-1.2
Mining	1,659	1,619	1,540	1,505	1,476	0.2	0.2	0.1	0.1	0.1	-0.4	-1.1	-0.7	-0.6	-0.4
Food	37,665	35,007	34,347	34,912	35,208	4.1	3.6	3.3	3.1	2.8	-1.1	-0.9	0.0	0.4	0.2
Textiles	11,149	6,288	5,212	4,688	4,194	1.2	0.6	0.5	0.4	0.3	-6.2	-8.1	-4.9	-2.6	-2.2
Pulp and Paper	9,389	8,132	8,164	8,495	8,682	1.0	0.8	0.8	0.7	0.7	-1.1	-2.4	0.5	1.0	0.4
Chemicals	25,701	25,525	27,133	28,296	29,613	2.8	2.6	2.6	2.5	2.3	0.2	0.5	1.1	1.1	0.9
Oil and Coal	10,489	11,079	10,973	11,393	11,839	1.1	1.1	1.0	1.0	0.9	1.2	-0.5	0.3	0.9	0.8
Ceramics, Clay and Stone	9,695	7,921	8,030	7,928	8,090	1.1	0.8	0.8	0.7	0.6	-1.5	-3.0	0.6	-0.3	0.4
Iron and Steel	20,059	17,744	18,715	18,794	19,850	2.2	1.8	1.8	1.7	1.6	-2.2	0.9	0.2	0.1	1.1
Non-ferrous metals	6,340	6,295	6,622	7,038	7,301	0.7	0.6	0.6	0.6	0.6	1.6	-2.4	3.2	1.5	0.7
Metal Products	15,687	12,596	12,319	12,414	12,712	1.7	1.3	1.2	1.1	1.0	-2.3	-3.1	-0.0	0.2	0.5
General Machinery	28,380	24,706	24,972	26,450	26,890	3.1	2.5	2.4	2.3	2.1	0.3	-4.2	1.6	1.4	0.3
Electric Machinery for Industrial Use	5,673	4,055	4,492	4,761	4,904	0.6	0.4	0.4	0.4	0.4	-2.8	-1.1	-2.3	1.5	0.6
Electric Appliances for Consumer Use	8,820	10,561	12,386	13,980	17,008	1.0	1.1	1.2	1.2	1.3	2.2	4.3	3.2	3.1	4.0
Electronic and Communication Equipment	36,157	49,102	69,739	80,720	91,480	3.9	5.1	6.6	7.1	7.2	9.5	1.9	6.6	3.7	2.5
Automotive	36,287	41,379	48,296	51,403	56,359	3.9	4.3	4.6	4.5	4.4	0.8	4.1	4.2	1.6	1.9
Other Transport Machinery	5,433	5,888	6,219	6,594	6,998	0.6	0.6	0.6	0.6	0.6	1.1	1.4	1.1	1.5	1.2
Precision Instruments	3,792	3,673	4,267	4,741	5,400	0.4	0.4	0.4	0.4	0.4	2.4	-0.4	0.7	2.7	2.6
Other Manufacturing	40,448	35,996	38,731	39,606	40,585	4.4	3.7	3.7	3.5	3.2	-1.0	-0.9	2.1	0.6	0.5
Construction	88,870	78,646	74,902	75,257	76,382	9.6	8.1	7.1	6.6	6.0	-1.2	-2.7	-0.2	0.1	0.3
Electric Power, Gas and Heat Supply	18,810	20,711	22,612	25,398	29,347	2.0	2.1	2.2	2.2	2.3	1.7	1.4	2.2	2.9	2.9
Water Supply, Waste Disposal	4,772	4,973	5,130	5,316	5,469	0.5	0.5	0.5	0.5	0.4	0.6	0.7	0.6	0.9	0.6
Wholesale, Retail Trade	102,310	99,624	111,293	120,096	133,803	11.1	10.3	10.6	10.6	10.5	-0.7	1.8	2.5	1.9	2.2
Finance and Insurance	39,903	46,935	48,828	51,648	52,155	4.3	4.8	4.6	4.5	4.1	1.5	2.2	2.0	1.4	0.2
Real Estate	65,365	73,833	82,742	90,768	108,041	7.1	7.6	7.9	8.0	8.5	1.8	2.3	2.8	2.3	3.5
Transportation	40,650	36,830	37,541	39,883	43,134	4.4	3.8	3.6	3.5	3.4	-1.8	-0.1	0.9	1.5	1.6
Communication	12,083	25,268	27,856	29,770	36,790	1.3	2.6	2.7	2.6	2.9	14.2	3.5	1.6	1.7	4.3
Public Services	100,527	120,697	129,557	143,523	160,672	10.9	12.5	12.3	12.6	12.6	2.7	1.9	2.2	2.6	2.3
Business Services	57,852	74,767	84,830	104,261	141,487	6.3	7.7	8.1	9.2	11.1	4.6	2.6	2.8	5.3	6.3
Personal Services	56,853	59,809	64,160	70,234	77,294	6.2	6.2	6.1	6.2	6.1	1.0	0.8	1.9	2.3	1.9
Others (non-classified)	5,510	5,873	5,646	6,057	6,574	0.6	0.6	0.5	0.5	0.5	1.6	-2.1	1.6	1.8	1.6
All industry total	922,145	969,144	1,050,209	1,138,290	1,271,347	100.0	100.0	100.0	100.0	100.0	1.1	0.8	2.1	2.0	2.2
Primary Industries	15,816	13,612	12,956	12,362	11,612	1.7	1.4	1.2	1.1	0.9	-2.2	-1.8	-0.9	-1.2	-1.2
Secondary Industries	401,693	386,213	417,057	438,974	464,969	43.6	39.9	39.7	38.6	36.6	0.4	-0.5	2.0	1.3	1.2
Manufacturing Industries	311,164	305,948	340,615	362,212	387,111	33.7	31.6	32.4	31.8	30.4	0.8	0.0	2.5	1.5	1.3
Basic Materials Suppliers	97,359	89,292	91,955	94,359	98,086	10.6	9.2	8.8	8.3	7.7	-0.7	-0.8	0.7	0.6	0.8
Processing and Assembly Industries	124,543	139,364	170,371	188,648	209,038	13.5	14.4	16.2	16.6	16.4	3.6	1.4	4.3	2.6	2.1
Products and Services for Daily Life	89,262	77,291	78,290	79,205	79,987	9.7	8.0	7.5	7.0	6.3	-1.6	-1.6	0.7	0.3	0.2
Tertiary Industries	499,126	563,447	614,549	680,897	788,192	54.1	58.1	58.5	59.8	62.0	1.8	1.8	2.3	2.6	3.0

Notes: Primary Industries = Agriculture, Forestry and Fishery
 Secondary Industries = From Mining to Construction Industries
 Tertiary Industries = Electric Power, Gas and Heat Supply to Personal Services
 Manufacturing Industries = From Food to Other Manufacturing Industries
 Of the Manufacturing Industries:
 Basic Materials Suppliers = From Pulp and Paper to Metal Products
 Processing and Assembly = From General Machinery to Precision Machinery
 Products and Services for Daily Life = Food, Textiles and other manufacturing industries

Source: " SNA Input-Output Table (Base Year 1995) ", Cabinet Office

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Appendix Table 3. Employment by Industry

Industry	Forecast					Forecast					(thousand persons , %)			
	Calendar Year	Number Employed				Share of Total					Average Year-on-year Changes			
		2000	2004	2006	2010	2015	2000	2004	2006	2010	2015	2001-2004	2005-2006	2007-2010
Agriculture, Forestry and Fishery	5,570	5,065	4,873	4,528	4,297	8.2	7.8	7.5	6.9	6.4	-2.3	-1.9	-1.8	-1.0
Mining	47	39	36	31	26	0.1	0.1	0.1	0.0	0.0	-4.8	-4.2	-3.8	-3.2
Food	1,351	1,302	1,263	1,182	1,069	2.0	2.0	1.9	1.8	1.6	-0.9	-1.5	-1.7	-2.0
Textiles	680	477	421	369	321	1.0	0.7	0.6	0.6	0.5	-8.5	-6.1	-3.2	-2.7
Pulp and Paper	294	267	263	248	233	0.4	0.4	0.4	0.4	0.3	-2.4	-0.7	-1.5	-1.2
Chemicals	422	353	343	314	296	0.6	0.5	0.5	0.5	0.4	-4.4	-1.3	-2.2	-1.2
Oil and Coal	38	32	30	27	24	0.1	0.0	0.0	0.0	0.0	-4.2	-3.2	-2.4	-2.5
Ceramics, Clay and Stone	397	332	328	311	306	0.6	0.5	0.5	0.5	0.5	-4.3	-0.6	-1.3	-0.4
Iron and Steel	330	286	278	263	251	0.5	0.4	0.4	0.4	0.4	-3.5	-1.5	-1.4	-0.9
Non-ferrous metals	168	146	146	141	135	0.2	0.2	0.2	0.2	0.2	-3.5	-0.2	-0.7	-0.9
Metal Products	867	786	761	712	651	1.3	1.2	1.2	1.1	1.0	-2.4	-1.7	-1.6	-1.8
General Machinery	1,164	1,047	1,064	1,089	1,083	1.7	1.6	1.6	1.7	1.6	-2.6	0.8	0.6	-0.1
Electric Machinery for Industrial Use	269	249	236	223	209	0.4	0.4	0.4	0.3	0.3	-2.0	-2.5	-1.4	-1.3
Electric Appliances for Consumer Use	225	208	206	206	215	0.3	0.3	0.3	0.3	0.3	-2.0	-0.4	-0.0	0.9
Electronic and Communication Equipment	1,308	1,102	1,077	992	940	1.9	1.7	1.7	1.5	1.4	-4.2	-1.2	-2.0	-1.1
Automotive	776	790	784	767	736	1.1	1.2	1.2	1.2	1.1	0.4	-0.4	-0.5	-0.8
Other Transport Machinery	202	204	205	202	202	0.3	0.3	0.3	0.3	0.3	0.2	0.3	-0.3	0.0
Precision Instruments	227	221	220	223	219	0.3	0.3	0.3	0.3	0.3	-0.7	-0.0	0.3	-0.4
Other Manufacturing	2,149	2,097	2,071	2,164	2,044	3.1	3.2	3.2	3.3	3.0	-0.6	-0.6	1.1	-1.1
Construction	6,572	5,885	5,666	5,371	5,064	9.6	9.1	8.7	8.2	7.5	-2.7	-1.9	-1.3	-1.2
Electric Power, Gas and Heat Supply	229	221	226	235	245	0.3	0.3	0.3	0.4	0.4	-0.9	1.1	1.0	0.8
Water Supply, Waste Disposal	274	261	262	278	286	0.4	0.4	0.4	0.4	0.4	-1.2	0.3	1.5	0.5
Wholesale, Retail Trade	14,034	13,362	13,209	12,634	12,370	20.6	20.5	20.3	19.3	18.4	-1.2	-0.6	-1.1	-0.4
Finance and Insurance	1,824	1,678	1,648	1,539	1,496	2.7	2.6	2.5	2.3	2.2	-2.1	-0.9	-1.7	-0.6
Real Estate	699	632	680	695	769	1.0	1.0	1.0	1.1	1.1	-2.5	3.7	0.5	2.0
Transportation	3,171	3,083	3,141	3,298	3,496	4.6	4.7	4.8	5.0	5.2	-0.7	0.9	1.2	1.2
Communication	705	712	710	706	730	1.0	1.1	1.1	1.1	1.1	0.3	-0.1	-0.1	0.7
Public Services	10,198	10,214	10,699	11,496	12,376	14.9	15.7	16.4	17.5	18.4	0.0	2.4	1.8	1.5
Business Services	6,267	6,249	6,411	7,207	8,572	9.2	9.6	9.8	11.0	12.8	-0.1	1.3	3.0	3.5
Personal Services	7,724	7,620	7,731	8,065	8,356	11.3	11.7	11.9	12.3	12.4	-0.3	0.7	1.1	0.7
Others (non-classified)	108	103	102	103	105	0.2	0.2	0.2	0.2	0.2	-1.3	-0.1	0.2	0.3
All Industry Total	68,289	65,021	65,091	65,618	67,122	100.0	100.0	100.0	100.0	100.0	-1.2	0.1	0.2	0.5
Primary Industries	5,570	5,065	4,873	4,528	4,297	8.2	7.8	7.5	6.9	6.4	-2.3	-1.9	-1.8	-1.0
Secondary Industries	17,487	15,822	15,397	14,835	14,024	25.6	24.3	23.7	22.6	20.9	-2.5	-1.4	-0.9	-1.1
Manufacturing Industries	10,867	9,896	9,696	9,433	8,934	15.9	15.2	14.9	14.4	13.3	-2.3	-1.0	-0.7	-1.1
Basic Materials Suppliers	2,516	2,202	2,148	2,016	1,896	3.7	3.4	3.3	3.1	2.8	-3.3	-1.2	-1.6	-1.2
Processing and Assembly Industries	4,171	3,820	3,792	3,702	3,604	6.1	5.9	5.8	5.6	5.4	-2.2	-0.4	-0.6	-0.5
Products and Services for Daily Life	4,181	3,876	3,755	3,715	3,434	6.1	6.0	5.8	5.7	5.1	-1.9	-1.6	-0.3	-1.6
Tertiary Industries	45,125	44,031	44,718	46,153	48,696	66.1	67.7	68.7	70.3	72.5	-0.6	0.8	0.8	1.1

Notes: Primary Industries = Agriculture, Forestry and Fishery
 Secondary Industries = From Mining to Construction Industries
 Tertiary Industries = From Electric Power, Gas and Heat Supply to Personal Services
 Manufacturing Industries = From Food to Other Manufacturing Industries
 Of the Manufacturing Industries:
 Basic Materials Suppliers = From Pulp and Paper to Metal Products
 Processing and Assembly = From General Machinery to Precision Instruments
 Products and Services for Daily Life = Food, Textiles and other manufacturing industries

Source: " 1990-1995-2000 Linked Input Output Tables ", Ministry of Internal Affairs and Communications