Economic Outlook for FY2006 and FY2007

May 2006

The Mizuho Research Institute Ltd. (MHRI) has revised its economic outlook for FY2006 and FY2007 subsequent to the release of Japan's GDP statistics for the Jan-Mar quarter of 2006. The key points of the outlook are as follows.

<The US >

	Slower pace of economic growth as the housing market cools down in 2007
2006	3.2% (previous outlook) → 3.4% (current outlook)
2007	3.0% (previous outlook) → 3.0% (current outlook)

<Japan>

FY2006	Continuation of self-sustained economic recovery
	Nominal GDP: 2.5% (previous outlook) → 2.4% (current outlook)
	Real GDP: 2.7% (previous outlook) → 2.3% (current outlook)
FY2007	Capital investment will serve as drag, due to slower corporate profit growth
	Nominal GDP: 1.8% (previous outlook) → 2.0% (current outlook)
	Real GDP: 1.7% (previous outlook) → 1.5% (current outlook)

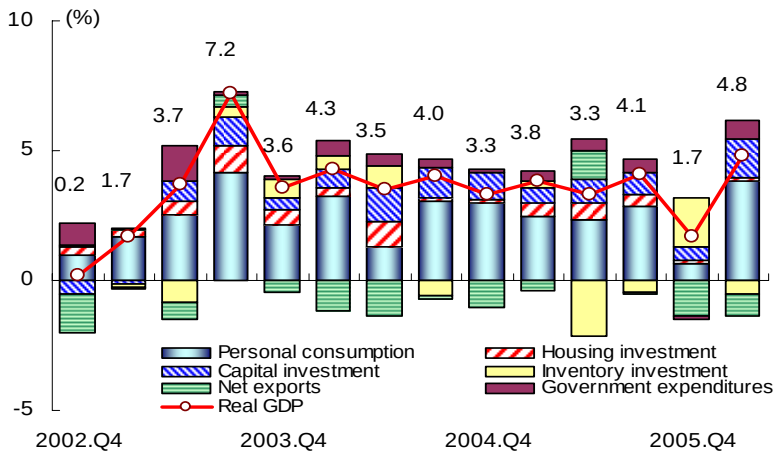
I. The current state of the US economy

The US economy grew slightly above expectations in the Jan-Mar quarter of 2006

US gross domestic product (GDP) in real terms grew at a pace of 4.8% q-o-q p.a. in the Jan-Mar quarter of 2006, picking up from a soft patch in the previous quarter (1.7% q-o-q p.a.) (**Chart 1**). The components of demand which had served as a drag upon growth in the previous quarter all grew strongly, thus pushing up the rate of economic growth. Personal consumption grew 5.5% q-o-q p.a. Fluctuations in consumer spending stemming from aggressive price discounting by US automakers last year have finally subsided. Capital investment grew at a faster-than-expected double-digit pace (14.3% q-o-q p.a.), due to a combination of (i) the acceleration of investment in information technology (IT) and (ii) a rebound of investment in transportation equipment which dropped sharply in the previous quarter. Even though the growth of government expenditures dipped into negative territory in the previous quarter, spending in this category regained momentum given the recovery of defense spending, the underlying factor which had served as a drag.

The recovery of the overseas economies also served as tailwinds. Despite the surge of imports (13.0% q-o-q p.a.) fueled by the recovery of domestic demand mentioned above, exports also grew at a double-digit pace (12.1% q-o-q p.a.), narrowing the negative contribution of external demand by approximately 0.5% pt from the previous quarter.

[Chart 1: US real GDP growth]



Note: Q-o-q p.a.
Source: US Department of Commerce.

US growth in 2006 is upwardly revised from 3.2% to 3.4%. Forecast on 2007 is left unchanged at 3.0%.

Given the faster-than-expected pace of growth in the Jan-Mar quarter of 2006, we have revised upward our forecast on US real GDP growth in 2006 from 3.2% in our previous outlook to 3.4%. Even so, we still retain our view regarding growth from the Apr-Jun quarter that "the economy will gradually slow down to its potential rate of growth", and have left our forecast on 2007 growth unchanged at 3.0%.

Albeit slower growth in the Apr-Jun quarter, the economy will remain firm

The US economy remains on solid footing as we write this report. Even though growth in the Apr-Jun quarter will slow down from the previous quarter, the odds are high that the rate of real GDP growth will continue to grow strongly at a level around 3.5%. The slowdown will stem primarily from consumer spending which accounts for 70% of US GDP.

According to a private-sector research firm in the US, domestic automobile sales grew 16.74 million units (in annualized terms) in April, increasing slightly from the previous month (0.9% m-o-m), but still lingering around the Jan-Mar average. In view of the fact that (i) the durable goods consumption cycle has already entered into an adjustment phase, (ii) the possibility of another round of aggressive price discounts by automakers is rather slim, and (iii) the rise of interest rates, it is unlikely that auto sales in the US will accelerate. Consumption of durable goods other than automobiles is also expected to slow, reflecting the cooling US housing market.

Even though retail sales (ex autos) grew a strong 0.7% m-o-m in April, non-durable goods consumption in real terms turned out flat from the previous month, and appears to have fallen below the Jan-Mar quarter average. Furthermore, the high retail price (nationwide) of gasoline (around US$2.90/gallon) is serving as a damper upon consumer sentiment. The University of Michigan index (Michigan preliminary) on consumer sentiment in May dropped a sharp 8.4 pt from the previous month.

Jobs and income conditions will remain favorable, due to brisk production activity

Despite the low level of consumer spending at the “launch pad” in the Apr-Jun quarter and the expected slowdown of real GDP growth, corporate production activity and household employment and income conditions are favorable, leading to our view that the economy will avert a loss of momentum.

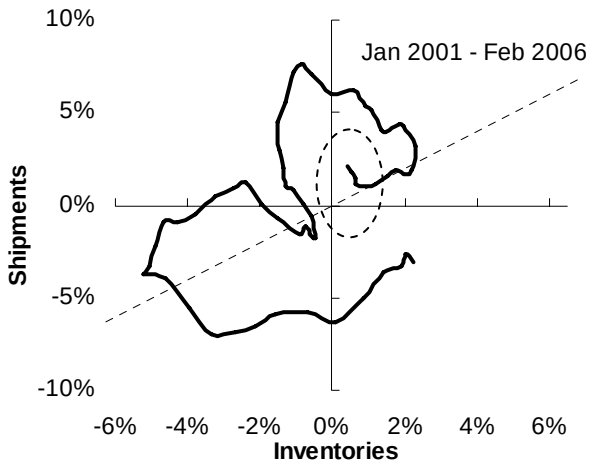
The inventory cycle in the manufacturing sector (**Chart 2**) is progressing in a counter-clockwise direction and crossing the 45-degree line in the upper right-hand quadrant (indicating that inventories are diminishing amid the rise of shipments), serving as tailwinds upon production activity. In addition to the dramatic rise of the industrial production index in April (0.8% m-o-m), note also the high level of the ISM manufacturing index (a gauge of business conditions among manufacturers). The wage index (hourly wages multiplied by total work hours index), compiled by the MHRI as an index to represent household employment and income trends, rose a sharp 1.0% m-o-m (**Chart 3**). Even though trends in employment and income may be a temporary uptick, the wage index has been moving within a range of 0.4% m-o-m ~0.6% m-o-m, household income conditions are firm, and should serve as a buttress to consumer spending.

Given a cooling housing market, the odds are high that the US economy will continue to slow

Meanwhile, there are signs that the softening of the US housing market since last summer is spreading from the sales-side to housing starts. The US economy should continue to decelerate, given the fading asset effect stemming from the rise of residential prices and the impact of the past interest rate hikes.

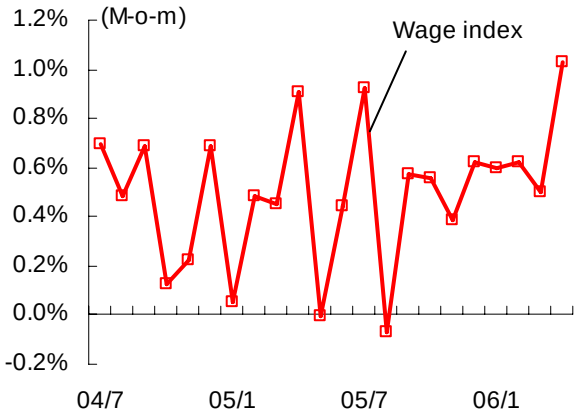
In the housing market, the number of units sold (both new and existing homes) has been following a downtrend since last summer (**Chart 4**). Considering that approximately 35% to 40% of new home sales are "sales prior to housing starts", we had expected the softening on the sales side to eventually spread to housing starts. Actual housing starts are starting to move consistently with our views, with the number of housing starts in April falling to an all-year low. Although housing starts are swayed by weather factors and require close attention, the decline of construction permits are less susceptible to weather factors. The fact that construction permits are starting to decline may be interpreted as signs that the slowdown on the sales side is starting to spread to housing starts.

[Chart 2: Inventory cycle (manufacturers)]



Note: In real terms, 3MMA, y-o-y change.
Source: US Department of Commerce.

[Chart 3: The wage index]



Note: Wage index = hourly w ages x total w ork hours index.
Source: US Department of Labor,
US Department of Commerce.

Judging from the high interest sensitivity of housing investment, housing investment will most likely fall into an adjustment phase reflecting the rise of real interest rates. Given the rise of real-term mortgage rates by nearly 1% since the end of last year, coupled with the adjustment of bloated inventories, downward pressures upon housing investment should intensify (**Chart 5**).

The rise of residential prices will gradually slow down amid the foregoing trends, serving as a drag upon consumption through a contraction/fading of the asset effect.

Scattered evidence that land prices are falling – need to watch its ripple effect upon employment

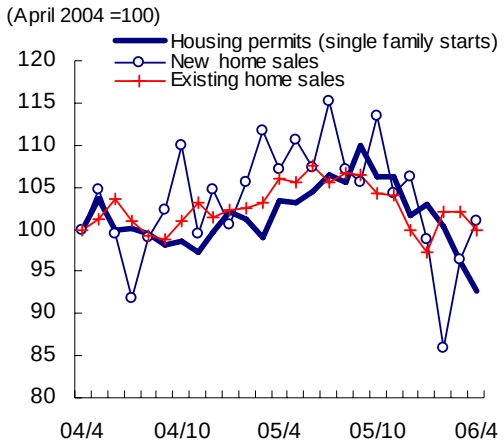
A number of major home builders are starting to set aside reserves for "land option" expenses, indicating the possibility that land prices will soften far more than expected. "Land options" refer to "rights to purchase land at a given price within a given period of time" and are options used in the event the price of land for development use such as residential development is predicted to rise. Developers acquire rights by paying a certain option fee. The option fee

would be applied to land purchase costs in the event the developer actually purchases the land. However, since the merits of exercising the right would diminish when the price of land falls, reserves are set aside to write off the option fees as losses. Thus, reserves for land options require close attention, being a precursor to the fall of the real estate market.

Furthermore, given the high probability that a correction in the housing market would spread to the deterioration of employment in related business sectors such as home builders, interior furnishing and real estate, another question is whether the contraction of employment in housing-related sectors can be absorbed by the expansion of jobs elsewhere.

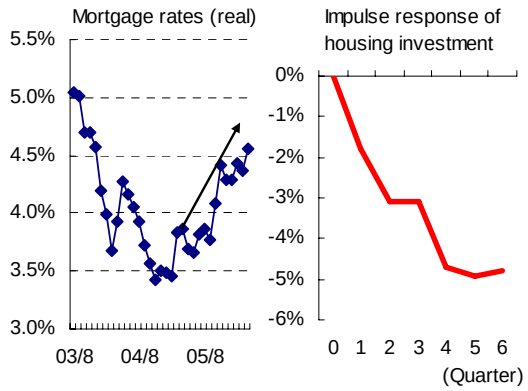
The US economy may be approaching a phase similar to a "global recession" toward the end of 2006 to the first half of 2007 due to a combination of (i) the negative impact of high energy costs upon consumer sentiment, (ii) the effect of cumulative interest rate hikes and (iii) the softening of the real estate market.

[Chart 4: US home sales and housing starts]



Source: US Department of Commerce, Federal Real Property Association.

[Chart 5: The impact of mortgage rates upon housing investment]



Note: Mortgage rates (30-yr, fixed) converted into real terms by core PCE deflator (y-o-y % ch). The impulse response refers to the impact upon housing investment by a 1% rise of the rate of change of real mortgage rates.
Sources: US Department of Commerce, FRB.

Inflationary pressures rise – cross road in monetary policy

The unemployment rate is near NAIRU. The core inflation rate will likely flatten out

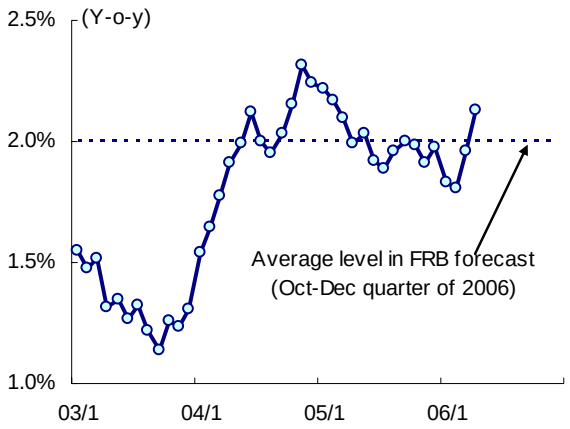
Inflationary pressures are rising amid the maintenance of solid economic conditions. The core personal consumption expenditures (PCE) deflator rose 2.0% y-o-y in March, on par with the median of the forecast range of the Federal Reserve Board (FRB) (forecast range of each of the members for the Oct-Dec quarter of 2006: 1.75%-2.50% y-o-y) (**Chart 6**). Given the inflation rate edging closer to the non-accelerating inflation rate of unemployment (NAIRU), which is generally understood to be approximately 5.0%, inflationary pressures will tend to rise from the labor market. In recent years, however, the unemployment rate is subject to downward pressures due to non-cyclical factors such as the higher academic backgrounds and age levels of the workforce.

Assuming a gradual slowdown of the US economy, the relationship between the rate of real GDP growth and the rate of unemployment (so-called Okun's Law) indicates that the unemployment rate will remain steady and the core PCE deflator

will also remain around 2.0% judged by the Phillip's curve (**Chart 7**).

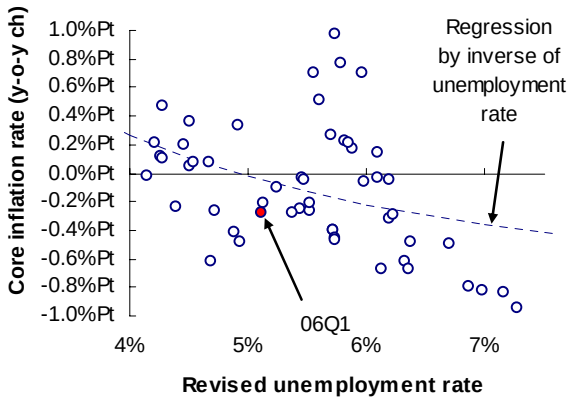
Amid these crosscurrents, the FRB will face a difficult task at the helm of monetary policy. To a query asking what would be done in the event the inflation rate runs above "the range that in the long run would be desirable" at the confirmation hearing of the FRB Chairman, Dr. Ben Bernanke responded that he "would certainly not try to return inflation to a target within a short period of time", indicating his stress upon medium- and long-term price stability. The new FRB chairman will face testing times because the state of the US economy is similar to the hypothetical posed at the Senate hearing.

[Chart 6: The core PCE deflator]



Source: US Department of Commerce, FRB.

[Chart 7: The price-based Phillips Curve]



Note: Unemployment rate: labor force population aged 16-24 and above 25 is fixed at 1992. Prices are based upon core PCE deflator. 93Q1-06Q1.

Sources: US Department of Labor, US Department of Commerce.

[Chart 8: Outlook on the US economy]

(%)

	2005 (Actual)	2006 (Forecast)	2007 (Forecast)	2006 1H	2006 2H	2007 1H	2007 2H
GDP	3.5	3.4	3.0	3.6	3.1	3.0	3.0
Personal consumption	3.5	3.3	2.8	3.7	2.9	2.7	3.0
Housing investment	7.1	1.8	-3.0	1.5	-2.5	-4.5	-0.5
Capital investment	8.6	8.9	4.2	10.5	7.2	2.7	4.2
Inventory investment ($100 million)	203	-42	48	151	-235	-34	130
Government expenditures	1.8	2.5	3.0	2.6	3.1	3.0	3.0
Net exports ($100 million)	-6,331	-6,647	-6,493	-6,781	-6,513	-6,378	-6,607
Exports	6.9	7.1	5.4	8.5	6.3	5.1	5.0
Imports	6.3	6.4	2.7	10.2	1.3	2.0	5.7
Domestic final demand	3.9	3.7	2.7	4.1	3.1	2.3	3.0
Core personal expenditures deflator <y-o-y ch>	2.0	2.0	1.9	1.9	2.0	1.9	1.9
Current account balance ($100 million)	-8,049	-8,780	-8,490	-4,430	-4,350	-4,100	-4,390
<as a percentage of nominal GDP>	-6.4	-6.6	-6.0	-6.8	-6.4	-5.9	-6.1

Notes: 1. Calendar year figures refer to the rate of change from the previous year. Half-year term figures refer to the rate of change from the previous half-year term (annualized).
2. The shaded columns are forecasts.
3. As for the current account balance, figures for half-year terms are adjusted for seasonal factors and the calendar year figures are the totals. The percentages of nominal GDP are annualized.

Sources: US Department of Commerce, US Department of Labor.

II. The Japanese economy

(1) The current state of the economy

The Japanese economy grew 1.9% p.a. in the Jan-Mar quarter of 2006, driven mainly by domestic private demand

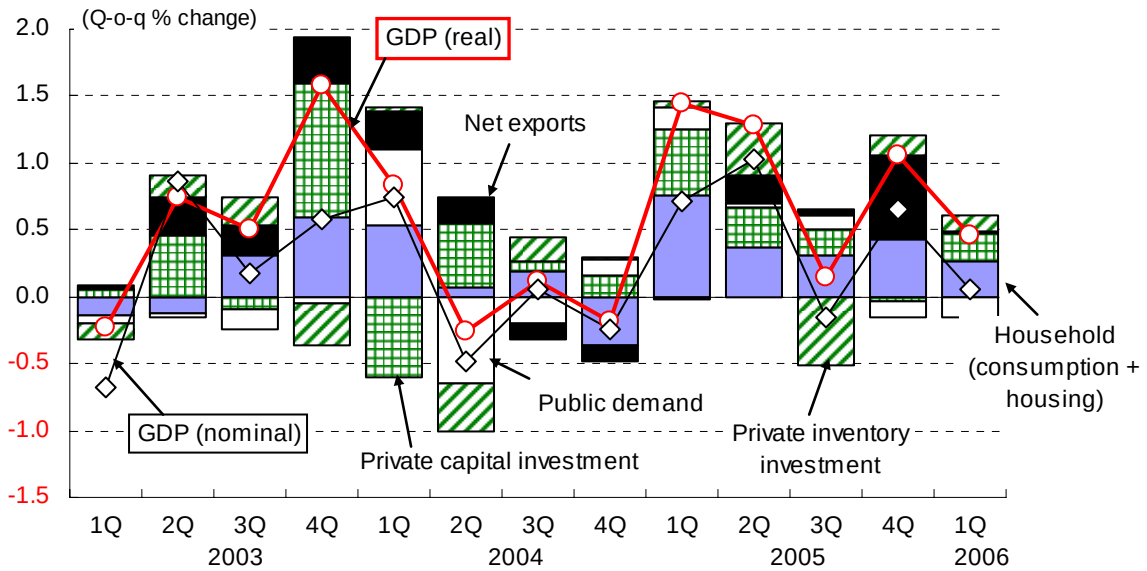
Japan's real GDP grew 0.5% q-o-q (1.9% q-o-q per anum) in the Jan-Mar quarter of 2006 (**Chart 9**). Even though the pace of economic growth slowed from the previous quarter from October to December of 2005 (1.1% q-o-q, or 4.3% q-o-q p.a.), the economy posted its fifth straight quarter of growth in positive territory driven mainly by domestic private sector demand.

Looking closer at each of the components of demand, domestic private sector demand served as the driver, pushing up growth through the ongoing rise of personal consumption and the upturn of capital investment. Despite the ongoing strength of exports, the upturn of imports completely offset the positive contribution by exports. Private sector inventory investment increased slightly, serving to push up Japan's growth rate. Meanwhile, public investment remained a drag upon growth due to the persistent decline of public investment.

End of deflation

The GDP deflator, a broad measure of price changes, improved to -1.3% y-o-y from -1.6% y-o-y in the previous quarter. Even though the GDP deflator is continuing to fall due to the rise of the import deflator accompanying the surge of crude oil prices, the domestic demand deflator stood at -0.0% y-o-y and has more or less stopped falling. The upturn of the output gap (calculated by MHRI) into positive territory indicates that Japan has already emerged out of deflation.

[Chart 9: Japan's quarterly GDP growth]



Source: Cabinet Office, *Preliminary Quarterly Estimates of GDP.*

The current expansion may surpass the *Izanagi* Boom

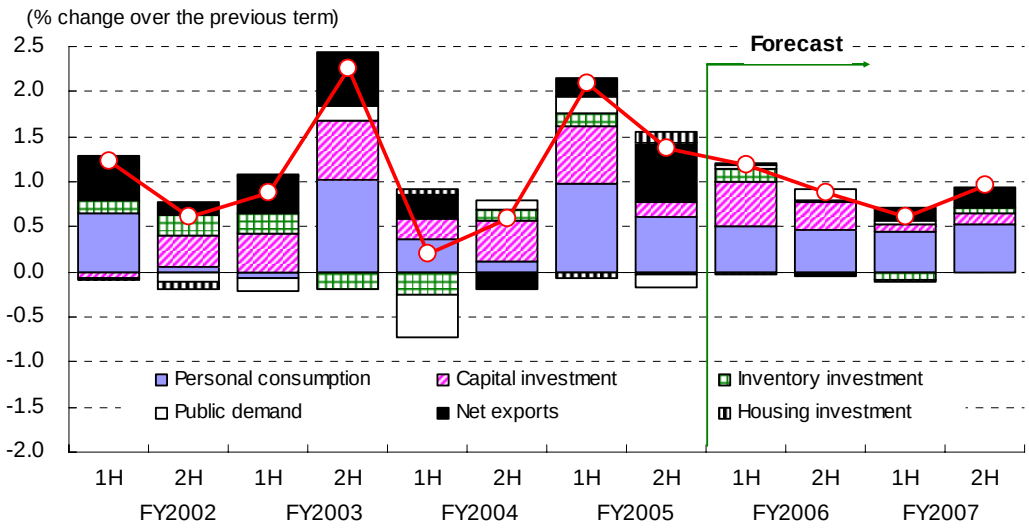
The main engines fueling the current expansion are exports, personal consumption and capital investment. The self-sustained expansion of the economy driven by exports, personal consumption and capital investment appears to be continuing in the Apr-Jun quarter, against a backdrop of the solid overseas economies, the improvement of labor market conditions and the expansion of corporate earnings. The economic expansion starting in January 2002 reached its 50th month in March. If the economy continues to expand, the length of the current expansion cycle would catch up with the *Heisei* Boom (51 months) in April and the *Izanagi* Boom (57 months) in October. The mechanism of corporate earnings growth spreading to workers' compensation and leading to the recovery of personal consumption has just started to function and should continue for some time. The odds are rising that the current economic expansion will surpass both the *Heisei* Boom and the *Izanagi* Boom.

(2) Forecast of the Japanese economy in FY2006 and FY2007

1H FY2006: Japan will continue to follow a self-sustained recovery driven mainly by private demand

In the first half of FY2006, the Japanese economy will likely grow 1.2% over the previous term (2.4% p.a.), continuing to expand above an annualized rate of 2% (**Chart 10**). In addition to favorable labor market conditions, there are more definite signs that consumers are more upbeat, providing us with reasons to believe that personal consumption will serve as the engine of growth. Furthermore, judging from the rise of the expected rate of economic growth among businesses, companies are likely to continue to invest in plant and equipment on the basis of their abundant cash flow. While exports will continue to expand reflecting the strength of the overseas economies, the contribution by external demand will turn out more or less neutral because of the rise of Japan's imports along with the increase of domestic demand.

[Chart 10: Forecast on Japan's real GDP growth]



Source: Cabinet Office, *Preliminary Quarterly Estimates of GDP.*

2H FY2006: external demand and capital investment will drag down growth

In the second half of FY2006, export growth is predicted to slow along with the deceleration of the US economy and the appreciation of the yen. The stagnation of production and corporate earnings accompanying the slowdown of external demand should lead to a slower pace of capital investment growth, causing the economy to pause on the landing. Meanwhile, personal consumption should remain strong, reflecting the ongoing improvement of income. Thus, even though external demand and capital investment will serve as a drag upon growth, we expect that the strength of personal consumption will keep the rate of real GDP growth in the second half of FY2006 at 0.9% over the previous term (1.8% p.a.).

FY2006: the Japanese economy will continue to grow a solid 2.3%

Judging from the foregoing, we expect full-year GDP growth in FY2006 to reach 2.3% in real terms (previous forecast: 2.7%) and 2.4% in nominal terms (previous forecast: 2.5%), growing strongly above 2% for the second year in a row subsequent to FY2005. The GDP deflator should climb to 0.1%, ending the reversal of real growth over growth in nominal terms for the first time in 9 years since FY1997. The downward revision of the growth rate from our previous forecast stems primarily from a smaller carry-over of growth from the previous fiscal year due to a change in quarterly patterns in FY2005, and therefore does not represent a fundamental change in our view on the actual state of the economy.

FY2007: slower growth due mainly to weak capital investment

In the first half of FY2007, the pace of economic growth will likely remain sluggish due to the lingering effect of the overseas economic slowdown from the second half of FY2006. Moreover, the increase of fixed costs such as labor costs and financial costs will start to weigh upon corporate earnings and lead to a sharp slowdown of profit growth in FY2007. Even though personal consumption should continue to grow amid the ongoing rise of income, the ebb of corporate earnings growth should lead to a sharp drop of capital investment.

Although the pace of economic growth will pick up slightly in the second half of FY2007 reflecting the upturn of the overseas economies, we expect full-year GDP growth in FY2007 to stand at 1.5% in real terms (previous forecast: 1.7%) and 2.0% in nominal terms (previous forecast: 1.8%) (**Chart 11**).

〔 Chart 11: Outlook on the Japanese economy 〕

(%)

	FY2005 (Actual)	FY2006 (Forecast)	FY2007 (Forecast)	FY2006 1H (Forecast)	FY2006 2H (Forecast)	FY2007 1H (Forecast)	FY2007 2H (Forecast)	FY2006 (Contribution) (Forecast)	FY2007 (Contribution) (Forecast)
GDP (real)	3.0	2.3	1.5	1.2	0.9	0.6	1.0	-	-
Domestic demand	2.6	2.1	1.3	1.2	0.9	0.5	0.7	2.0	1.3
Private sector demand	3.3	2.6	1.5	1.5	1.1	0.5	0.9	2.0	1.2
Personal consumption	2.3	1.8	1.7	0.9	0.8	0.8	0.9	1.0	1.0
Housing investment	-0.1	0.7	-0.6	-1.0	-0.1	-0.4	-0.3	0.0	-0.0
Capital investment	6.6	5.0	1.9	3.4	2.1	0.5	0.8	0.8	0.3
Public sector demand	0.6	0.2	0.5	0.2	0.6	0.2	0.1	0.1	0.1
Government consumption	1.5	2.0	1.9	1.1	1.3	0.9	0.7	0.4	0.3
Public investment	-2.5	-6.9	-4.4	-3.6	-2.6	-1.9	-2.5	-0.3	-0.2
Net exports (contribution)	0.5	0.3	0.2	0.0	-0.0	0.1	0.2	0.3	0.2
Exports	9.2	7.9	4.8	3.7	1.5	2.2	3.5	1.2	0.7
Imports	6.7	6.7	3.9	4.3	2.1	1.5	2.5	-0.9	-0.6
GDP (nominal)	1.7	2.4	2.0	1.8	0.6	1.5	0.5		
GDP deflator	-1.4	0.1	0.5	-0.1	0.3	0.6	0.4		
Industrial production	1.6	3.8	2.3	1.9	1.0	0.6	2.6		
Unemployment rate	4.4	4.0	3.7	4.1	4.0	3.7	3.7		
Current account balance (trillion yen)	18.9	19.7	20.5	18.9	20.7	20.5	21.2		
as a percentage of nominal GDP	3.7	3.8	3.9	3.7	4.0	3.9	4.0		
Corporate goods prices	2.1	1.9	-0.2	2.5	1.4	0.1	-0.5		
Consumer prices	0.1	0.7	0.5	0.7	0.7	0.5	0.5		
Long-term interest rate (%)	1.42	2.05	2.25	2.00	2.10	2.20	2.30		
Nikkei stock average (yen)	13,547	17,300	18,100	17,100	17,500	17,900	18,300		
Exchange rate (yen/dollar)	113.2	108	107	110	107	106	108		
Crude oil price (WTI $/barrel)	60.0	68.9	61.4	71.2	66.7	63.1	59.8		

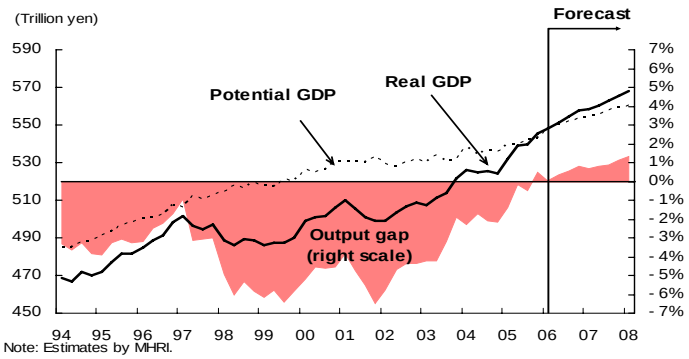
Notes: 1. FY = rate of change from the previous year. Half-year = rate of change from the previous term (excluding the unemployment rate, current account balance and prices).
2. Half-year corporate goods prices and half-year consumer prices = rate of change over a year ago. Consumer prices = nationwide (excluding fresh foods).
3. Half-year unemployment rate and half-year current account balance are adjusted for seasonal factors. Figures on current account balance are converted into annualized rates.
4. Crude oil price = near-term contract for WTI crude futures. The long-term interest rate = newly-issued 10-yr government bonds.

Sources: Cabinet Office, *Annual Report on National Accounts*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production, Producer's Inventory of Finished Goods and Producer's Inventory Ratio of Finished Goods (Index)*, Ministry of Internal Affairs and Communications, *Labor Force Survey, Consumer Price Index*, Ministry of Finance, *Balance of Payments*, Bank of Japan, *Corporate Goods Price Index*.

The negative output gap has been closed

The output gap (the gap between demand and supply) calculated by MHRI has been positive since the Oct-Dec quarter of 2005 as Japan's economic growth continues to outpace its potential rate of growth (**Chart 12**). While deflation appears to have already ended in Japan, if the economy continues to recover as in MHRI's forecast, the positive output gap (indicating an excess of demand) should gradually expand, diminishing the risks of Japan falling back into deflation. Given these circumstances, the Bank of Japan (BOJ) will most likely step forward to terminate the zero interest rate policy (ZIRP) sometime around the summer of 2006.

[Chart 12: The output gap]



Note: Estimates by MHRI.
Source: Cabinet Office, Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, and others.

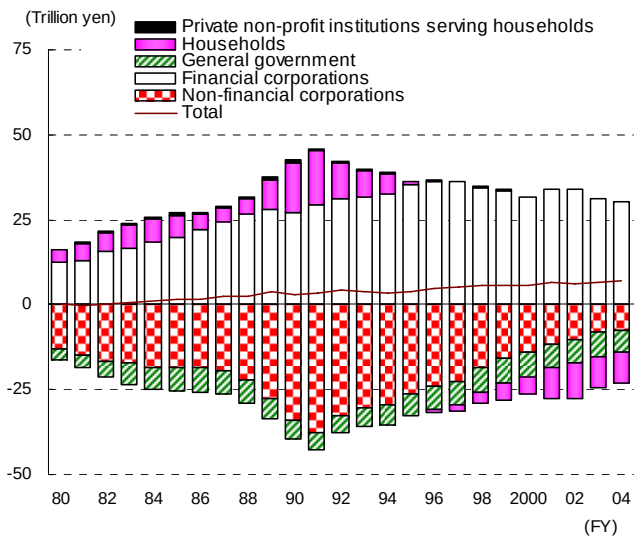
The risks factors: the rise of interest rates, the yen appreciation and price of crude oil

Ever since the quantitative monetary easing policy was terminated in March, market speculation on an early interest rate hike is driving up the long-term interest rate. The yield on 10-yr government bonds (JGBs) is climbing to around 2%. Although the yen had been losing ground to the dollar to around 118 yen/dollar in March, speculation that the US is nearing the end of its interest rate hike cycle turned the tide, driving the appreciation of the yen to around 110 yen/dollar. The price of crude oil (WTI near-term contracts - a benchmark crude oil futures price) is trading around the $70/barrel-level amid the protracted nuclear inspections issue involving Iran and the decline of US gasoline reserves. Given the major shifts in the external environment surrounding the Japanese economy, their impact upon the economy requires attention as possible risk factors. We shall touch upon each of these risks factors in the section below.

Low interest rates lead to lower household interest income and interest payments by corporations

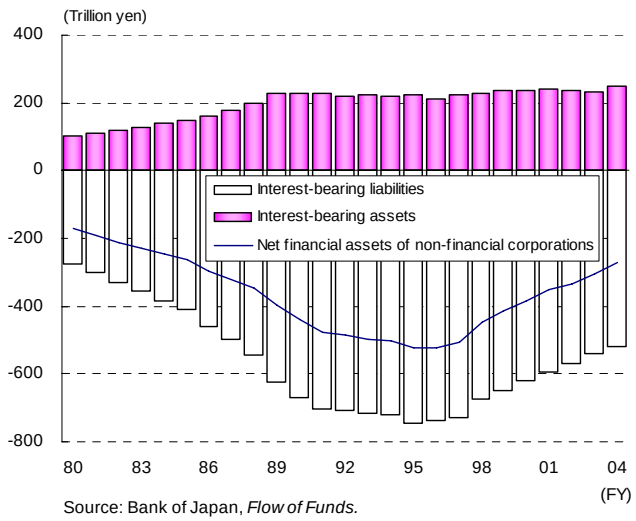
Firstly, we shall take a closer look upon the impact stemming from the rise of interest rates. According to the SNA-based trends in net interest income among each of the sectors of the Japanese economy, net interest income in the household sector fell approximately 25 trillion yen from the peak in FY1991 to FY2004 and household interest payments have started to rise from FY1996 (**Chart 13**). In the meantime, non-financial corporate enterprises' interest burdens (net interest payments) decreased by approximately 30 trillion yen. The reduction of interest burdens in the corporate sector stems from both the fall of the interest-bearing liability ratio and the decline of the outstanding balance of interest-bearing liabilities. As a result of balance sheet adjustments, the outstanding balance of interest-bearing liabilities among corporations has fallen from approximately 750 trillion yen from the peak period (FY1995) to approximately 520 trillion yen in FY2004 (**Chart 14**).

[Chart 13: Trends in net interest income (by sector)]



Source: Cabinet Office, *Annual Report on National Accounts.*

[Chart 14: Outstanding interest-bearing assets and interest-bearing liabilities of non-financial corporations]



Source: Bank of Japan, *Flow of Funds.*

Given the contraction of interest-bearing debt among corporations, the rise of the long-term interest rate will only have a limited impact upon the real economy

Estimating the impact of the rise of interest rates in consideration of the financial asset/debt structure in the household and corporate sectors, **Chart 15** reveals that the burden of interest payments upon corporations is growing smaller as a result of companies paying off their debts. In the event of a 0.5% rise of the long-term interest rate, the burden of interest payments is estimated to be around 390 billion yen (approximately 0.7% of operating surplus) in FY2006. This is considerably smaller in comparison to similar estimates regarding FY1988 (monetary tightening at the time of the Bubble Economy), FY1995 (the peak of corporate debts) and FY2000 (termination of the ZIRP). Although a 0.5% rise of the long-term interest rate would have increased the debt burden by approximately 990 billion yen (approximately 1.8% of operating surplus) if we were to assume an asset-debt balance as of FY1995 (the peak period of corporate debts), the debt burden in FY2006 would be less than half the amount. The foregoing reveals that the negative impact upon the corporate sector stemming from the rise of the long-term interest rate is diminishing sharply. As for the household sector, our calculations indicate that households may expect net interest income to rise approximately 0.6% to 0.8% (as
a percentage of disposable income) in either of the hypothetical cases in FY1988, FY1995, FY2000 and FY2006.

[Chart 15: The impact of a 0.5% rise of the long-term interest rate]

	Household sector				Corporate sector			
	Receipts	Payments	Net interest income	Percentage of disposable income	Receipts	Payments	Net interest income	Percentage of operating surplus
FY1988	20.1	6.0	14.1	0.6%	6.9	12.9	-6.0	-0.9
FY1995	29.8	8.7	21.2	0.7%	7.7	17.6	-9.9	-1.8
FY2000	33.4	9.2	24.2	0.8%	8.1	14.6	-6.5	-1.2
FY2006	34.3	8.5	25.8	0.8%	8.4	12.3	-3.9	-0.7

Note: "Receipts", "payments" and "net interest income" are in units of 100 billion yen and "percentage of disposable income" and "percentage of operating surplus" are represented as percentages.
Sources: Estimates by MHRI on the basis of data including Cabinet Office, *Annual Report on National Accounts* and Bank of Japan, *Flow of Funds*.

As far as the impact upon the real economy is concerned, the foregoing calculations reveal that while the negative impact of a higher long-term interest rate is contracting sharply in the corporate sector, the positive impact upon the household sector is more or less unchanged. Thus, the negative impact stemming from the rise of the long-term interest rate, serving as a drag upon the real economy, is considerably smaller than in the past. According to calculations using the Mizuho Macroeconometric Model (MMM), the negative impact from a 0.5% rise of the long-term interest rate would only be -0.9% in terms of current profits and -0.2% with respect to the rate of real GDP growth (**Chart 16**). Even though the long-term interest rate is expected to rise from 1.42% in FY2005 to approximately 2% in FY2006, it will only have a limited impact and will not

derail the current self-sustained recovery of the Japanese economy.

[Chart 16: The impact of the rise of the long-term interest rate upon macroeconomic conditions (estimate)]

(%)

	Breadth of the rise of long-term interest rate			
	0.25%	0.50%	0.75%	1.00%
Real GDP	-0.09	-0.18	-0.27	-0.36
Personal consumption	0.01	0.03	0.04	0.05
Housing investment	-0.02	-0.05	-0.07	-0.09
Capital investment	-0.68	-1.36	-2.04	-2.73
Current profits	-0.45	-0.90	-1.35	-1.80
Stock prices	-0.77	-1.53	-2.30	-3.07

Notes: 1. Estimates using the Mizuho Macroeconometric Model (MMM).
2. Current profits are based upon the *Financial Statements Statistics of Corporations by Industry (Quarterly)*.

Up to around 110 yen/dollar, the appreciation of the yen will not affect corporate performance

As for the impact of a stronger yen, according to the Bank of Japan's (BOJ) *Short-Term Economic Survey of Enterprises in Japan ("Tankan")* in March, manufacturers on average assume an exchange rate of 110.8 yen/dollar during FY2006. Thus, up to around 110 yen/dollar, the appreciation of the yen would not have a significant impact upon corporate business performance and economic conditions. Meanwhile, the foreign exchange rate at which manufacturers would be able to remain profitable is 104.40 yen/dollar according to the *Annual Survey of Corporate Behavior (FY2005)* of the Cabinet Office. The negative impact of a strong yen upon corporate business performance would start to expand once the yen strengthens above 105 yen/dollar,. According to the MMM, a 5-yen appreciation of the yen would push down current profits by 1.1% and real GDP growth by 0.3% (**Chart 17**).

[Chart 17: The impact of a stronger yen (comparison with 110 yen/dollar)]

(%)

	Yen/dollar exchange rate		
	105	**100**	**95**
Current profits	-1.1	-2.2	-3.3
Real GDP	-0.3	-0.5	-0.8
Consumer prices	-0.1	-0.2	-0.3

Notes: 1. Estimates using the MMM.
2. Current profits are based uon the *Financial Statements Statistics of Corporations by Industry (Quarterly)*.

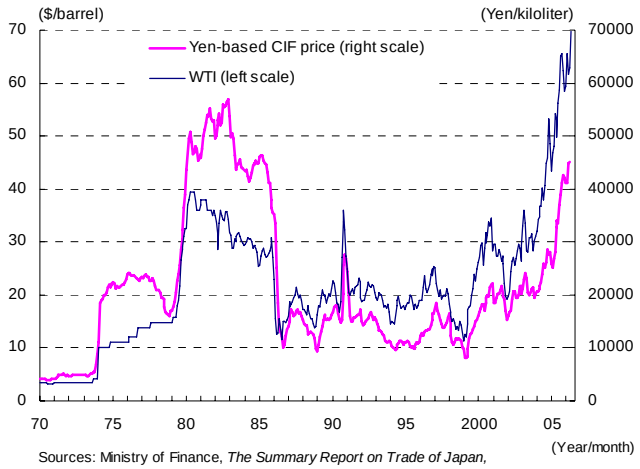
The price of crude oil (yen-based) is triple the initial stage of economic recovery

Lastly, we shall examine the impact of the surge of crude oil prices. The price of crude oil (WTI) is currently moving at a historical high of $70/barrel (**Chart 18**). Even though the yen-based CIF price of crude oil is still below prices during the Second Oil Shock, the price has tripled since the initial stage of the current economic recovery.

Prices of intermediate and final goods are not rising as much as they did during the Second Oil Shock

A look at the rise of corporate goods prices during this period reveals that prices of raw materials have risen 71.0% to date in comparison to a 107.8% rise during the Second Oil Shock. Prices of intermediate and final goods have only risen 11.8% and 1.3% respectively in comparison to 38.2% and 13.4% respectively during the Second Oil Shock (**Chart 19**).

[Chart 18: Price of crude oil (CIF)]



Sources: Ministry of Finance, *The Summary Report on Trade of Japan*, US Federal Reserve Bank of St.Louis.

[Chart 19: Rise of corporate goods prices]

(%)

	The Second Oil Shock	The current surge
% rise of raw material prices (Bottom → peak)	107.8 (Oct 1978 → Oct 1982)	71.0 (Nov 2001 → Apr 2006)
% rise of intermediate goods prices (Bottom → peak)	38.2 (Nov 1978 → Sep 1982)	11.8 (Nov 2001 → Apr 2006)
% rise of intermediate goods prices ／% rise of raw material prices	35.4	16.6
% rise of final goods prices (Bottom → peak)	13.4 (Feb 1979 → Sep 1982)	1.3 (Jan 2005 → Feb 2006)
% rise of final goods prices ／% rise of raw material prices	12.4	1.9

Source: Bank of Japan, *Corporate Goods Price Index*.

The input ratio of petroleum and coals products among manufacturers has dropped to one-third of 1980

The rise of crude oil prices will only have a limited impact

The ripple effect upon intermediate and final goods is smaller because of the fact that the input ratio of petroleum-related products is declining in the manufacturing sector. The decline can be verified by the *Input-Out Table* which shows that the input ratio of petroleum and coal products dropped from approximately 2.9% as of 1980 to approximately 0.8% in 2000, declining by approximately one-third (**Chart 20**).

Given the rise of energy efficiency of Japan's industrial sector, the negative impact due to the rise of crude oil prices is considerably smaller than before. According to the MMM, even if the price of crude oil (WTI) rises from the FY2005 average of $60/barrel to $70 dollar/barrel, it would only push down current profits by 0.9% and the rate of real GDP growth by 0.1%. Furthermore, it would only push up consumer prices by 0.2%. Even if the price of crude oil rises to $80/barrel, it would only push down the rate of economic growth by 0.3% (**Chart 21**). We are thus inclined to believe that the direct impact of the rise of crude oil prices upon the Japanese economy are benign. A more worrisome concern for the Japanese economy is the indirect impact of the surge of crude oil prices through the deceleration of the overseas economies and the appreciation of the yen.

[Chart 20: Ratio of petroleum and coal products in the manufacturing sector]

	1980	2000	Change
Manufacturing sector (total)	2.93	0.82	-2.10
Foods	0.91	0.29	-0.63
Textile products	1.88	0.37	-1.51
Paper and pulp products	1.82	0.80	-1.02
Chemical products	9.87	3.92	-5.94
Ceramic, stone and clay products	6.76	1.24	-5.53
Metal primary products	6.09	1.26	-4.83
Iron & steel	–	1.53	–
Non-ferrous metals	–	0.05	–
Metal products	1.55	0.24	-1.31
General machinery	0.51	0.12	-0.39
Electrical machinery	0.47	0.08	-0.39
Transportation equipment	0.43	0.14	-0.29
Precision instruments	0.35	0.07	-0.28
Electricity, gas and heat supply	(20.19)	3.34	–
Transport	(18.03)	9.73	–

Notes: 1. Intermediate input of petroleum and coal products/domestic product.
2. "Electricity, gas and heat supply" regarding 1980 are based uon data regarding "electricity, cas and w ater supply" and "transport" is based upon data regarding "transportation and communications".
3. The manufacturing sector (total) excludes petroleum and coal products.
Source: Ministry of Internal Affairs and Communications, *1980, 2000 Input-Output Table.*

[Chart 21: Impact of the rise of crude oil prices]

(%)

	Price of crude oil (WTI, $/barrel)			
	65	70	75	80
Current profits	-0.4	-0.9	-1.3	-1.7
Real GDP	-0.1	-0.1	-0.2	-0.3
Personal consumption	0.0	0.0	-0.1	-0.1
Capital investment	-0.4	-0.8	-1.2	-1.6
Consumer prices	0.1	0.2	0.3	0.4
Corporate goods prices	0.3	0.5	0.8	1.0

Notes: 1. Estimates using the MMM (comparison w ith a case w here the price of crude oil is $60/barrel).
2. Current profits are based uon the *Financial Statements Statistics of Corporations by Industry (Quarterly).*

As examined in the foregoing pages, the rise of the long-term interest rate and the surge of crude oil prices would only have a benign impact upon the actual state of the economy because of structural shifts in the economy which are weakening the mechanism that slow down the economy. Meanwhile, even though the negative impact stemming from the appreciation of the yen cannot be disregarded, the strength of the yen up to around 110 yen/dollar would not have much effect upon corporate business performance and economic conditions.

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