

## Economic Outlook for FY2008 and FY2009

August 2008

The Mizuho Research Institute Ltd. (MHRI) has revised its economic outlook for FY2008 and FY2009 subsequent to the release of *The First Preliminary Quarterly Estimates of GDP (1<sup>st</sup> QE*) for the Apr-Jun quarter of 2008. The key points are as follows.

### <The US Economy>

The economy will remain weak due to the credit crunch and inflation

**2008** 0.9% (previous outlook) → 1.2% (current outlook)

**2009** 0.5% (previous outlook) → 0.6% (current outlook)

### <The Japanese Economy>

**FY2008** Stagnant domestic demand and export slowdown due to worsening terms of trade and global economic slowdown

Real GDP: 1.4% (previous outlook) → 0.7% (current outlook)

Nominal GDP: 0.0% (previous outlook) → -0.4% (current outlook)

**FY2009** The economy will bottom out due to the improvement of terms of trade and recovery of exports

Real GDP: 1.1% (previous outlook) → 1.0% (current outlook)

Nominal GDP: 1.4% (previous outlook) → 1.7% (current outlook)

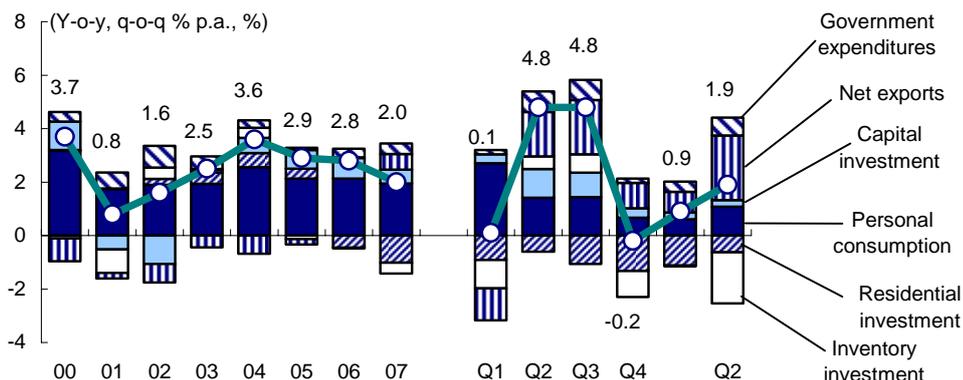
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# I. The US economy

**The US economy picked up (1.9% q-o-q p.a.) in the Apr-Jun quarter of 2008, driven by external demand**

According to the US Department of Commerce, US gross domestic product (GDP) in real terms grew 1.9% q-o-q p.a. in the Apr-Jun quarter of 2008 (“advance” estimates), picking up from the Jan-Mar quarter (0.9% q-o-q p.a.) (Chart 1). The major factor driving growth is external demand. Given a faster pace of export growth reflecting the weak dollar and solid overseas demand in contrast to the fall of imports, the contribution of external demand to GDP growth rose a dramatic 2.4%. Despite the ongoing housing investment downturn, domestic demand charted solid growth as personal consumption grew 1.5% q-o-q p.a., avoiding a loss of momentum helped by the tax rebates. Capital investment also remained in positive territory. Even though industrial production recorded the sharpest fall since 2003 (-3.2% q-o-q p.a.), final demand (= GDP minus inventory investment) surged 3.9% q-o-q p.a. reflecting the foregoing factors while inventory investment marked the steepest fall since 2001 (-USD62.2 billion, contribution to GDP -1.9%).

[ Chart 1: US real GDP growth ]



Note: The line represents real GDP (calendar year data on a y-o-y basis and quarterly data on a q-o-q basis). The bars represent the contribution to the line.  
Source: US Department of Commerce.

**Growth in the Oct-Dec quarter 2007 dipped slightly into negative territory reflecting the annual revision of GDP**

The recent estimates of US GDP also include the regular annual revision of data beginning with the estimates for 2005. As a result of the revision, growth in the Oct-Dec quarter of 2007 dipped slightly into negative territory. Coincident indicators such as production, employment, income and shipments all fell from the peak, ranging from -0.6% p.a. to -3.3% p.a. (Chart 2). Even though defense-related spending which are not readily reflected in external demand and monthly data pushed up GDP in the Apr-Jun quarter, as we indicated in our outlook in May, domestic economic activity has essentially fallen into a recession.

**Core inflation is moving above the price stability zone**

Looking at price developments, core inflation (rise of personal consumption expenditures (PCE) deflator, excluding food and energy) rose 2.3% y-o-y in June, moving above the upper end of the so-called price stability zone (1.0% ~ 2.0%) (Chart 3). The inflation rate is also rising on a short-term time span, for example

**The FOMC decided to keep the FF rate unchanged for the second time in a row**

on a month-on-month basis or a comparison from three months before, suggesting that the global rise of commodity prices are spreading to core inflation.

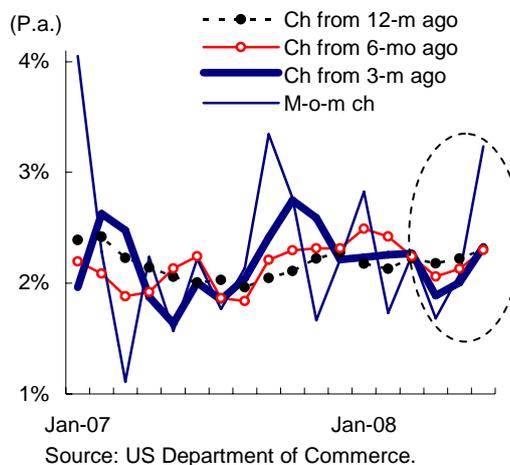
The Federal Open Market Committee (FOMC) decided to keep its target regarding the federal funds (FF) rate unchanged at 2.00% for the second time in a row at its meeting in August as it did at its June meeting. The FOMC’s assessment of conditions are turning grimmer in terms of both the economy and prices in comparison to it’s assessment in June. In addition to a retreat in its assessment of economic conditions by deleting the wording that “(downside risks) appear to have diminished somewhat” (FOMC Statement in June), the FOMC also indicated that “(although downside risks to growth remain) upside risks to inflation are also of significant concern” (FOMC Statement in August).

**[ Chart 2: Trends in coincident indicators ]**

	Peak	Recent reading /the peak (change p.a.)	Past recessions	
			90-91(8M)	00-01(8M)
Industrial production index	2008/1	-1.9%	-8.1%	-5.0%
			6M	15M
(Reference) non-energy sector production index	2007/12	-2.6%	-9.3%	-5.1%
			6M	17M
Nonfarm payrolls	2007/12	-0.6%	-1.6%	-1.0%
			11M	22M
(Reference) Private sector total working hours index	2007/12	-1.9%	-2.8%	-2.1%
			14M	26M
Real personal income (ex transfer income)	2007/10	-1.5%	-4.2%	-1.1%
			7M	19M
Shipments and sales in real terms	2007/10	-3.3%	-11.7%	-3.9%
			5M	12M

Note: The rate of change p.a. from the peak to bottom and the number of months during such time with respect to past recessions.  
Sources: US Department of Labor, US Department of Commerce, Federal Reserve Board.

**[ Chart 3: Core PCE deflator ]**



**The July crisis and the policy steps taken**

As indicated in the statement of the FOMC meeting in August, US financial markets “remain under considerable stress”.

In July, the rise of concerns regarding the stability of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) – both of which are expected to play key roles in providing the housing financial market with liquidity – led to a sharp fall of its stocks and the surge of risk spreads on bonds issued by both government sponsored enterprises. (GSE) Among the background factors behind the rise of uncertainties were concerns regarding massive losses due to the deterioration of overall housing loan debt and the enormous volume of both GSE’s assets and guaranteed obligations in proportion to their capital.

On July 13<sup>th</sup>, the US government announced a set of initiatives including (1) the temporary increase in the line of credit (set normally at USD2.25 billion) the GSEs have with the US Department of the Treasury, (2) the purchase of equity in either of the two GSEs by the Department of the Treasury “if needed”, and (3) regulatory

reinforcement by a new GSE regulator under consultation by the Federal Reserve. The Federal Reserve also announced that the two GSEs above would have access to emergency lending facilities (Article 13-3 of the Federal Reserve Act), setting forth liquidity-boosting measures. Article 13-3 was applied last in March with respect to Bear Stearns. Furthermore, the Securities and Exchange Committee implemented measures to restrict the short-selling of stocks of 19 major banking institutions including Fannie Mae and Freddie Mac (announced on July 15<sup>th</sup> and implemented from July 21<sup>st</sup> to August 12<sup>th</sup>). The rescue measures by the US Department of the Treasury were subsequently passed as part of the Housing and Economic Recovery Act of 2008 (July 30<sup>th</sup>).

These initiatives, however, are only stopgap measures which do nothing to cure the fundamental ailment of the US economy, which are the lingering adjustment pressures in the housing market and the colossal debt in the household and financial sectors. Unless these ailments are cured, the US economy will remain in a “negative spiral” fueled mutually by economic stagnation and financial market stress.

How large are the downward pressures currently lingering in the housing market? As of May 2008, approximately 2.5 years has passed since residential investment peaked in the Oct-Dec quarter of 2005 and two years has lapsed since the S&P Case-Shiller Index (10 major cities) peaked in June 2006. Furthermore, the number of existing single-family homes sold has stopped falling and is flattening out since the second half of 2007. Demand is surpassing supply in the new home market, reaching a stage where the inventory ratio will decline if investment is maintained at the level reached in the Apr-Jun quarter.

Even so, private-sector financial institutions are tightening their lending standards with respect to mortgages toward prime borrowers with high credit ratings while providers of policy finance such as Fannie Mae and Freddie Mac are also raising their mortgage guarantee fees and abolishing the purchase of Alt-A loans. Financial market conditions will serve as a major drag upon the recovery of housing demand.

Considering that home prices are said to be overvalued by approximately 10%~20%, the fall of home prices will continue to have a negative effect upon residential demand and the strength of financial institutions.

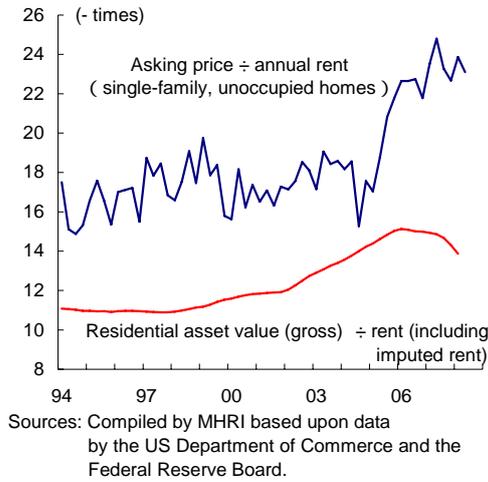
According to the US Department of Commerce, the ratio of asking prices to annual rent (the so-called P/E ratio of houses (single-family basis)) has been rising sharply since 2006, indicating that homes are still over-valued in comparison with rental housing as of the Apr-Jun quarter of 2008. (**Chart 4**). Furthermore a comparison of the Office of Federal Housing Oversight (OFHEO) Index with per-capita disposable income and average household income and estimates of appropriate price levels in view of income factors, housing stock and mortgage loan rates, reveal results that the home price index as of the Jan-Mar quarter of

**The inventory ratio is starting to decline in the new home market**

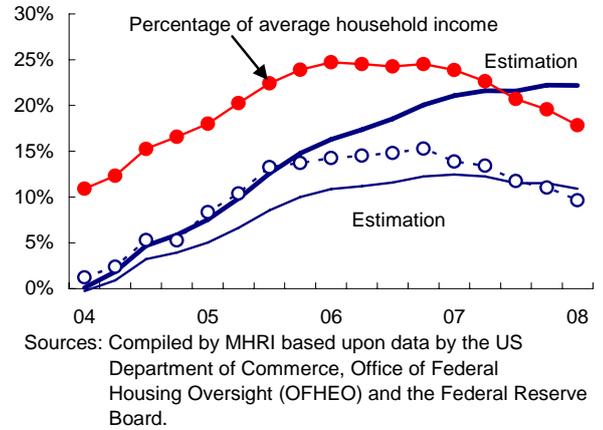
**Home prices are still overvalued by 10% ~ 20%**

2008 is over-valued by approximately 10%~20% (Chart 5).

[ Chart 4: P/E ratio of houses ]



[ Chart 5: US residential valuation ]



**The impact of the tax cut will wear off, leading to a sharp downturn of consumer spending**

The ongoing housing market downturn and the slowdown of consumer spending due to the fading effect of the tax cuts will serve as a drag upon the US economy toward the end of the year.

According to the US Department of Commerce, the tax cuts implemented in the Apr-Jun quarter reached USD313.2 billion. Assuming that the extent to which disposable income (excluding the tax cuts) is channeled to consumption (average consumption propensity) is the same as the Jan-Mar quarter, this means that personal consumption amounting to approximately USD65.2 billion (p.a.) would be financed by the tax cuts. This indicates a marginal consumption propensity of approximately 0.2. Of the past three tax rebates in 1975, 2001 and 2003, the marginal consumption propensity of 0.2 is more or less the same as the tax rebates in 1975. Empirical studies reveal extremely high levels of marginal consumption propensity at the time of the tax rebates in 2001 and 2003 owing to the fact that the tax cuts were “permanent” in nature. The marginal consumption propensity is said to be “0.2 or so” at the time of the tax rebates in 1975 which were of a “provisional and temporary” nature as is the case in the current tax rebates. If we emphasize the impact of the different nature of the tax cuts, the effect of the tax cuts have been more or less exhausted with the exception of the tax cut implemented in July. Thus, the tax cuts will not have much effect in boosting consumption from the Jul-Sep quarter onward.

**2008 real GDP growth: 1.2% (June outlook: 0.9%), 2009 real GDP growth: 0.6% (June outlook: 0.5%)**

In our Economic Outlook released in May, we predicted that “US economic growth will fall into negative territory in the second half of 2008 dragged down by the fading impact of the tax cuts, high prices and the credit crunch”. Despite the stronger-than-expected rise of external demand thus far, the global economy apart from the US such as the European and Japanese economies are slowing down. Since external demand will only have limited effect as a driver of the economy, we

maintain our view that US economic growth will fall into negative territory.

Given the deterioration of the jobs and income environment, rise of prices, downward pressures from the financial market and fall of residential prices coupled with the fading effect of the tax cuts, personal consumption – thus far showing resilience – will fall sharply. Capital investment is also predicted to fall into an adjustment cycle, reflecting the tightening of the financial market, slowdown of exports and fall of personal consumption.

Although US economic growth will rise into positive territory in 2009, the recovery will remain weaker than its potential rate of growth estimated to be around the upper end of the 2%-level because of the persisting housing market downturn and adjustment of debt in the household and financial sectors.

**Upside risks to core inflation will keep the Federal Reserve vigilant**

Turning to price developments, core inflation will most likely trend above the so-called “price stability zone”.

Even though the relaxation of the supply-demand gap stemming from the economic slowdown and the sluggish rise of unit labor costs reflecting the high rate of labor productivity growth will continue, it remains uncertain whether inflationary expectations among the household and corporate sectors will cool down. Given these conditions, even in the event of an economic downturn, the Federal Reserve will most likely keep extremely vigilant regarding the upside risks to inflation.

[ Chart 6: Outlook on the US economy ]

(%)

	2007	2008 (Forecast)	2009 (Forecast)	2007		2008 (Forecast)		2009 (Forecast)	
				1H	2H	1H	2H	1H	2H
GDP	2.0	1.2	0.6	1.6	3.5	0.9	-0.4	0.6	1.7
Personal consumption	2.8	0.7	0.7	3.3	1.7	1.1	-1.0	1.1	1.7
Residential investment	-17.9	-20.5	-10.4	-16.0	-20.0	-23.4	-14.9	-10.8	-4.6
Capital investment	4.9	2.5	-3.6	4.0	7.8	2.6	-2.6	-5.8	-0.0
Inventory investment (USD100 million)	-25	-263	-46	-89	40	-362	-165	-112	20
Government expenditures	2.1	2.2	1.4	1.8	3.1	2.0	1.7	1.0	1.7
Net exports (USD100 million)	-5,465	-4,166	-3,763	-5,949	-4,982	-4,286	-4,047	-3,797	-3,728
Exports	8.4	6.7	2.0	6.2	14.5	5.9	1.2	2.2	2.4
Imports	2.2	-1.7	-0.5	3.3	-0.0	-2.7	-1.5	-0.8	1.2
Domestic final demand	1.8	0.3	0.1	2.1	1.5	0.4	-1.1	0.0	1.4
Unemployment rate	4.6	5.5	6.0	4.5	4.8	5.1	5.9	6.0	6.1
Nonfarm payrolls (per month, 1,000 persons)	127	-89	-58	119	89	-55	-123	-81	-35
PCE deflator <y-o-y ch>	2.6	3.6	2.4	2.4	2.8	3.6	3.5	2.7	2.1
CorePCE deflator <y-o-y ch>	2.2	2.3	2.3	2.2	2.1	2.2	2.3	2.3	2.2
Current account balance (USD100 million)	-7,312	-7,177	-6,483	-3,910	-3,402	-3,609	-3,568	-3,220	-3,263
<as a percentage of nominal GDP>	-5.3	-5.0	-4.4	-5.7	-4.9	-5.1	-5.0	-4.4	-4.4

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. Regarding the current account balance, figures for the 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, MHRI (August 15, 2008).

## II. The Japanese economy

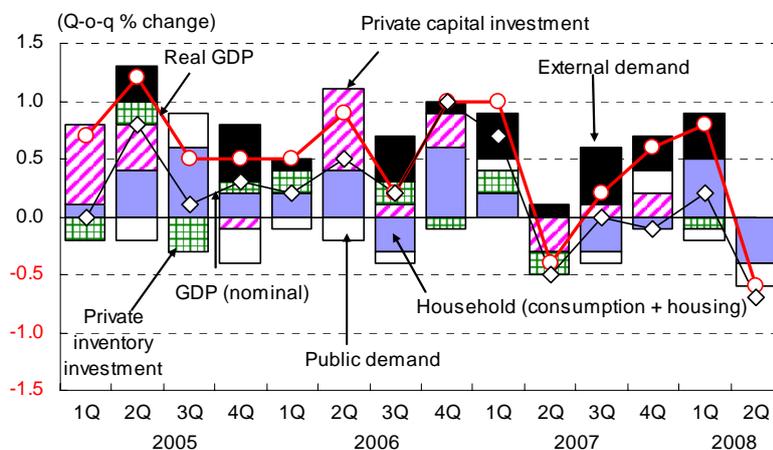
### (1) The current state of the economy

**The Japanese economy shrank in the Apr-Jun quarter of 2008 due to sharp declines of domestic demand and exports**

Japan's real GDP shrank 0.6% q-o-q (2.4% q-o-q p.a.) for the first time in four quarters in the Apr-Jun quarter of 2008 (**Chart 6**).

Looking closer at each of the components of demand, personal consumption contracted (-0.5% q-o-q) for the first time in seven quarters due to a counter reaction to the fact that the previous quarter had one more day than usual due to 2008 being a leap year and the deterioration of the income environment. Residential investment fell for the first time in two quarters (-3.4% q-o-q), reflecting the softening of housing starts from the beginning of the year. Capital investment turned out virtually flat (-0.2% q-o-q) due to slumping investment in machinery. Given a slight slowdown of private-sector inventory investment, its contribution to Japan's economic growth fell to -0.0% pt. Domestic private-sector demand served as a major drag, pushing down GDP growth by 0.4% pt. Even though public investment fell sharply (-5.2% q-o-q), this was due most likely to local governments putting off road construction works because of the temporary expiration of the provisional tax rate on road-related tax revenues (certain tax revenues earmarked for road maintenance) in April. While government consumption inched up (0.1% q-o-q), public demand dragged down GDP growth by 0.2% pt. As a result, the contribution by domestic demand to economic growth fell deep into negative territory (-0.6% pt). In addition to slumping domestic demand, exports also fell sharply reflecting the overseas economic slowdown. Even though external demand did not serve as a major drag upon GDP growth since imports also slowed (-2.8% q-o-q), the contribution by external demand dipped slightly into negative territory (-0.0% pt), thus failing to underpin Japan's economic growth as it had during the past year.

**[ Chart 7: Japan's quarterly GDP growth ]**



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

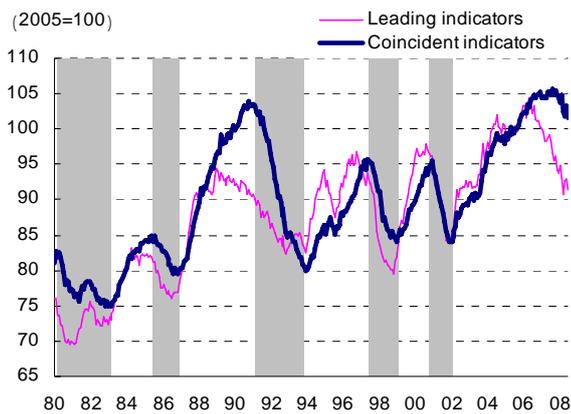
**Fall of gross domestic income (GDI) due to worsening terms of trade**

The GDP deflator, a broad measure of price changes, sank deeper into negative territory (-1.6% y-o-y) from the previous quarter (Jan-Mar quarter -1.5% y-o-y) . Accordingly, Japan's GDP growth on a nominal basis fell 0.7% q-o-q or (-2.7%q-o-q p.a.), falling sharply below growth in real terms. Even though the domestic demand deflator grew at a faster pace of 0.6% y-o-y (Jan-Mar quarter 0.4% y-o-y), the GDP deflator sank deeper into negative territory as a result of the import deflator rising a sharp 9.9% y-o-y (Jan-Mar quarter 7.1%) due to the rise of primary commodity prices. Given the expansion of trading losses due to the deterioration of trading terms, gross domestic income (GDI) shrank 0.9% y-o-y (Jan-Mar quarter -0.6% y-o-y). The Japanese economy is falling into dire straits as it loses its support of external demand amid the stagnation of domestic demand due to the deterioration of terms of trade.

**It now looks certain that the Japanese economy is falling into a recession**

As of June, the composite index (CI) of coincident indicators has been unable to climb above the recent peak of 105.7 (2005 = 100) last reached in August 2007 (Chart 8). Of the 11 indicators comprising the coincident index, the majority (six of the indicators) have already peaked out by November 2007 (Chart 9) and the historical DI appears to have fallen below 50% at 45.5% in December 2007 (estimates by MHRI). Therefore, on the basis of current economic indicators (which may be subject to amendments as a result of annual corrections and changes in seasonal adjustments), the odds are high that the economy peaked in November 2007. The current economic expansion with the trough in January 2002 and surpassing the Izanagi Boom (lasting 57 months) appears to have come to an end in 71 months.

[ Chart 8: The coincident CI ]



Note: The shaded areas indicate periods of economic recession. (CY/Mo)  
Source: Cabinet Office, *Indexes of Business Conditions*.

Chart 9: The component indicators of the coincident CI ]

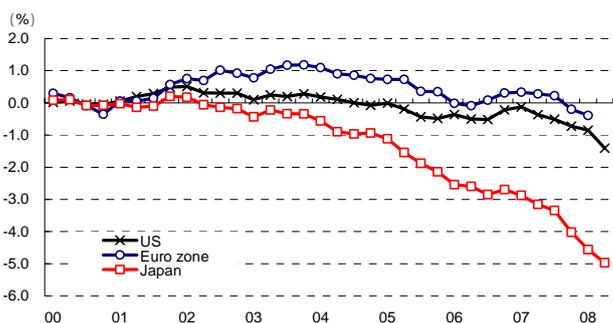
	Component indicators	Recent peak
1	Effective job offer ratio (ex new school graduates)	Jul 2006
2	Index of producer's shipments (investment goods ex transport equipments)	Feb 2007
3	Operating profits (all industries)	Jun 2007
4	Index of capacity utilization ratio (manufacturing)	Aug 2007
5	Index of producer's shipment (producer goods for mining and manufacturing)	Oct 2007
6	Index of non-scheduled worked hours (manufacturing)	Nov 2007
7	Index of industrial production (mining and manufacturing)	Feb 2008
8	Retail sales value	Feb 2008
9	Wholesale sales value	Feb 2008
10	Large industrial power consumption	May 2008
11	Index of sales in small and medium sized enterprises (manufacturing)	May 2008

Source: Cabinet Office, *Indexes of Industrial Production*.

**Massive income drains due to the deterioration of terms of trade**

Countries such as Japan which are heavily dependent on imports for resources and food, are subject to massive overseas income drains in times of a commodity market surge such as the recent rise of commodity prices. Trading gains as a percentage of real GDP are as follows, revealing a significant decline into negative territory with respect to Japan: the euro zone (-0.4%), the US (-1.4%), Japan (-5.0%) (**Chart 10**). According to provisional estimations of imports (by value) of major raw materials such as crude oil, iron ore and coal on the basis of recent market trends, raw material imports would reach JPY27.1 trillion (5.3% of nominal GDP) in FY2008 (**Chart 11**). This is comparable to the past peak of 5.9% at the time of the 1<sup>st</sup> Oil Crisis (FY1974) and the 2<sup>nd</sup> Oil Crisis (FY1980). Furthermore, the amount of increase from the previous fiscal year would reach JPY8.5 trillion (1.7% of nominal GDP). The total amount to be paid to commodity-exporting countries would have to be borne either by the corporate or household sectors. These burdens most likely served as downward pressures upon domestic demand, pushing the Japanese economy into a recession ahead of the US and European economies.

[ Chart 10: Trading gains (as a percentage of real GDP) ]



Notes: 1. Trading gains as a percentage of real GDP.  
 2. Trading gains =  $(X - M) / P - (X / P_x - M / P_m)$   
 where: X: nominal exports, M: nominal imports, P: price deflator,  
 P<sub>x</sub>: exports deflator, P<sub>m</sub>: imports deflator, P: numeraire deflator =  $(X + M) / (X_r + M_r)$   
 Sources: HAVER, Bloomberg, Cabinet Office.

[ Chart 11: Imports (value) of major raw materials ]

Fiscal year		2003 (Actual)	2004 (Actual)	2005 (Actual)	2006 (Actual)	2007 (Actual)	2008 (Estimate)
Imports (value)	Crude oil	5.1	6.4	10.0	11.4	13.7	19.0
	Iron Ore	0.4	0.4	0.7	0.9	1.1	1.7
	Coal	0.8	1.2	1.6	1.6	1.8	4.4
	Nonferrous metals	0.5	0.8	1.2	1.8	2.0	2.0
	Total	6.8	8.8	13.5	15.7	18.6	27.1
Imports (change)	Crude oil	0.0	1.2	3.6	1.4	2.3	5.3
	Iron Ore	0.0	0.1	0.2	0.2	0.2	0.6
	Coal	0.0	0.4	0.4	0.0	0.2	2.6
	Nonferrous metals	0.1	0.3	0.4	0.7	0.2	0.0
	Total	0.1	2.0	4.7	2.2	2.9	8.5

Note: Premises: FY2008 WTI = USD124.3/bbl. USD-based per unit import price of iron ore will rise 72.5% y-o-y. USD-based per unit import price of coal will rise 167% y-o-y. Quantity of imports of crude oil, iron ore and coal will remain flat from the previous year. USD/JPY rate = USD105/JPY. Imports (value of nonferrous metals will remain around the level in FY2007).  
 Sources: Compiled by M-HRI based upon Ministry of Finance, Trade Statistics.

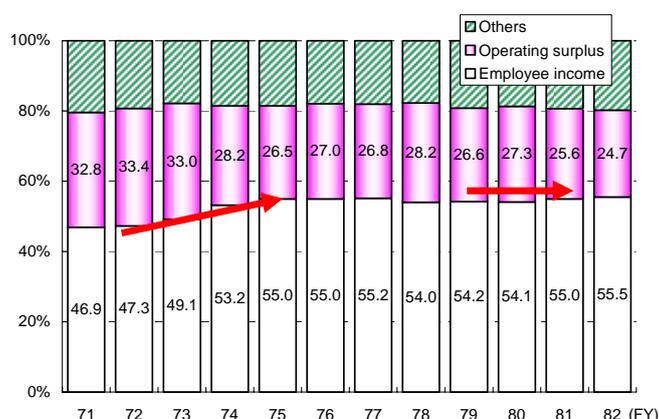
**Japanese companies took a different approach in the 1<sup>st</sup> and 2<sup>nd</sup> Oil Crises**

Looking back at the past oil crises, during which the price of crude oil surged and led to a sharp deterioration of Japan's terms of trade, Japanese companies took a very different approach in the 1<sup>st</sup> Oil Crisis (from 1973) and the 2<sup>nd</sup> Oil Crisis (from 1978). During the 1<sup>st</sup> Oil Crisis, the labor distribution rate rose sharply since wage hikes were implemented in step with inflation (**Chart 12**). This in turn resulted in a sharp fall of corporate earnings and rise of overall inflation. During the 2<sup>nd</sup> Oil Crisis, the labor distribution rate did not change much since companies refrained from wage hikes in a lesson from its past mistakes during the 1<sup>st</sup> Oil Crisis. Although the time span of the economic recession was long (36 months) due to the prolonged surge of crude oil prices, the inflation rate remained stable and Japan's economic indicators did not fall as deeply as in the 1<sup>st</sup> Oil Crisis.

**Decline of corporate profitability will lead to downward pressures upon wages**

In the current episode, how will companies behave under the decline of profitability stemming from rising raw material and fuel costs? Given the permeation of performance-based salaries and the diversification of employment patterns, most companies today do not consider price movements when determining wages. The percentage of companies taking price movements into consideration today is far lower than in the 2<sup>nd</sup> Oil Crisis (**Chart 13**). During the current recession, the odds are high that companies will take initiatives such as the reduction of bonus payments which will restrict the rise of the labor distribution rate, leading to our view that wages and ultimately household income will be subject to downward pressures.

[ **Chart 12: Income distribution during the past Oil Crises** ] [ **Chart 13: Factors emphasized in determination of wages** ]



Note: "Others" = total of fixed capital consumption, indirect taxes and subsidies.  
Source: Cabinet Office, *National Accounts*.

	Year	Corporate performance	Common practice	Employee retention	Price developments	Others
1st Oil Crisis	1973	30.4	34.8	18.2	12.9	3.7
	1974	26.6	37.5	8.6	24.0	3.3
	1975	52.9	23.2	4.3	14.6	5.0
	1976	54.3	25.8	4.3	8.0	7.6
2nd Oil Crisis	1978	67.2	18.9	2.3	6.5	5.1
	1979	64.9	18.2	4.2	7.1	5.6
	1980	57.3	22.2	5.2	8.8	6.5
	1981	57.0	24.3	3.2	9.3	6.2
	1982	62.9	23.3	1.7	5.8	6.3
Current episode	2004	78.1	7.3	2.7	0.0	11.9
	2005	75.2	8.4	4.2	0.3	11.9
	2006	63.5	8.6	7.2	0.6	20.1
	2007	70.6	5.4	9.2	0.1	14.7

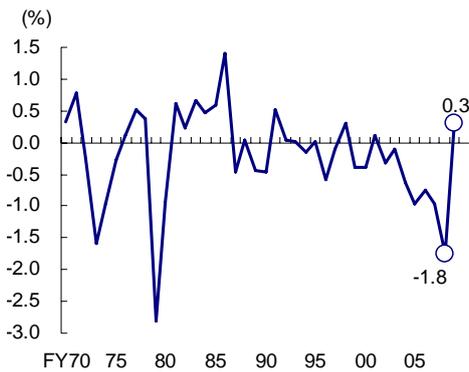
Source: Ministry of Health, Labor and Welfare.

**The rate of change of nominal wages which does not change the labor distribution rate in FY2008 is -0.5% y-o-y**

The change of the labor distribution rate may be expressed as <the rate of change of the labor distribution rate = rate of change of real wages – (rate of change of labor productivity – income drain due to change of terms of trade)>. Thus, the rate of change of real wages which keeps the labor distribution rate constant (the “neutral rate of real wage growth”) may be obtained from the percentage rise of labor productivity and change of terms of trade. According to MHRI’s estimations, the neutral rate of real wage growth would be pushed down (-1.8%) in FY2008 and pushed up (0.3%) in FY2009 as a result of the change in terms of trade (**Chart 14**). Assuming that the the percentage rise of labor productivity is 0.8% in FY2008 and 0.5% in FY2009, the neutral rate of real wage growth would be -1.0% for FY2008 and 0.8% for FY2009. The neutral rate of nominal wage growth obtained by the domestic demand deflator (estimations by MHRI) would be -0.5% for FY2008 and 0.9% for FY2009 (**Chart 15**). If the percentage rise of labor productivity turns out to be lower than expected, the neutral rate of wage growth would be even lower. In any event, wages in FY2008 are subject to significant downward pressures, providing us with reasons to believe that nominal wages will fall below the previous year for the second year in a row. While we expect a modest rise of nominal wages in FY2009, there are risks of an ongoing

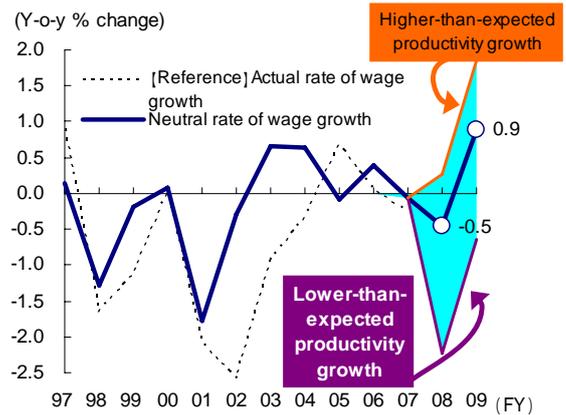
decline of nominal wages in the event of a lower-than-expected rise of productivity or a further deterioration of terms of trade. In particular, household real income will be squeezed by the fall of nominal wages and inflation and keep consumer spending in the doldrums in FY2008. The recovery of personal consumption will remain weak even in FY2009, making it unlikely that the Japanese economy will climb out of a recession driven mainly by domestic demand.

[ Chart 14: The impact of the change of terms of trade upon real wages ]



Note: Readings for FY2008 and FY2009 are forecasts by MHRI.  
Source: Cabinet Office, *National Accounts*.

[ Chart 15: The neutral rate of nominal wage growth ]



Note: The figures next to the are the current assumptions ( productivity growth: FY2008 0.8%, FY2009 0.5%). The higher-than-expected productivity growth is 1.5% for both FY2008 and FY2009. The lower-than-expected productivity growth is -1.0% for both FY2008 and FY2009.  
Source: MHRI, based upon data including Cabinet Office, *National Accounts*.

**The capital investment downturn will turn out to be benign**

In contrast, the capital investment downturn will turn out to be benign. Japanese companies have maintained a conservative stance regarding investment to boost domestic capacity under the current economic expansion, given its experience in shedding excess capacity during the prolonged economic slump following the collapse of the “Heisei bubble”. As a result, the production capacity DI (the diffusion index of “excessive capacity” minus “insufficient capacity” in the Bank of Japan’s (BOJ) *Short-Term Economic Survey of Enterprises in Japan (TANKAN)* of June 2008) stood at 2% pt, indicating that companies do not feel burdened by excess capacity at the moment. Moreover, note that FY2008 fixed investment plans (excluding land purchasing expenses and including software investment) among large enterprises rose 6.9% y-o-y in the June survey, revealing the rise of investment plans. In particular, expectations among manufacturers that exports to emerging countries will grow over the short-to medium-term will underpin capital investment. Even though the decline of cash flows stemming from the current business downturn will serve as restraints upon capital investment among small and medium-sized companies, a sharp fall of overall capital investment is unlikely given the investment among large companies.

**Japan will avoid falling into a serious recession**

Comparing the depth of past recessions, economic conditions fell deeply when the fall of economic growth expectations led to an adjustment of capital stock and resulted in a double-digit decline of capital investment as in the 1<sup>st</sup> Oil Crisis, the aftermath of the Heisei Bubble and the financial sector crisis in the second half of the 1990s (**Chart 16**). We are thus inclined to believe that unless exports – the driver of the economy so far – falls sharply, the risks of a large-scale capital stock adjustment are benign and therefore the chances are remote that the current recession will turn out to be a serious downturn.

**[ Chart 16: A comparison of past recessions ]**

	Peak	Trough	Span (months)	Depth				Notes
				Production	Personal consumption	Capital investment	Exports	
6th Cycle	1970-Jul	1971-Dec	17	2.2	-0.7	-7.3	14.1	After the Izanagi Boom
7th Cycle	1973-Nov	1975-Mar	16	-18.8	-3.4	-14.4	16.2	1st Oil Crisis
8th Cycle	1977-Jan	1977-Oct	9	-0.2	2.5	-0.6	1.7	
9th Cycle	1980-Feb	1983-Feb	36	-2.2	8.9	7.1	17.3	2nd Oil Crisis
10th Cycle	1985-Jun	1986-Nov	17	-0.8	5.3	7.4	-8.5	High-yen recession
11th Cycle	1991-Feb	1993-Oct	32	-12.2	6.1	-19.1	6.4	After the Heisei Boom
12th Cycle	1997-May	1999-Jan	20	-9.1	2.1	-13.5	-5.5	Financial Crisis, Asian Currency Crisis
13th Cycle	2000-Oct	2002-Jan	15	-1.7	1.4	-9.5	-11.4	Collapse of the IT Bubble
14th Cycle	2007-Nov			-1.6	0.2	-0.3	1.0	

Notes: The "depth" of production, personal consumption, capital investment and exports refer to the breadth of the correction from the peak of the economic cycle to the low est level during the recession, and refers to the breadth of the change if there is no decline. In the 14th Cycle, the breadth of the change from 2007/4Q to 2008/4Q.

Sources: Cabinet Office, *National Accounts*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production*.

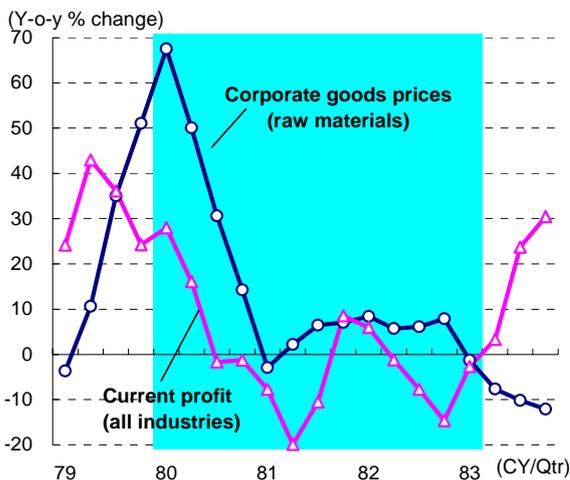
**Japan's terms of trade will improve and the economy will bottom out in the spring of 2009**

When will the economy start to pick up? Looking back at the 2<sup>nd</sup> Oil Crisis, even though the recession dragged on for a prolonged time span due to the persistence of high crude oil prices, the economy started to pick up along with the recovery of corporate earnings performance due to the downturn of raw material prices (**Chart 17**). In the current economic recession, the bottoming of corporate earnings will signal the recovery of Japan's economy. Assuming that the price of crude oil will peak out and start to decline from this summer as in our current Economic Outlook, Japan's terms of trade will start to improve as the price of crude oil falls below the previous-year level in the Apr-Jun quarter of 2009 (**Chart 18**). Corporate performance should also record the growth of profits on a year-on-year basis at around this time. Considering that the deterioration of terms of trade has a strong tendency to drag down wages in the current recession as explained before, a self-sustained recovery of personal consumption is unlikely. Looking closer at the components of demand, exports will serve as the driver of

Japan's economic recovery. In particular, the upturn of exports to Europe and the US – charting the deepest decline at the moment - is a requisite condition for the recovery of Japan's economy. The average length of Japan's recession in the post-WWII period is approximately 17 months. Assuming that the economy peaked in November 2007 and bottomed in the Apr-Jun quarter of 2009, the length of the recession would be approximately 18 months, on par with the average time span of post-War recessions.

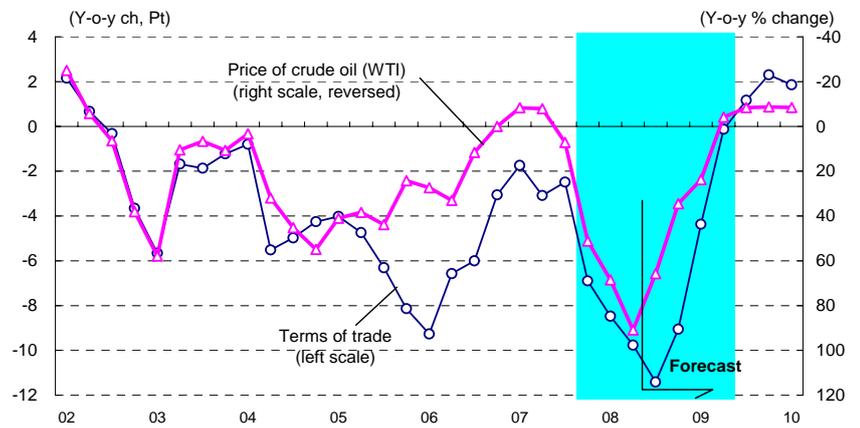
Having said so, in the event of a resurgence of crude oil prices and the ongoing deterioration of Japan's terms of trade, or if the European and US economies do not pick up in FY2009, Japan's economic recession will most likely drag on for a prolonged period of time.

[ Chart 17: Raw material prices and corporate earnings (2<sup>nd</sup> Oil Crisis) ]



Note: The shaded area indicates a recession.  
Sources: Bank of Japan, *Domestic Corporate Goods Price Index*,  
Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

[ Chart 18: Forecast on crude oil prices and terms of trade ]



Note: The shaded area indicates the period of recession assumed in MHR's current Economic Outlook.  
Terms of trade = export deflator / import deflator.  
Sources: Cabinet Office, *National Accounts*, Federal Reserve Bank of St. Louis.

## (2) Forecast of the Japanese economy in FY2008 and FY2009

**The Japanese economy will remain in a recession during FY2008**

The decline of corporate earnings reflecting the deterioration of terms of trade and the rise of prices (mainly food and energy) will keep domestic demand in the doldrums in FY2008. The curtailment of labor costs by companies due to the decline of profitability will serve as restraints upon personal consumption throughout FY2008. Capital investment will also soften mainly among small and medium-sized companies which tend to reduce investment when cash flows decline. Residential investment on a works-in-progress basis may serve as a temporary driver of GDP growth in the second half of 2008 due to the rise of condominium starts in the Jan-Mar quarter of 2008. The rate of economic growth is predicted to rise slightly (0.5% p.a.) in the second half of FY2008 due in part to the contribution by residential investment (**Chart 19**). However, given the ongoing stagnation of personal consumption and capital investment and the sluggish rise of exports primarily toward Europe and the US, production activity will weaken, keeping the economy in recession mode during FY2008

**Real GDP growth in FY2008: 0.7%**

As a result, the rate of real GDP growth in FY2008 will stand at 0.7% (previous outlook: 1.4%) (**Chart 21**). While the carry-over from the previous fiscal year (1.0%) will keep growth in positive territory, the rate of growth on a fourth-quarter to fourth-quarter basis in FY2008 is predicted to turn negative (-0.1%). Even though the domestic demand deflator will rise to 1.0% y-o-y, the rise of the import deflator stemming from the rise of raw material prices will keep the GDP deflator in negative territory for the 11<sup>th</sup> year in a row (-1.1% y-o-y), thereby dragging down the rate of nominal GDP growth into negative territory (-0.4%, previous outlook: 0.0%) for the first time in six years since FY2002.

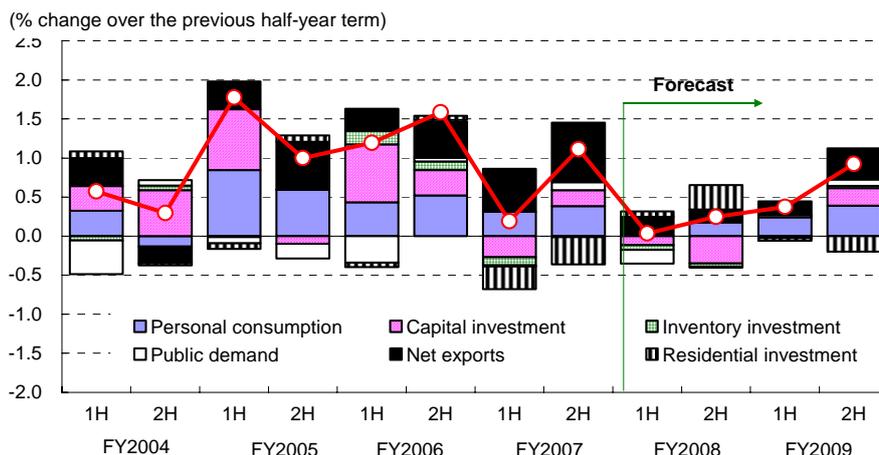
**The economy will gradually pick up in FY2009**

Economic conditions will gradually pick up in FY2009. Crude oil prices will fall below the previous-year level in FY2009, leading to an upturn of terms of trade among companies. Domestic inflationary pressures will weaken, causing household real income to bottom out. Even though the economic recovery will be driven mainly by exports, personal consumption will gradually pick up as household incomes in real terms stop falling. Even though the recovery of capital investment will lag the improvement of corporate earnings, investment should turn positive in the second half of FY2009.

**Y-o-y change of fourth-quarter growth in FY2009 will recover to 1.7%**

Full-year real GDP growth in FY2009 will stand at 1.0% (previous outlook: 1.1%), rising slightly above growth in FY2008. The rate of growth on a fourth-quarter to fourth-quarter basis for FY2009 should pick up to 1.7%. Given the stabilization of crude oil prices along with the slower pace of rise of the imports deflator, the GDP deflator will take an upturn (0.7% y-o-y). For the first time in 12 years, nominal GDP growth (1.7%) will rise above the rate of real GDP growth.

[ Chart 19: Forecast on Japan's real GDP growth (half-year basis) ]

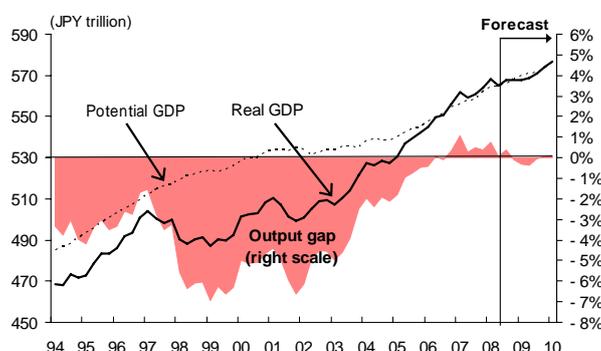


Source: Cabinet Office, *Preliminary Quarterly Estimates of GDP*.

**The positive output gap will contract in the second half of FY2008**

The output gap (the gap between real GDP and potential GDP) estimated by MHRI stood at 0.0% as of the Apr-Jun quarter of 2008 (Chart 20). If the Japanese economy grows in accordance to our outlook, the output gap should dip into negative territory during the recession in the second half of FY2008. Even though we expect that consumer prices (core CPI excluding fresh food) will rise to 1.8% in FY2008, note that the rise is comprised mainly of energy and food items. The spread of inflation to items other than food and energy should remain limited. Considering that companies with slumping earnings will tend to curb labor costs, the risks of wage inflation are also virtually nonexistent. Although the superficial inflation rate will rise, driven mainly by energy and food, the need for an interest rate hike would be extremely weak. On the other hand, since there would be no pressing needs for an interest rate cut as long as the output gap is near zero, monetary policy will most likely be kept on hold during FY2008. Discussions on a rate hike will only emerge around the summer of FY2009 when the economy starts to show signs of a gradual recovery.

[ Chart 20: The output gap ]



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

[ Chart 21: Outlook on the Japanese economy ]

(%)

	FY2007	FY2008	FY2009	FY2008		FY2009		FY2007	FY2008	FY2009
	(Actual)	(Forecast)	(Forecast)	1H (Forecast)	2H (Forecast)	1H (Forecast)	2H (Forecast)	(Contribution) (Actual)	(Contribution) (Forecast)	(Contribution) (Forecast)
GDP (real)	1.6	0.7	1.0	0.1	0.5	0.8	1.9	-	-	-
Domestic demand	0.3	-0.1	0.6	-0.6	0.2	0.8	1.1	0.3	-0.1	0.5
Private sector demand	0.4	0.1	0.6	-0.3	0.2	0.9	1.2	0.3	0.1	0.5
Personal consumption	1.4	0.5	0.9	0.0	0.6	0.9	1.4	0.8	0.3	0.5
Residential investment	-13.3	1.9	1.0	5.2	24.2	-2.1	-12.8	-0.4	0.1	0.0
Capital investment	-0.1	-1.3	-0.3	-1.5	-4.4	-0.0	3.0	-0.0	-0.2	-0.0
Public sector demand	0.2	-0.7	0.3	-1.7	-0.0	0.3	0.8	0.0	-0.1	0.1
Government consumption	0.7	0.3	0.8	-0.1	0.2	0.7	1.4	0.1	0.1	0.1
Public investment	-1.8	-5.1	-2.1	-8.6	-1.6	-2.5	-1.9	-0.1	-0.2	-0.1
Net exports (contribution)	1.2	0.7	0.5	0.5	0.3	0.3	0.8	1.2	0.7	0.5
Exports	9.5	3.7	3.6	0.7	2.1	2.5	7.5	1.4	0.6	0.6
Imports	2.1	-1.1	1.3	-3.5	0.1	0.6	4.1	-0.2	0.1	-0.1
GDP (nominal)	0.6	-0.4	1.7	-0.9	0.3	2.3	1.8			
GDP deflator	-1.0	-1.1	0.7	-1.6	-0.6	0.7	0.8			
Industrial production	2.6	0.5	1.4	-0.2	0.1	0.8	1.2			
Unemployment rate	3.8	4.1	4.0	4.1	4.2	4.0	4.0			
Current account balance (JPY trillion)	24.6	17.5	23.5	17.8	17.3	20.6	25.7			
as a percentage of nominal GDP	4.8	3.4	4.5	3.5	3.4	4.0	4.9			
Domestic corporate goods prices	2.3	5.8	1.6	5.2	5.9	2.2	1.0			
Consumer prices	0.3	1.8	0.8	1.8	1.8	1.0	0.6			
Long-term interest rate (%)	1.59	1.58	1.68	1.60	1.56	1.60	1.75			
Nikkei stock average (JPY)	16,000	13,400	14,800	13,500	13,300	14,300	15,300			
Exchange rate (JPY/USD)	114.2	105	106	106	103	105	107			
Crude oil price (WTI)	82.2	123.1	114.0	124.6	121.7	116.7	111.2			

Notes: 1. FY = rate of change from the previous year. Half-year GDP = rate of change from the previous term p.a. (the GDP deflator = rate of change from the previous year).

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 industrial production = rate of change from the previous term. The half-year unemployment rate and half-year current account balance are adjusted for seasonal factors and the 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 = yield on newly-issued 10-yr government bonds.

Sources: Cabinet Office, *National Accounts*, Ministry of Economy, Trade and Industry, *Indices of Industrial Production*, 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*.

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