

March 25, 2011

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## Japan Economic Monthly

*We pray for the souls of those who lost their lives in the 2011 off the Pacific coast of Tohoku Earthquake, and extend our deepest sympathies for those who suffered from the devastation. We sincerely hope for the speediest possible recovery for the affected regions.*

### ~Movement Toward Self-Sustaining Economic Recovery Stalls the 2011 off the Pacific coast of Tohoku Earthquake~

Economic Research Office  
The Bank of Tokyo-Mitsubishi UFJ, Ltd.

#### 1. The Real Economy

##### (1) Overview of the Economy

Following one of the strongest earthquakes ever recorded, Japan's progress toward a self-sustaining recovery stalls

Japan's economy had escaped from a holding pattern, pulled by exports and production, and signs of progress toward a self-sustaining recovery were appearing more widely. Then a massive 9.0 magnitude earthquake, one of the strongest ever recorded, struck in the Pacific Ocean off the Tohoku Region on March 11, triggering great tsunamis and then a crisis at a nuclear power plant. Although the impact of these events is still difficult to gauge, at this time we do already know that the human, social, and economic costs will be enormous, and Japan's progress toward a self-sustaining economic recovery will likely stall.

The March 11 earthquake can be broadly characterized in three ways compared to other major earthquake disasters in the past. First, the cost of the damage and losses will be huge. In January 1995, Hyogo Prefecture was hit by the Great Hanshin-Awaji Earthquake<sup>1</sup> in January 1995, and Japanese consumer sentiment cooled immediately after the disaster (see *Topic* section below). Private consumption in the Jan-Mar quarter dropped significantly. In the wake of the 2011 off the Pacific coast of Tohoku Earthquake, which clearly has wrought much more damage, domestic demand and especially private consumption will probably drop even more as consumer sentiment chills even more sharply.

<sup>1</sup> Commonly known as the Kobe Earthquake outside of Japan.

The second characteristic of the recent quake is the extremely wide geographic area affected, with damage occurring from the Tohoku Region down to the northern Kanto Region, including areas hit by the huge tsunamis. (According to police reports, damage also occurred in Hokkaido, Shizuoka, and Kochi prefectures.) In terms of nominal GDP, the six prefectures of the Tohoku Region comprise only 6.4% of the nation's nominal GDP (2007 figures), less than the 11.2% comprised by Hyogo and Osaka prefectures, the areas struck by the Great Hanshin-Awaji Earthquake (Table 1). However, the six prefectures of the Tohoku Region, together with five more prefectures—Ibaragi, Tochigi, Gunma, Chiba, and Niigata—account for a total of 17.2% of the nation's nominal GDP, on par with the scale of metropolitan Tokyo. The adverse economic effects are also highly likely to mount further. Also, a broad range of industry has been hit, and stalled distribution and transportation across wide areas could cause bottlenecks to occur in economic activity around the nation.

**Table 1: Nominal GDP of Disaster-Struck Areas and Rankings of Electricity, Gas, and Water Nationwide Weights (FY2007)**

	Nominal GDP(JPY Trn)				
		Nationwide weight (%)	National ranking	Of this, Electricity, Gas, and Water	
				National weight (%)	National ranking
Aomori Prefecture	4.6	0.9	30	1.1	31
Iwate Prefecture	4.5	0.9	31	0.9	37
Miyagi Prefecture	8.3	1.6	15	1.7	19
Sendai City	4.3	0.8	—	0.6	—
Akita Prefecture	3.8	0.7	35	0.9	35
Yamagata Prefecture	4.2	0.8	34	0.7	42
Fukushima Prefecture	7.9	1.5	19	5.4	4
Tohoku Region - 6 Prefectures	33.3	6.4	—	10.8	—
Ibaragi Prefecture	11.6	2.2	12	2.9	12
Tochigi Prefecture	8.3	1.6	16	1.0	34
Gunma Prefecture	7.5	1.4	21	1.5	22
Chiba Prefecture	19.7	3.8	6	5.1	5
Niigata Prefecture	9.0	1.7	14	2.4	13
Total - 11 Prefectures	89.3	17.2	—	23.7	—
Reference					
Tokyo	92.3	17.7	1	7.7	2
Osaka Prefecture	38.9	7.5	2	7.8	1
Osaka City	21.5	4.1	—	2.5	—
Hyogo Prefecture	19.1	3.7	7	4.3	7
Kobe City	6.2	1.2	—	0.7	—

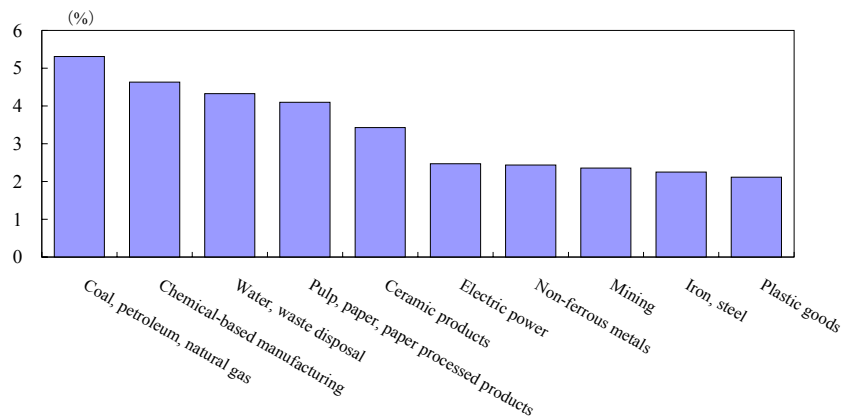
Source: Compiled by BTMU Economic Research Office from Cabinet Office *System of Prefectural Accounts*.

Third, the subsequent nuclear power plant crisis has hurt electric power supply in the Tohoku and Kanto regions. The badly-damaged Tohoku region, especially Fukushima Prefecture, supplies a good deal of electric power (Table

1), and industries highly reliant on electric power will likely continue to be hard hit (Figure 1). The planned power outages (rolling blackouts planned to last until at least through the end of April) have already started and are expected to continue for some time; however, if the outages are extended, there is a risk that economic and industrial activity and the economy will stall for a longer period.

Overall, we predict that Japan's economy will suffer a severe plunge, especially in the disaster-struck region, for some time and that the drop will then manifest itself clearly on a national scale in terms of macro data. Also, we think there should be sufficient caution regarding the risk that the effects of the nuclear power plant crisis will persist and the economy will not have a chance to recover.

Figure 1: Electric Power Input Ratio by Industry  
(2008, Top 10 Industries out of 50)



Note: Electric power input ratios are electric power input volume subtracting domestic production value, by industry.  
Source: Compiled by BTMU Economic Research Office from METI Updated Input-Output Tables.

Meanwhile, as long as overseas economies continue to expand, external demand can be expected to support Japan's economy. Of course, domestically, the Japanese Government should implement an array of measures speedily and flexibly to strongly support reconstruction in the disaster region while also involving the private sector.

## (2) Fiscal

Supplementary budget to be compiled for disaster rebuilding

Both the ruling and opposition parties agree on compiling a supplementary budget for disaster reconstruction efforts. Three supplementary budgets were drawn up following the January 1995 Hanshin-Awaji Earthquake to allot more than JPY3 trillion for earthquake rebuilding-related efforts (Table 2). The area affected by this month's earthquake is so widespread, and the costs are very

likely to exceed those of the Great Hanshin-Awaji Earthquake. DPJ leaders have already noted that the first round of quake measures will not be less than JPY10 trillion even in the FY11 supplementary budget bill, the first budget to address the March 11 disaster. However, ruling and opposition party opinions regarding the timing of the supplementary budget submission and financial resources differ, and reaching agreement will take some time.

Table 2: Supplementary Budgets Following Hanshin-Awaji Earthquake

FY94 Second Supplementary Budget (passed Feb. 28, 1995)		1.223 trn	
Expenditures		Revenue	
Disaster reconstruction-related	1.223 trn	Construction bonds	779.4 bn
		Deficit bonds	810.6 bn
		Non-tax revenue	34.3 bn
		Tax revenue	▲602.0 bn
FY95 First supplementary budget (passed May 19, 1995)		2.7261 trn	
Expenditures		Revenue	
Disaster reconstruction-related	1.4293 trn	Construction bonds	2.2620 bn
Emergency disaster management measures	790.0 bn	Deficit bonds	564.0 bn
Science technology/Information communications promotion	320.0 bn	Non-tax revenue	38.0 bn
Strong JPY, SME measures	70.0 bn	Tax revenue	▲138.0 bn
Other	116.7 bn		
FY95 Second Supplementary Budget (passed Octobe 18, 1995)		5.3252 trn	
Expenditures		Revenue	
Disaster reconstruction-related	778.2 bn	Construction bonds	4.4910 bn
Public works projects	2.303 trn	Deficit bonds	211.0 bn
Education, research, social welfare facilities	711.2 bn	Non-tax revenue	15.6 bn
Uruguay Round agricultural measures expenses	595.0 bn	Surplus funds from previous FY	607.7 bn
Costs for special measures for efficient land utilization	330.3 bn		
Costs for special SME measures	270.1 bn		
Subsidies for housing, urban development corp	149.0 bn		
Other	461.1 bn		
<b>Reference: Total, Earthquake reconstruction-related</b>		<b>3.2298 trn</b>	
		<b>(incl measures in FY94 and FY95 budgets 3.3746 trn)</b>	

Source: Compiled by BTMU Economic Research Office from MoF materials, various reports.

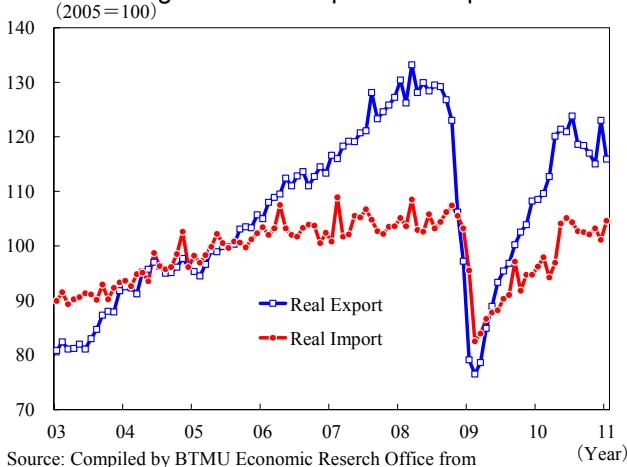
### (3) Corporate Sector

#### ① Exports

Exports to continue to improve

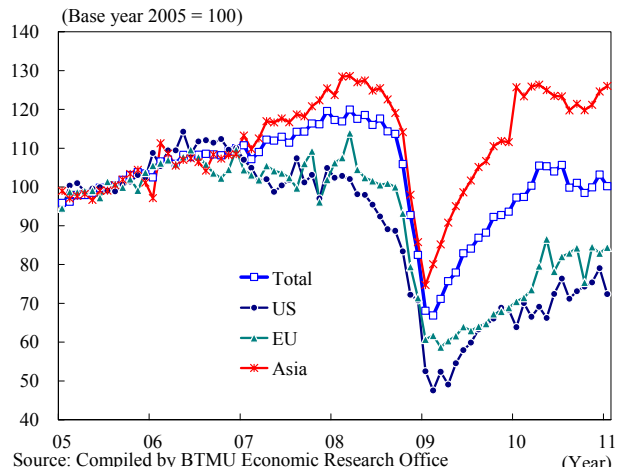
Real exports, according to BoJ *Real Imports and Exports*, fell -5.8% MoM in January, apparently in reaction to the December result (Figure 2). Export volume to the US dropped -8.4% MoM after rising +4.8% MoM in December, according to Cabinet Office *Export Volume Index*. Meanwhile, export volume to Asia rose +1.1% MoM and to the EU +1.8% MoM, accelerating from the previous month (Figure 3). Export volume to the US was suppressed by falling shipments of transport equipment, which had been strong in November and December, while other goods were also weak.

Figure2: Real Import and Export



Source: Compiled by BTMU Economic Reserch Office from BOJ Real Inport and Export

Figure 3: Export Volume by Destination Region



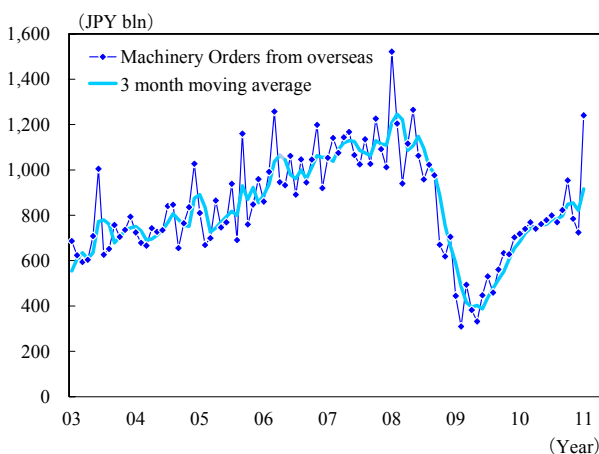
Source: Compiled by BTMU Economic Research Office from Cabinet Office Export Volume Index.

Despite robust demand from abroad, concerns persist that declining production will suppress exports

The drop in exports is considered to be a reaction to the December figures because exports of general machinery continue to be firm and automobile sales in the US remain strong. By item, real exports of general machinery have been on an upward trend since January 2010, thus driving exports. This is due to economic recoveries in destination countries as well as increasing machinery orders for facilities (Figure 4), and exports are expected to continue to rise, especially to China. Further, since US automobile sales also improved in February (Figure 5), the drop in exports in January is very likely to have been in reaction to December figures.

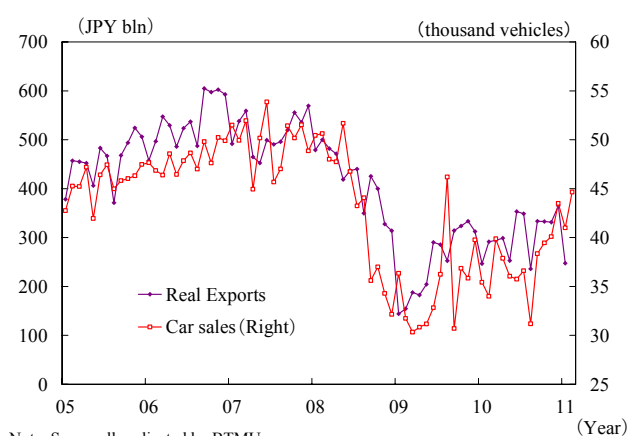
However, it is unclear whether Japanese manufacturers will be able to maintain enough supply to meet robust demand from abroad as their production capacity is hit by the effects of the 2011 off the Pacific coast of Tohoku Earthquake.

Figure4: Machinery Orders from overseas



Source: Compiled by BTMU Economic Research Office from Cabinet Office

Figure5: Japanese Car sales in US and



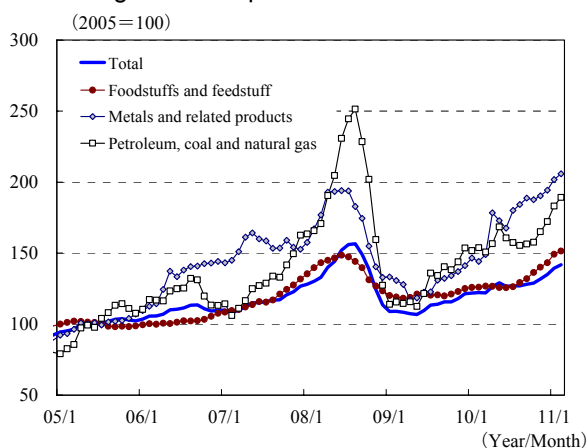
Note: Seasonally-adjusted by BTMU  
Export volume divided by Export Price Index is Real Exports  
Source: Compiled by BTMU Economic Reserch Office from Mof Trade Statistics and Bloomberg

Trade deficit occurs due to temporary decline in exports and rise in import values

Trade balance stood at -JPY471.4 billion in original data in January, the first trade deficit in 22 months. Adjusted for seasonality, the trade balance fell -66.9% MoM and the trade surplus shrank to JPY191.7 billion. This was, as noted earlier, due to exports dropping temporarily, as well as import prices rising (Figure 6). Import prices continue to rise, especially for “foodstuffs and Feedstuffs”, “metals and related products” and “petroleum, coal and natural gas”. Meanwhile, export prices remain flat on average, especially for more heavily-weighted sectors like electric/electronic equipment and transport equipment. Japan’s terms of trade continue to worsen (Figure 7).

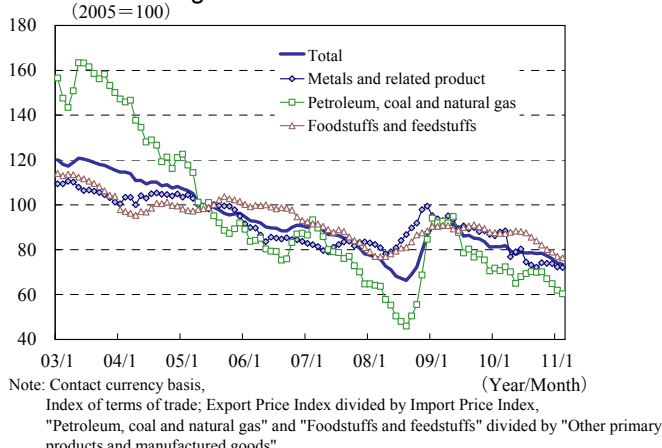
Japan’s trade balance is likely to remain soft for some time, given the projected increase in imports, especially natural resources, due to the effects of the 2011 off the Pacific coast of Tohoku Earthquake.

Figure6 : Corporate Goods Price Index



Note: Contact Currency Basis  
Source: Compiled by BTMU Economic Reserch Office from BOJ Corporate Goods Price Index

Figure7: Terms of Trade



Note: Contact currency basis,  
Index of terms of trade; Export Price Index divided by Import Price Index,  
"Petroleum, coal and natural gas" and "Foodstuffs and feedstuffs" divided by "Other primary products and manufactured goods"  
Source: Compiled by BTMU Economic Reserch Office from BOJ Corporate Goods Price Index

## ② Production

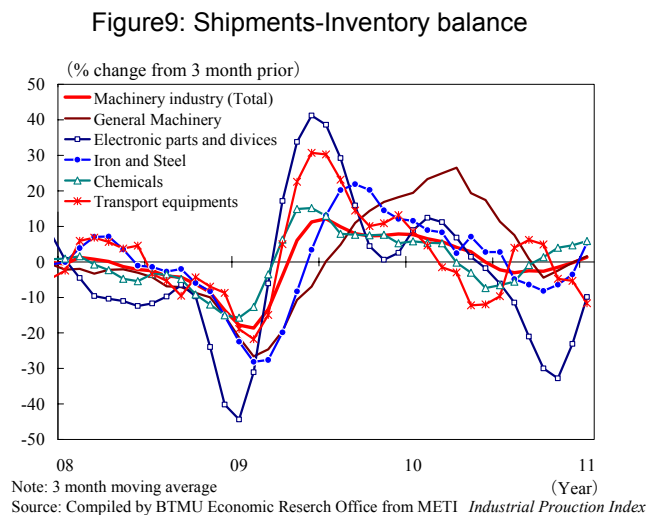
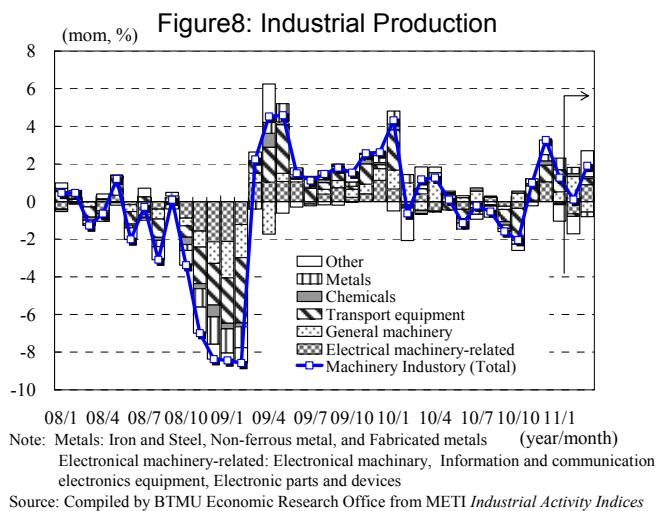
Recent improvement to continue

Although January industrial production slowed to +1.3% MoM from +3.3% MoM in December, production continued to rise. By item, transport machinery production (+7.0% MoM) rose strongly, and output of general machinery (+3.9% MoM), including semiconductor manufacturing machinery, contributed to the increase in production (Figure 8). Although manufacturing of electronic equipment-related goods, including electronic parts and devices, continued to increase, production of electronics-related goods overall dragged on total production because of the decline in production of information and communications electronic equipment, including LCD TVs.

The shipments-inventory balance (shipments year-on-year rate of rise minus inventories year-on-year rate of rise) continues to improve because shipments

of electronic parts and devices are recovering (Figure 9). This has supported the balance, which has been positive since last May, even for the industrial sector overall. Further, even transport equipment, which has had a negative balance because of the buildup in inventories, appears to have actively built up inventories, due to strong shipments and the reactionary drop following the end of the Eco-car subsidies wearing off.

Note that damage to production facilities like factories as well as stalled production due to the planned blackouts following the 2011 off the Pacific coast of the Pacific coast of Tohoku Earthquake will put downward pressure on production. The industrial production forecast survey conducted in January projected that manufacturing would increase +0.1% MoM in February and +1.9% MoM in March; however, March production is highly likely to drop considerably.

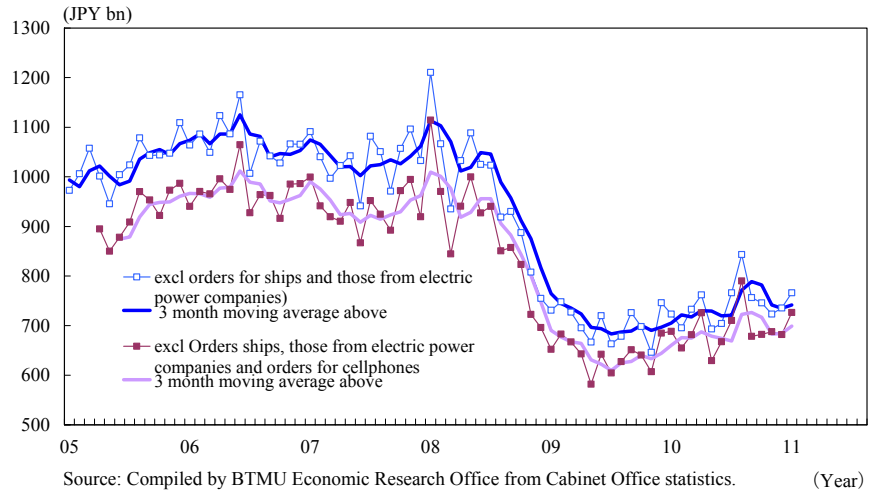


### ③ Capital Expenditures

**Machinery orders**  
showing signs of  
emerging from lull

Private sector machinery orders (excluding orders for ships and those for electric power generation industries), a leading indicator of capital expenditures, rose +4.2% MoM in January. This was the second straight month of positive growth (Figure 10). Even machinery orders excluding cell phones, which are strongly correlated to consumption, started to rise, by +6.6% MoM, reflecting an end to the lull. However, the increase in sectors that tend to have one-time, limited demand—as for airplanes and engines—made a big contribution. Therefore, although January’s increase should be discounted, we think that machinery orders are trending toward a recovery because demand for a wide range of production equipment has been firm.

Figure 10: Machinery Orders from Private Sector



Further, capacity utilization indicators for major industries, including the electronics parts and devices sector (which had dropped) and transport machinery industry, have started to rise, with January indicators exceeding the recent peak in May 2010 (Figure 11). Furthermore, cash flow—the source of capital spending—has been growing because of recovering sales (Figure 12).

Figure 11 : Capacity Utilization Ratio by industry

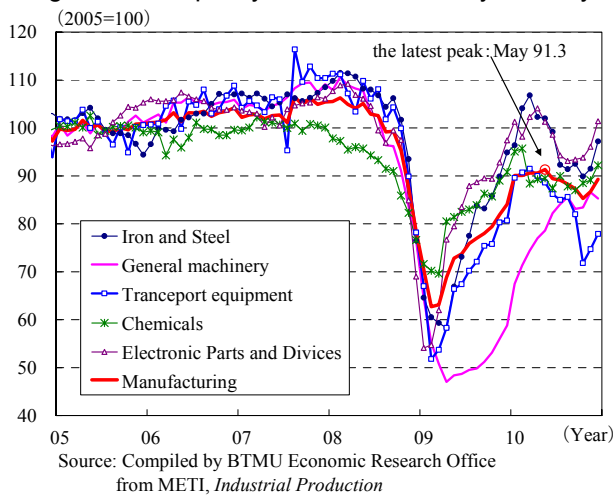
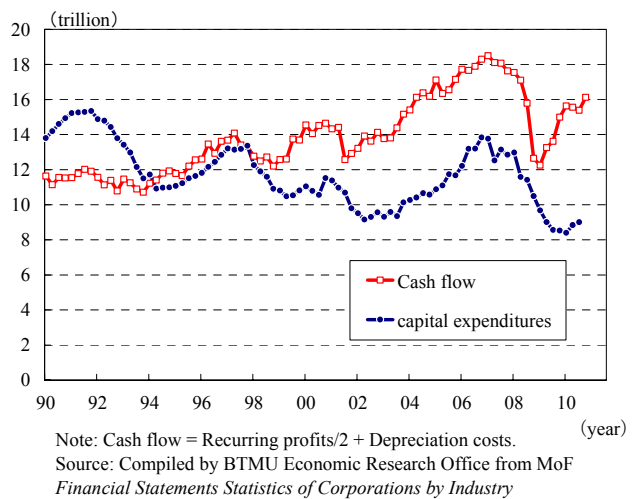


Figure 12: Capital Expenditures and Cash Flow



However, we think that corporate sentiment will grow somewhat cautious because of the large scale of destruction following the 2011 off the Pacific coast of Tohoku Earthquake, and companies are likely to limit or postpone capital expenditures for some time. Thereafter, once events settle down, we think that capital expenditures can be expected to jump due to pent-up and



reconstruction demand.

#### (4) Household Sector

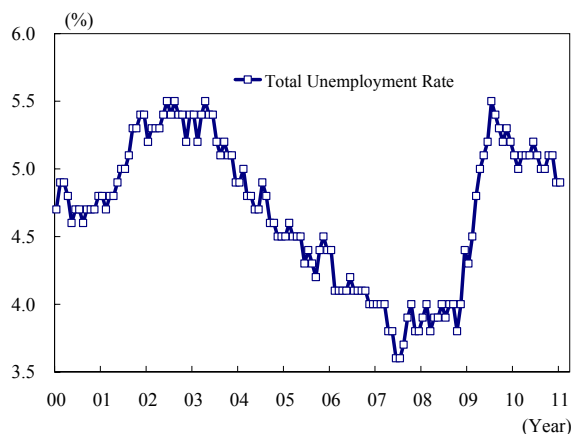
##### ① Employment, Wages

Employment conditions gradually showing positive movement

Employment conditions are gradually starting to show some bright spots, with the unemployment rate—which had been chronically high—starting to fall and an improved jobs-to-applicants ratio and increase in worker numbers.

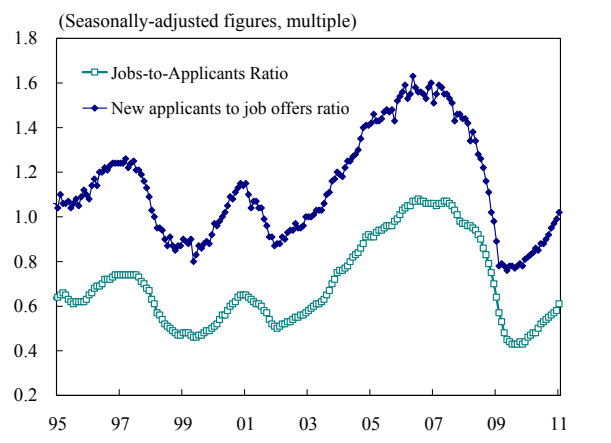
Although the January unemployment rate remained flat from December at 4.9%, this was the second straight month below 5.0% (Figure 13). The job-openings-to-applicants ratio is improving, although slowly, with the jobs-to-applicants ratio rising to the 0.60x level for the first time in two years, since January 2009. The new job applicants-to-job-openings ratio was also above 1.0x (Figure 14).

Figure 13: Total Unemployment Rate



Source: Compiled by BTMU Economic Research Office from MIC Labor Force Survey.

Figure 14: Job-Offers-to-Applicants Ratio

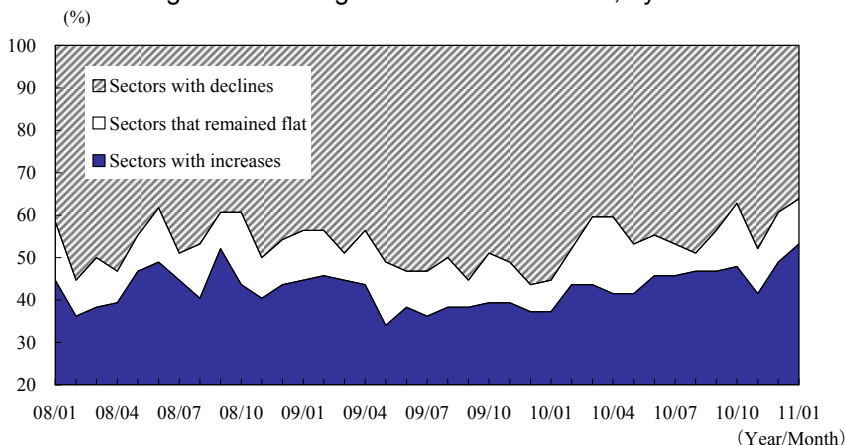


Source: Compiled by BTMU Economic Research Office from MHLW Report on Employment Service.

The medical and welfare sector continues to show strong growth in worker numbers, while worker numbers have started to trend upward in services-related sectors like education and learning support services and living-related and eating/drinking services since the second half of last year. Even overall, the share of sectors in which the number of workers is increasing has started to rise, as the recovery in employment conditions continues to widen (Figure 15).

Despite monthly fluctuations in wages, overall trending toward recovery

Figure 15: Changes in Worker Numbers, by Sector



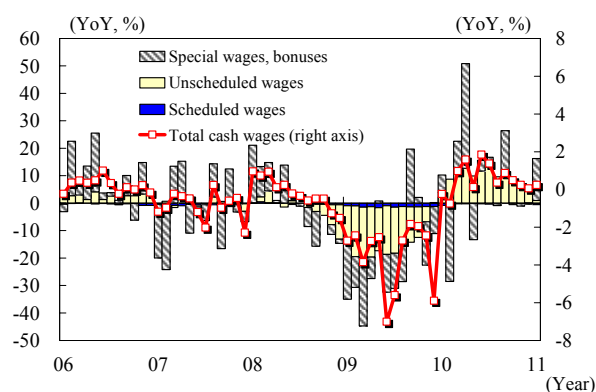
Source: Compiled by BTMU Economic Research Office from MIC *Labor Force Survey*.

However, because of the damage following the Pacific coast of Tohoku Earthquake, more operational shutdowns at plants are occurring and retailers are curtailing operations, and this could have an adverse impact on employment conditions over the short term.

Wages (total cash wages) are continuing the recovery trend, although there have been big monthly fluctuations recently due to scheduled wages and bonuses. Although January total cash wages have not recovered to the mid-2010 level, they did rise by +0.2% YoY, continuing to exceed year-earlier levels.

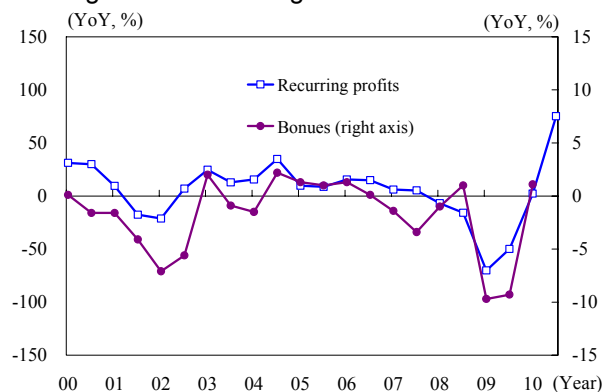
Broken down, although January scheduled wages dropped considerably, by -0.5% MoM, bonuses and special wages jumped by +15.3% MoM. This supported overall wages (Figure 16). Special wages had been a factor behind the big drop in wages since the collapse of Lehman Brothers, but with bonuses rising as corporate profits have recovered, the recent improvement in wages has continued (Figure 17).

Figure 16: Total Cash Wages, Breakdown



Note: For workplaces with five or more workers based on surveyed industries.  
Source: Compiled by BTMU Economic Research Office from MHLW, *Monthly Labor Statistics*.

Figure 17: Recurring Profits and Bonuses



Note: Recurring profits for companies of all sizes, six months before.  
Bonuses for companies with five or more workers, based on surveyed industries.  
Source: Compiled by BTMU Economic Research Office from BoJ Tankan Survey, MHLW *Monthly Labor Survey*.

## ② Private Consumption

January real consumption spending was suppressed by a reactionary drop following the surge in purchases prior to the scaling back of the Ecopoint program, falling -1.0% YoY. This was the fourth straight month figures fell below year-earlier levels (Table 3).

Table 3 : Consumption

	Consumption	Food	Housing	Fuel, light&water chrges	Furniture& Household utensils	Clothing & footwear	Medical Care	Transportation & communication	Education	Culture&recreation	Othres
YoY (%)	▲ 1.0	▲ 2.4	1.5	2.2	▲ 0.6	▲ 3.7	3.4	▲ 1.8	9.5	▲ 6.4	0.6
Contribution (% pt)	▲ 1.0	▲ 0.5	0.1	0.2	▲ 0.0	▲ 0.2	0.1	▲ 0.2	0.4	▲ 0.7	0.2

Note: Excluding Housing, Purchase of Money gifts and Remittance

Source: Compiled by BTMU Economic Research Office based on Statistics Bureau *Family Income and Expenditure Survey*

**Declining household electronics sales** Since the Ecopoint program was scaled back in December, sales of Ecopoint-eligible telephones have plunged. This has been a factor in suppressing private consumption overall. The shift to digital terrestrial broadcasting occurred last July, so the drop in sales of thin-screen TVs was relatively small. However, refrigerator sales plunged (Figure 18).

Meanwhile, sales of passenger vehicles, which had held back the recovery in private spending since the Ecocar program ended, have started to improve. Sales had fallen to 265,000 vehicles in November, but recovered to the 311,000 vehicle level. This suggests that the reactionary drop to the surge in demand prior to the end of the Ecocar program has been worked through (Figure 19).

That said, we think that private consumption could drop considerably, not because of any direct impact from the 2011 off the Pacific coast of Tohoku Earthquake and the damage, but as consumer sentiment deteriorates.

Figure 18: Ecopoint System Home Appliance Sales

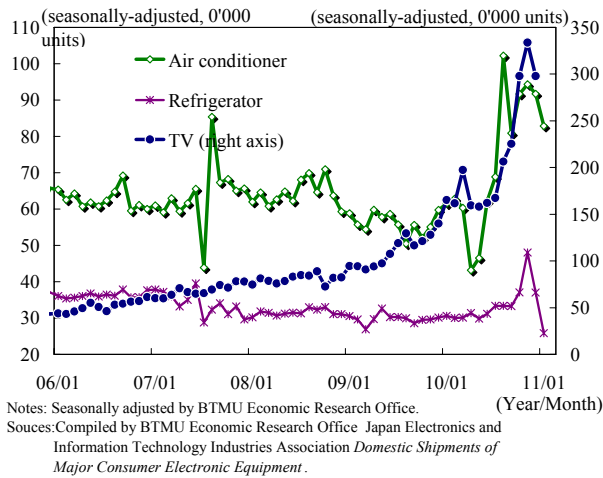
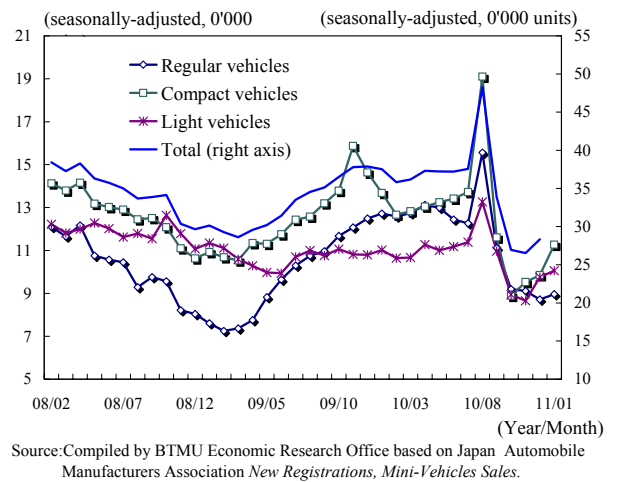


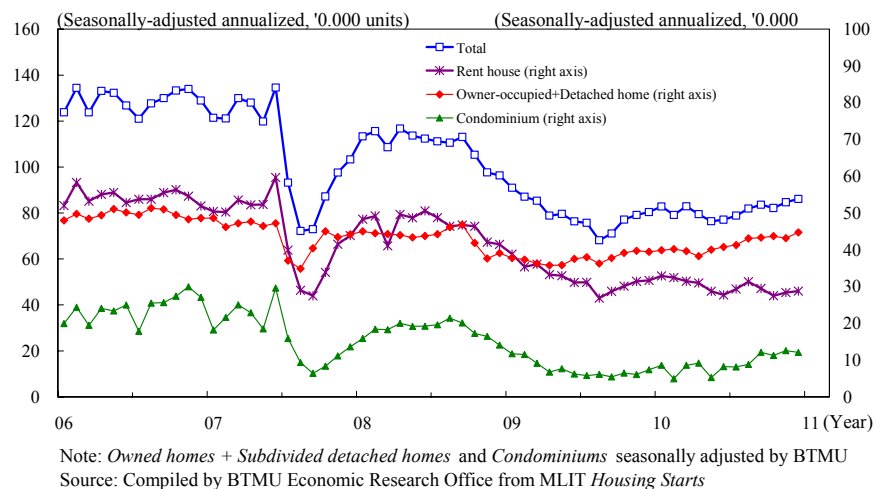
Figure 19 : Vehicle Sales



### ③ Residential Investment

Although new home starts fell slightly in January (to 847,000 units annualized from 861,000 units annualized in December), this was the sixth straight month that starts exceeded the 800,000 unit annualized level. The gradual recovery in housing starts continues. Despite monthly fluctuations, by occupant type, owned homes plus detached homes and condominiums continue to be firm. Meanwhile, rental housing remains flat, due to the decline in the younger population—which comprises a big part of demand for rental housing—as well as the real estate investment market, which remains severe although the worst is over (Figure 20).

Figure 20: New Housing Starts by Owner-Occupant Relation



Residential investment to continue modest recovery

We believe that residential investment will continue to recover gradually, especially starts of owned homes plus detached homes and condominiums.

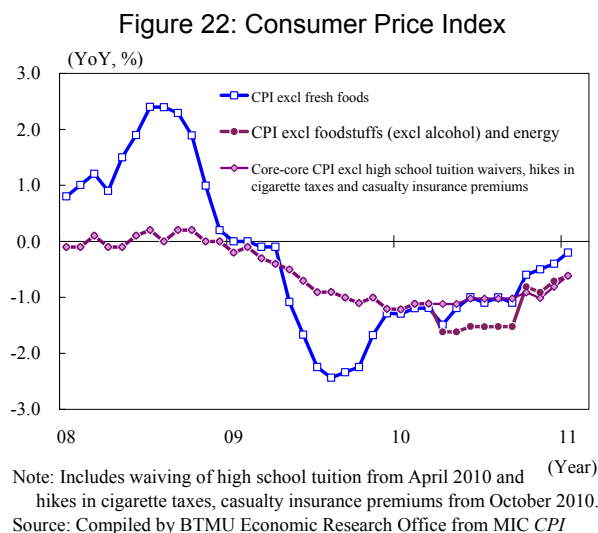
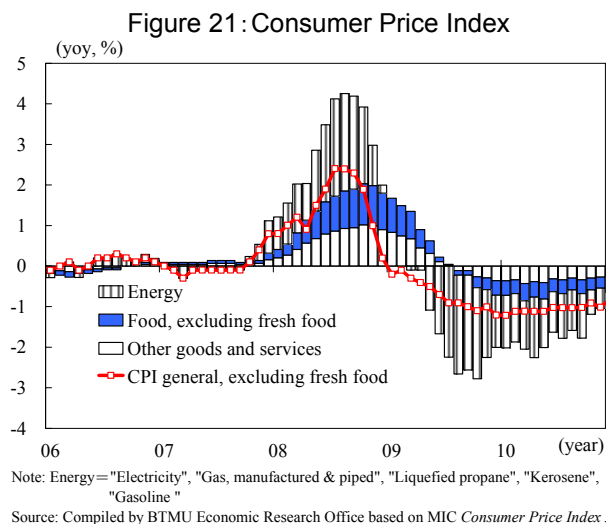
Low interest rates and tax credits, including exemptions for gift and inheritance taxes, will contribute to the improvement. Also, reconstruction as well as temporary shelter demand for housing is anticipated in the disaster-struck region once conditions settle down.

According to January data, the household sector overall is improving, but we think that the destruction from the recent Pacific coast of Tohoku Earthquake will be enormous and the effects will inevitably manifest in the days ahead. On top of the direct destruction from the earthquake, worsening consumer sentiment could also hurt private consumption and residential investment.

## (5) Inflation

No change in downward consumer price trend

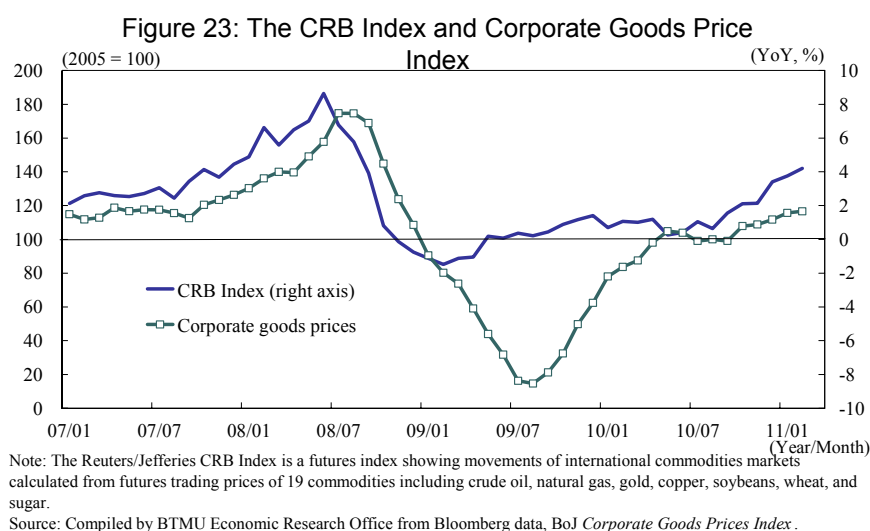
The January consumer price index (the core CPI, excluding fresh foods) stood at -0.2% YoY, the fourth straight month of slowing decline. However, the slowdown was largely due to the recent rise in energy prices like gasoline and kerosene prices as oil prices rise (Figure 21). The margin of decline in the core-core CPI (excluding foodstuff except for alcohol and energy) shrank only slightly, with the core-core CPI at -0.6% YoY (versus -0.7% YoY in December). The downward trend in consumer prices still has not changed (Figure 22).



Although uptrend in corporate goods prices persists, spread to downstream goods is limited

Meanwhile, corporate prices are rising at a faster pace, especially for petroleum and grains, as international commodities prices increase (Figure 23). Commodities prices are expected to remain high, so corporate goods prices will probably continue to rise. Although consumer prices of some goods like coffee and cooking oil have started to become affected, in macro terms a sizeable deflationary gap persists and continues to put strong downward pressure on

prices. Thus, the effect of rising commodities prices on consumer prices overall is still limited.



However, distribution bottlenecks for everyday goods and energy products could worsen due to the severe devastation, and prices of some goods could rise temporarily.

## 2. The Financial Markets

### (1) Monetary Policy

BoJ to implement further easing

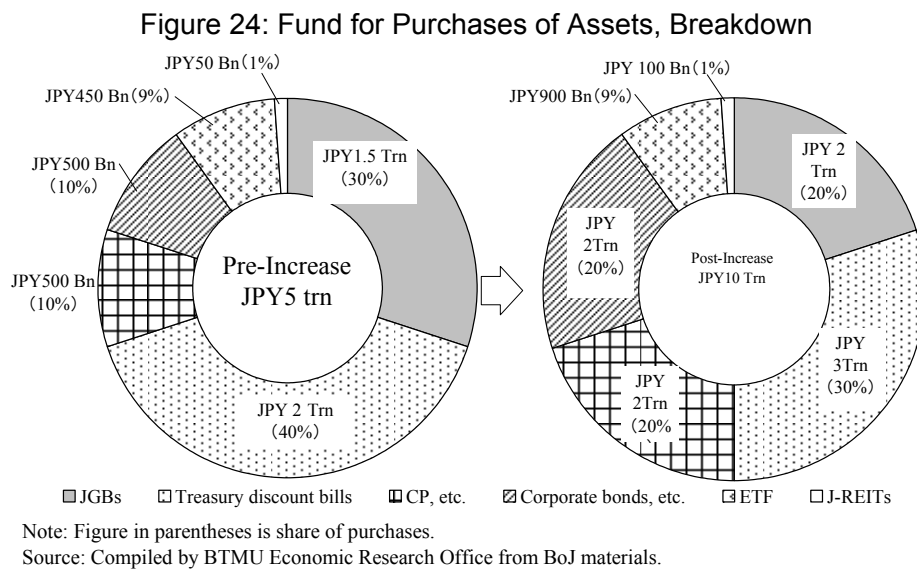
The Bank of Japan has boosted monetary easing in order to prevent corporate sentiment from worsening and greater risk aversion in the financial markets following the 2011 off the Pacific coast of Tohoku Earthquake. At its March 14 Monetary Policy Board meeting, the BoJ agreed to increase funds for asset purchases by JPY5 trillion to JPY40 trillion (Table 4).

Table 4: BoJ Asset Purchase Funds

Assets to be purchased	Amount of fund			Balance as of February
	before March MPC①	after March MPC②	②-①	
Purchase	50,000	100,000	(50,000)	21,048
JGBs	15,000	20,000	(5,000)	6,019
Treasury discount bills	20,000	30,000	(10,000)	10,497
CP, etc.	5,000	20,000	(15,000)	1,603
Corporate bonds, etc.	5,000	20,000	(15,000)	2,055
ETF	4,500	9,000	(4,500)	828
J-REITs	500	1,000	(500)	46
Pooled collateral operations	300,000	300,000	(0)	272,323
<b>Total</b>	<b>350,000</b>	<b>400,000</b>	<b>(50,000)</b>	<b>293,371</b>

Source: Compiled by BTMU Economic Research Office from BoJ materials.

The fund had been established as part of the central bank’s ‘comprehensive monetary easing’ voted on last October, and its objective is to put downward pressure on interest rates and encourage a lower risk premium over the longer term. The fund is largely divided into two parts, JPY30 trillion for fixed interest rate pooled collateral operations and JPY5 trillion for purchases of various types of assets; the recent increase in funds is for the latter. The portion of the recent increase is big for non-JGB risk assets (corporate bonds, CP, etc.); this can be interpreted as the BoJ’s intention to limit the rise in risk premium (Figure 24).



**Biggest same-day funds supplying operations ever**

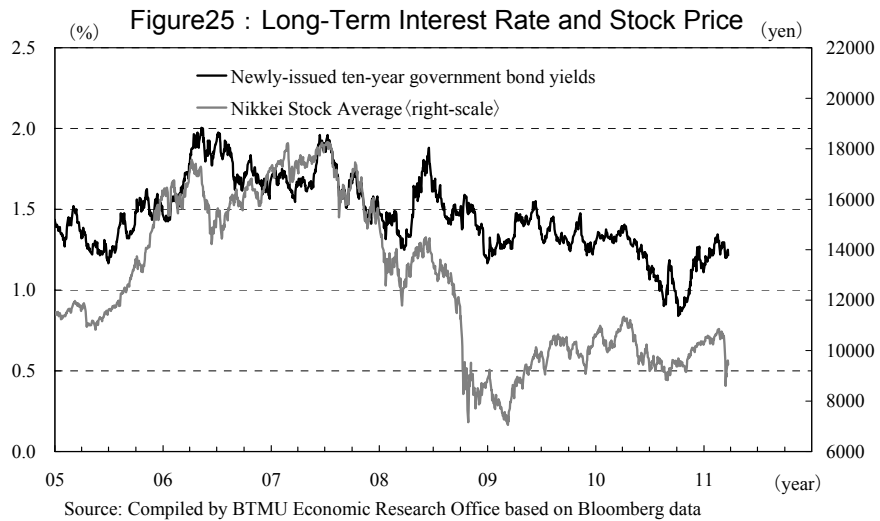
The BoJ also boosted supplies of funds to the short-term markets in order to prevent difficulty with funds procurement as lending in the short-term financing markets declined as unease grew. On March 14, the central bank provided a record JPY15 trillion in same-day funds supplying operations and has continued to aggressively supply funds even after the 15<sup>th</sup>.

## (2) Long-term Interest Rates

**Benchmark JGB yield supported after plunging temporarily**

Although the benchmark JGB yield declined due to the ‘flight to quality’ following the 2011 off the Pacific coast of Tohoku Earthquake, it has been supported since then. At one point on March 15, the yield on newly-issued 10Yr JGBs fell to 1.145%, the lowest level in two months, but has since recovered to nearly 1.2% (Figure 25). The benchmark yield’s decline has been more limited than the drop in stock prices. This is probably because of the strong possibility of boosted JGB issuances in order to raise funds for earthquake reconstruction, as well as the belief that insurance companies will

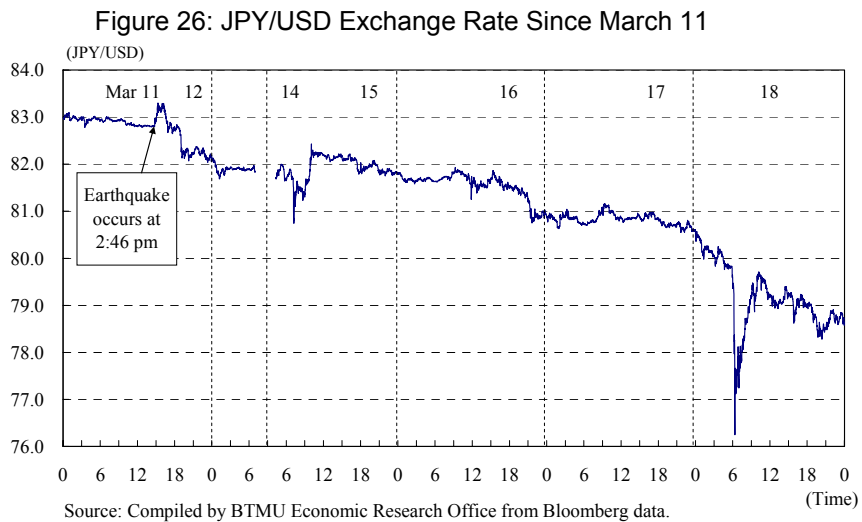
cash in their JGB holdings ahead of payouts.



### (3) Foreign Exchange

JPY/USD sets new record high

The JPY weakened against the USD immediately following the earthquake, but then started to strengthen again. On March 17, the JPY hit JPY/USD 76.25 at one point, surging past the previous record high of JPY/USD 79.75, set in April 1995 (Figure 26).

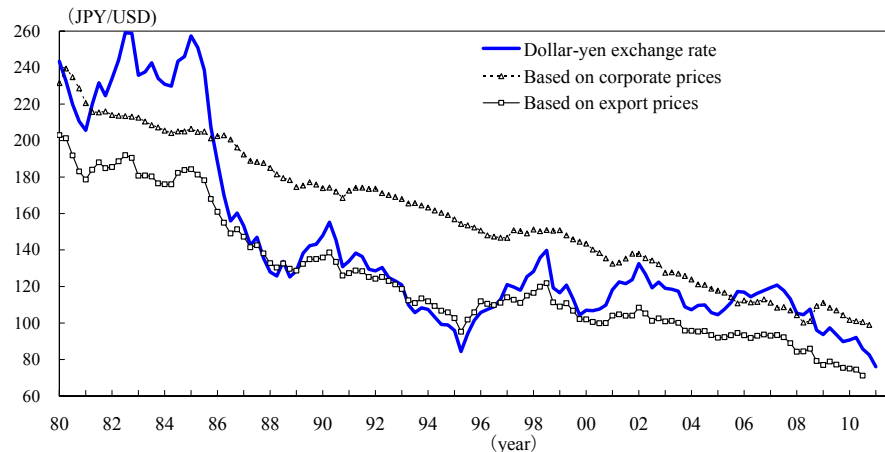


The JPY's sudden surge was due to speculation that Japanese institutional investors, especially insurance companies, would accelerate the repatriation of funds, as well as to greater demand for JPY by overseas investors. The euro-yen LIBOR one-month contract rate stood at 0.1650% as of March 17, well above the 0.1325% prior to the earthquake. This indicates that procuring JPY overseas has become more difficult, and overseas investors have



increasingly started to sell their USD cash on hand in order to buy JPY. The JPY's purchasing price parity in terms of export prices—viewed as the upper limit of the JPY in the past—has been JPY/USD70 to JPY/USD74 (Figure 27) recently, so we cannot deny that there is room for the JPY to strengthen further.

Figure 27 : Yen Exchange Rate : Purchasing Power Parity



Note: Purchasing power parity = exchange rate for a base year (Average of 1973: ¥271.40 per dollar) × (Japanese price index / U.S. price index)

Data for export prices are the averages of those based on corporate prices and those based on GDP deflator.

Source: Compiled by BTMU Economic Research Office based on MIC, "Consumer Price Index"; Bank of Japan, "Wholesale Price Index"; Cabinet Office, "National Accounting"; U.S. DOL, "Monthly Labor Review"; U.S. DOC, "Survey of Current Business"; and Bloomberg data.

Amidst such circumstances, finance ministers and central bankers from the G7 countries held an emergency teleconference on the morning of March 18 and agreed to jointly intervene in the foreign exchange markets that day. The collaborative intervention conducted in July 1995 when the JPY was strong had been a turning point, and by September of that year the JPY had fallen to the JPY/USD100 range. The recent intervention appears to have had some effect, but uncertainty about the future is extremely high, with the events surrounding the Fukushima Daiichi Reactor and other factors still evolving. The risk that the JPY will continue to strengthen thus persists.

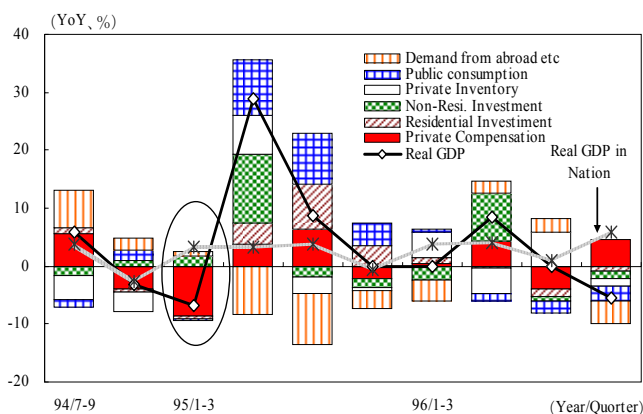
## Topic: The Economic Impact of the 1995 Hanshin-Awaji Earthquake

Big economic decline in Hyogo Prefecture, especially for private consumption, in the immediate aftermath of the Kobe Earthquake

The Great Hanshin-Awaji Earthquake struck on January 17, 1995, with an epicenter in the Akashi Strait off Awaji Island in Hyogo Prefecture. The major natural disaster claimed more than 6,400 lives and injured nearly 44,000 persons as approximately 250,000 homes were either completely or partially destroyed.

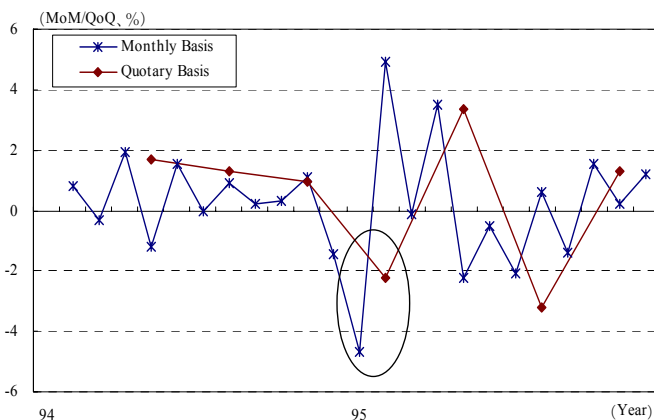
The disaster caused Hyogo Prefecture's GDP to fall an annualized 6.9% QoQ in the Jan-Mar quarter (Figure 28). By demand item, private consumption plummeted 15.7% QoQ, and residential investment also dropped -9.9% QoQ. Further, industrial production in the Kinki Region declined -2.2% QoQ (-4.7% MoM in January alone, Figure 29). However, the nation as a whole posted positive annualized GDP growth of +3.4% QoQ in Jan-Mar 1995 (partly due to a surge in inventory investment), suggesting that the greatest adverse impacts were limited to the disaster-struck region.

Figure28:Hyogo's real GDP around Hanshin-Awaji Earthquake period



Source: Compiled by BTMU Economic Reserch Office from Hyogo, Quortaly GDP inside Hyogo

Figure29: Hanshin-Awaji EarthquakeIndustrial Production in Kinki



Source: Compiled by BTMU Economic Reserch Office from METI Kinki Industrial Activity Indices

Government aggressively implemented support and reconstruction measures for the disaster-struck area

Meanwhile, three supplementary budgets were compiled in order to cover public support and rebuilding measures, totaling JPY3.3746 trillion (Table 5). The spending was for public works projects including infrastructure restoration for roads and railways (JPY1.1074 trillion), rehabilitation of port functions (JPY529.5 billion), and public housing supply (JPY421.7 billion). The government also provided economic support to both businesses and private citizens, with JPY199.1 billion for SME refinancing and JPY142.1 billion for

condolence money and support loans.

Table 5: Budget Related to Hanshin-Awaji Earthquake

(JPY Bn)

	Total	FY94 Second	FY95 First	FY95 Second	FY94-95 original
		supplementary budget	supplementary budget	supplementary budget	budgets
Roads, railroads infrastructure reconstruction	11,074	4,716	4,369	1,429	560
Restoration of port functions	5,295	1,199	3,671	357	68
Public housing supply	4,217	869	969	2,194	185
Support for SME refinancing	1,991	609	1,178	204	0
Rubble removal	1,878	343	1,357	157	21
Temporary housing assistance funds	1,639	853	219	419	148
Land reallocation	1,483	150	239	1,032	62
Condolence money, assistance loans	1,421	440	247	734	0
Secondary damage prevention projects	1,388	96	1,277	0	15
Earthquake-proofing projects	954	103	236	316	299
Improving disaster-prevention functions	835	65	228	452	90
Industrial promotion	134	0	6	128	0
Other (social insurance assistance, etc.)	1,437	780	297	360	0
Total	33,746	10,223	14,293	7,782	1,448

Source: Compiled by BTMU Economic Research Office from Headquarters for Reconstruction of Hanshin-Awaji Area materials.

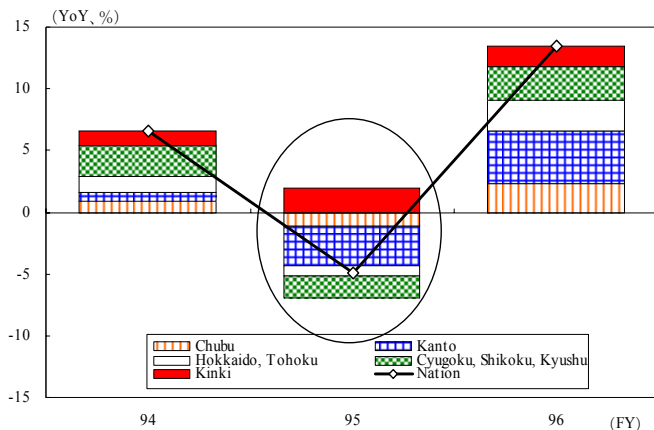
In terms of GDP, the increase in government final consumption spending and public fixed capital over the five quarters from Jan-Mar 1995 to Jan-Mar 1996 totaled approximately JPY2.5 trillion nationwide. The pace of increase was as follows: 3.3% Jan-Mar 1995, 18.6% Apr-Jun 1995, 34.4% Jul-Sept 1995, 7.7% Oct-Dec 1995, and 36.0% Jan-Mar 1996. Of course, the increase in public demand made a big contribution, even though it was limited to within Hyogo Prefecture, and this continued to boost growth for one year, starting from Apr-Jun 1995 (Figure 28).

Fast recoveries for both private reconstruction demand and Hyogo Prefecture's economy

Further, reconstruction demand from the private sector appeared from the quarter following the earthquake. Hyogo Prefecture residential investment continued to rise on-quarter for four straight quarters from Apr-Jun 1995. Capital expenditures also nearly doubled in annualized terms in Apr-Jun 1995 (to nearly 100%), and together with public demand, the +28.8% QoQ high growth in Apr-Jun contributed to a rapid recovery (Figure 28). That said, residential investment and capital expenditures in nationwide GDP started to turn positive in Oct-Dec 1995 and Apr-Jun 1996, respectively. In FY95 in particular, residential investment fell across the board outside the Kinki Region (Figure 30), and capital expenditures were also weak overall (Figure 31). Just as the plunge in internal demand immediately following the earthquake was restricted to the disaster zone, as described earlier, the surge in reconstruction

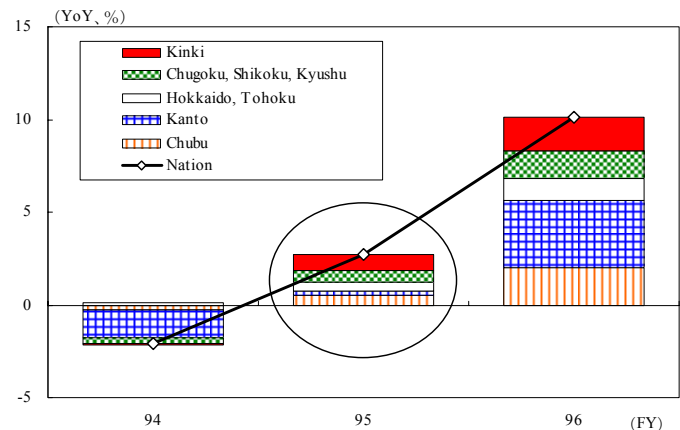
demand by the private sector also appears to have been contained within the affected area.

Figure30:Housing Investment around Hanshin-Awaji Earthquake period



Source: Compiled by BTMU Economic Reserch Office from Cabinet Office, *province Accounts*

Figure31:Real Investment around Hanshin-Awaji Earthquake period



Source: Compiled by BTMU Economic Reserch Office from Cabinet Office, *province Accounts*

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## MAIN ECONOMIC AND FINANCIAL INDICATORS (JAPAN)

### 1. Main Economic Indicators

As of Mar 28, 2011

	Fiscal 2008	Fiscal 2009	2010			2010			2011	
			2Q	3Q	4Q	OCT	NOV	DEC	JAN	FEB
Real GDP Growth Rate <% changes from previous period at SA annual rate>	-4.1	-2.4	2.1 (3.2)	3.3 (4.9)	-1.3 (2.2)	***	***	***	***	***
Index of All Industries Activity	-4.5		0.8 (3.4)	0.7 (3.1)	-1.1 (1.9)	-0.3 (1.3)	-0.1 (2.4)	-0.3 (1.9)	2.9 (1.7)	
Industrial Production Index	-12.7	-8.9	1.5 (21.0)	-1.8 (13.5)	-1.6 (4.9)	-2.0 (4.3)	1.0 (5.8)	3.3 (4.9)	1.3 (3.5)	
Production										
Shipments	-12.6	-8.4	1.6 (21.8)	-1.2 (14.3)	-1.6 (5.8)	-3.0 (4.1)	2.6 (8.1)	1.2 (5.4)	0.6 (2.7)	
Inventory	-5.2	-6.0	3.4 (1.2)	0.4 (3.4)	-1.2 (3.7)	-1.0 (3.8)	-1.8 (1.9)	1.6 (3.7)	4.0 (6.7)	
Inventory/Shipments Ratio (2005=100)	121.9	120.4	106.2 [136.4]	108.1 [124.3]	111.5 [114.7]	117.9 [118.7]	108.1 [115.5]	108.5 [110.0]	108.3 [108.0]	[108.3]
Domestic Corporate Goods Price Index	3.1	-5.2	0.6 (0.2)	-0.2 (-0.1)	0.3 (1.0)	0.1 (0.8)	0.1 (0.9)	0.4 (1.2)	0.5 (1.6)	0.2 (1.7)
Consumer Price Index(SA, total, excl.fresh foods)	1.2	-1.6	0.0 (-1.2)	-0.2 (-1.0)	0.3 (-0.5)	0.4 (-0.6)	0.2 (-0.5)	0.2 (-0.4)	0.0 (-0.2)	(-0.3)
Index of Capacity Utilization (2005=100)	88.7	80.0	90.4 [71.8]	88.2 [77.0]	87.1 [81.8]	85.3 [79.4]	86.7 [81.9]	89.3 [84.1]	92.5 [90.1]	[90.1]
Machinery Orders(Private Demand, Excl.Electric Power and Ship building)	-14.1	-20.6	0.3 (3.3)	9.6 (13.0)	-6.9 (4.9)	-1.4 (7.0)	-3.0 (11.6)	1.7 (-1.6)	4.2 (5.9)	
Manufacturing	-22.4	-27.8	-8.6 (13.2)	12.2 (34.3)	-4.4 (11.6)	1.4 (4.2)	10.6 (25.0)	-1.9 (8.3)	7.2 (11.0)	
Non-manufacturing Excl.Electric Power & Ship building	-6.8	-15.8	5.8 (-2.4)	9.9 (2.3)	-10.1 (-0.3)	-8.7 (6.2)	-10.5 (3.9)	3.9 (-7.9)	-2.7 (2.1)	
Shipments of Capital Goods (Excl.Transport Equipment)	-17.6	-24.3	7.4 (29.6)	1.8 (31.4)	1.2 (26.1)	2.8 (29.9)	-1.4 (27.0)	-0.7 (22.6)	-2.2 (18.2)	
Construction Orders	-12.3	-14.2								
Private	-19.0	-15.3								
Public	23.5	-11.1								
Public Works Contracts	0.1	4.9								
Housing Starts 10,000 units at Annual Rate, SA	103.3 (0.3)	77.6 (-25.4)	77.6 (-1.1)	81.5 (13.8)	84.3 (6.9)	82.1 (6.4)	84.7 (6.8)	86.1 (7.5)	84.7 (2.7)	
Total floor	(-2.3)	(-21.5)	(3.9)	(15.1)	(11.0)	(10.1)	(10.2)	(12.8)	(7.3)	
Sales at Retailers	-1.1	-0.4								
Real Consumption Expenditures of Households over 2 persons (SA)	-2.8	1.0	-0.8 (-0.2)	1.2 (0.6)	-1.5 (2.0)	-0.8 (-0.4)	0.2 (-0.4)	-2.4 (-3.3)	1.0 (-1.0)	
Propensity to Consume (SA,%)	73.3	74.7	72.4 [75.3]	75.2 [74.2]	74.5 [74.8]	70.8 [73.7]	75.6 [74.0]	74.1 [75.3]	74.1 [72.6]	[72.9]
Overtime Hours Worked (All Industries, 5 employees or more)	-7.0	-8.5	1.1 (10.8)	0.2 (9.6)	-0.6 (5.7)	-0.1 (6.2)	1.0 (6.1)	0.5 (5.1)	1.3 (3.2)	
Total Cash Earnings (Regular Employees Only; All Industries, 5 employees or more)	-1.1	-3.3								
Employment Index(Regular Employees Only;All Industries, 5 employees or more) (Change over the M/Q/Y)	29076.0	-77894.3	10188.4 [-96,970.8]	21463.6 [-106,546.5]	28037.5 [-109,742.7]	28054.1 [-107,821.4]	28971.3 [-110,971.6]	27087.2 [-110,435.1]	32797.3 [-6,870.6]	[5,834.7]
Ratio of Job Offers to Applicants (SA,Times)	0.78	0.45	0.50 [0.46]	0.54 [0.43]	0.57 [0.44]	0.56 [0.44]	0.57 [0.43]	0.58 [0.44]	0.61 [0.46]	[0.47]
Unemployment Rate (SA,%)	4.1	5.2	5.1 [5.1]	5.0 [5.4]	5.0 [5.3]	5.1 [5.2]	5.1 [5.3]	4.9 [5.2]	4.9 [5.1]	[5.0]
Economy Watcher Survey (Judgment of the present condition D.I,%)	25.6	39.9	48.3 [37.7]	45.4 [42.4]	43.0 [36.7]	40.2 [40.9]	43.6 [33.9]	45.1 [35.4]	44.3 [38.8]	48.4 [42.1]
Bankruptcies (Number of cases)	16,146 (12.3)	14,732 (-8.7)	3,323 (-15.9)	3,232 (-14.5)	3,299 (-6.5)	1,136 (-9.9)	1,061 (-6.2)	1,102 (-2.9)	1,041 (-2.0)	987 (-9.4)

(Notes)

Unless otherwise indicated, tabulated figures and those in parentheses show % changes from previous quarter/month as applicable.

The figures in ( ) indicate % changes from previous year.

[ ] show the comparable figure of the previous year.

## 2. Balance of Payments

As of Mar 28, 2011

	Fiscal 2008	Fiscal 2008	2010			2010			2011	
			1Q	2Q	3Q	OCT	NOV	DEC	JAN	FEB
Customs Clearance(Exports in Yen Terms)	-16.4	-17.1	(33.2)	(17.8)	(10.0)	(7.8)	(9.1)	(12.9)	(1.4)	(9.0)
Value	-3.3	-7.0	(0.3)	(-0.7)	(1.2)	(2.4)	(-0.1)	(1.4)	(-0.9)	(-0.2)
Volumes	-14.3	-9.9	(32.8)	(18.6)	(8.6)	(5.3)	(9.1)	(11.4)	(2.3)	(9.2)
Imports(In Yen terms)	-4.1	-25.2	(28.1)	(14.9)	(11.3)	(8.9)	(14.3)	(10.8)	(12.1)	(10.0)
Value	0.6	-18.4	(7.4)	(0.4)	(1.6)	(3.0)	(-1.0)	(2.8)	(0.8)	(4.9)
Volumes	-5.7	-7.3	(19.3)	(14.5)	(9.6)	(5.8)	(15.4)	(7.8)	(11.2)	
Current Balance(100 mil. yen)	123,362	157,817	36,116	48,791	35,577	14,362	9,262	11,953	4,619	
Trade Balance(100 mil. yen)	11,589	65,996	20,358	19,787	19,414	9,129	2,597	7,688	-3,945	
Services(100 mil. yen)	-20,469	-18,185	-5,219	-2,756	-4,609	-2,745	-993	-871	-893	
Capital and Financial Accounts(100 mil. yen)	-173,053	-123,113	-16,465	-36,631	-18,433	-4,433	-5,187	-8,813	-16,930	
Gold & Foreign Exchange Reserves(\$1mil.)	1,018,549	1,042,715	1,050,235	1,109,591	1,096,185	1,118,121	1,101,031	1,096,185	1,092,980	1,091,485
Exchange Rate(¥/\$)	100.46	92.80	92.01	85.86	82.59	81.87	82.48	83.41	82.63	82.53

## 3. Financial Market Indicators

	Fiscal 2008	Fiscal 2008	2010			2010			2011		
			1Q	2Q	3Q	OCT	NOV	DEC	JAN	FEB	
Uncollateralized Overnight Call Rates	0.363	0.102	0.093 [0.103]	0.093 [0.103]	0.090 [0.104]	0.091 [0.106]	0.091 [0.105]	0.087 [0.101]	0.085 [0.096]	0.093 [0.101]	
Euro Yen TIBOR (3 Months)	0.805	0.516	0.388 [0.579]	0.364 [0.543]	0.336 [0.498]	0.336 [0.525]	0.335 [0.508]	0.335 [0.462]	0.335 [0.452]	0.335 [0.442]	
Newly Issued Japanese Government Bonds Yields (10 Years)	1.438	1.353	1.208 [1.420]	0.987 [1.338]	1.072 [1.317]	0.920 [1.405]	1.185 [1.260]	1.110 [1.285]	1.215 [1.315]	1.255 [1.300]	
Average Contracted Interest Rates on Loans and Discounts(City Banks) (% changes from previous period)	1.619	1.449	1.420 (-0.029)	1.392 (-0.028)	1.382 (-0.010)	1.398 (0.006)	1.401 (0.003)	1.382 (-0.019)	1.377 (-0.005)		
The Nikkei Stock Average (TSE 225 Issues)	8,110	11,090	9,383 [9,958]	9,369 [10,133]	10,229 [10,546]	9,202 [10,035]	9,937 [9,346]	10,229 [10,546]	10,238 [10,198]	10,624 [10,126]	
M2(Average)	(2.1)	(2.9)	(3.0)	(2.8)	(2.6)	(2.8)	(2.6)	(2.3)	(2.3)	(2.4)	
Broadly-defined Liquidity(Average)	(0.1)	(0.8)	(1.5)	(0.5)	(0.1)	(0.2)	(0.1)	(-0.1)	(-0.1)	(-0.0)	
Principal Figures of Financial Institutions											
Loans and Discount (Average)	Banks & Shinkin		(2.4)	(0.8)	(-1.9)	(-1.8)	(-2.0)	(-2.0)	(-2.0)	(-1.8)	(-1.8)
	Banks		(2.7)	(0.8)	(-2.0)	(-1.9)	(-2.1)	(-2.1)	(-2.1)	(-1.9)	(-2.0)
	City Banks etc.		(1.9)	(-0.4)	(-3.8)	(-3.8)	(-4.6)	(-4.4)	(-4.7)	(-4.7)	(-4.6)
	Regional Banks		(3.9)	(2.4)	(0.0)	(0.4)	(0.9)	(0.7)	(0.9)	(1.1)	(1.2)
	Regional Banks II		(2.4)	(1.3)	(-0.4)	(-0.7)	(-0.5)	(-0.6)	(-0.5)	(-0.4)	(-0.5)
	Shinkin		(0.9)	(0.8)	(-1.4)	(-1.4)	(-1.3)	(-1.3)	(-1.3)	(-1.1)	(-0.9)
Deposits and CDs (Average)	Total(3 Business Condition)		(1.7)	(2.9)	(2.8)	(2.7)	(2.7)	(3.1)	(2.7)	(2.1)	(2.0)
	City Banks		(1.7)	(3.0)	(2.7)	(2.9)	(3.0)	(3.7)	(3.2)	(2.0)	(1.5)
	Regional Banks		(1.9)	(3.1)	(3.3)	(3.1)	(3.0)	(3.2)	(2.9)	(2.9)	(3.1)
	Regional Banks II		(1.3)	(1.8)	(1.0)	(0.4)	(0.1)	(0.3)	(0.0)	(0.1)	(0.5)

(Notes) Interest rates are averages. The Nikkei Stock Average is as of month-end.

(Sources) Cabinet Office, National Accounts, Machinery Orders; METI, Indices of Tertiary Industry Activity, Industrial Production, Current Survey of Commerce; MOF, Trade Statistics, Balance of Payments; MPMHAPT, Consumer Price Index, Family Income and Expenditure Survey, Labour Force Survey; MHLW, Monthly Labour Survey; Ministry of Land, Infrastructure, and Transport, Economic Construction Statistics; BOJ, Corporate Price Index, Financial and Economic Statistics Monthly, etc.