

An 18-Month Economic Forecast Using the STP (Short-term & Turning Point) Approach - Prescription for Takeoff -

by the Economic Research Dept.

Much can happen in the span of a decade. In Europe, countries have overhauled generous social security programs and endured unemployment pains to move toward EU integration for the 21st century. With the end of the Cold War, the U.S. has pains re-channeled vast amounts of military technology, human resources and funds into the private sector, contributing to today's economic vitality.

Over the same ten year period, Japan has managed to evade disclosing the full extent of its bad loan problem. It has postponed substantive measures to deal with structural unemployment. The real problem is the lack of a long-term vision. While the economy remains capable of autonomous recovery, Japan will need to brace itself against the pain of necessary structural adjustments. Time is running out.

1. The Global Context

(1) Asia and Europe

Asia will feel the brunt of the financial crisis during 1998 as Asia's real GDP growth rate drops from 6.5 percent in 1997 to 1.3 percent in 1998. But growth will recover to 3.4 percent in 1999 as external demand improves.

While the strong U.K. economy's performance will shift to an adjustment phase, Europe's growth will remain steady led by Germany's domestic demand.

(2) U.S.

The U.S. economy continues to grow while keeping inflation in check, but is starting to slow down from: (1) lower net exports as the Asian economic crisis slows exports; (2) minor adjustments due to inventory buildup; and (3) slower residential spending as residential investment takes a pause after a boost from warm winter weather.

Table 1 Real GDP Growth in Asia

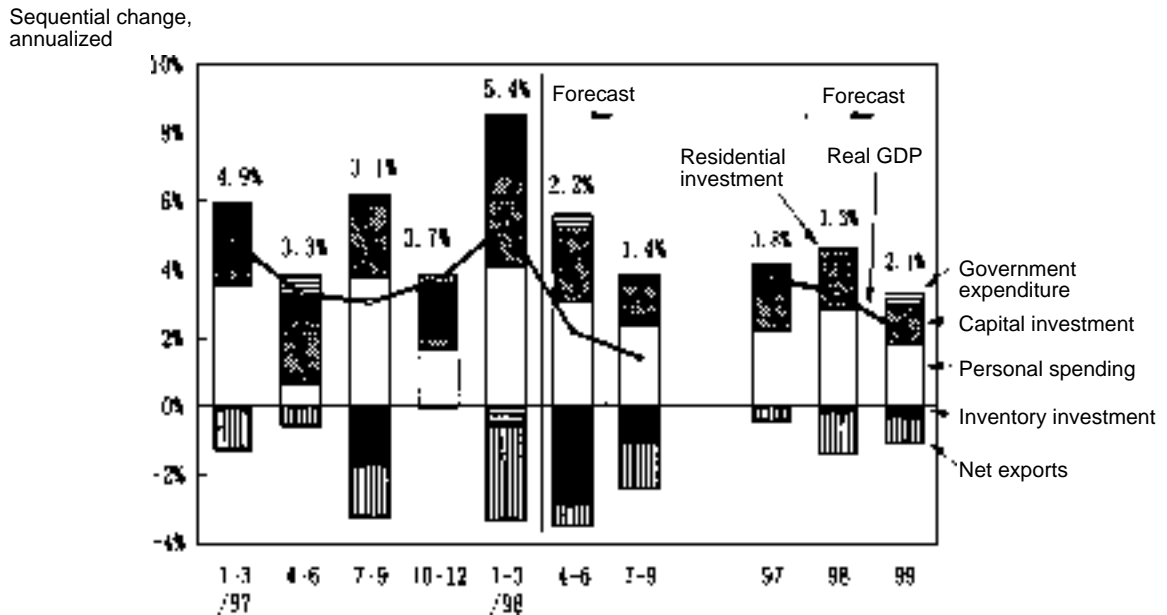
| | 1997 (actual) | 1998 (forecast) | 1999 (forecast) |
|-------------|---------------|-----------------|-----------------|
| S. Korea | 5.5 | -2.0 | 0.5 |
| Thailand | -0.4 | -5.5 | 0.0 |
| Indonesia | 4.6 | -11.0 | -2.0 |
| Malaysia | 7.8 | -1.0 | 1.0 |
| Philippines | 5.1 | 2.0 | 3.0 |
| Hong Kong | 5.2 | 0.0 | 2.0 |
| China | 8.8 | 7.0 | 7.0 |
| Taiwan | 6.8 | 5.5 | 5.5 |
| Singapore | 7.8 | 2.5 | 3.0 |
| Total | 6.5 | 1.3 | 3.4 |

Table 2 Germany and the U.K.

(Annualized sequential change; current account balance is expressed as % of GDP)

| | | 1997 actual | 1998 forecast | 1999 forecast | 1998 1H | 1998 2H | 1999 1H | 1999 2H |
|---------|-----------------------|----------------|------------------|------------------|------------|------------|------------|------------|
| Germany | Real GDP | 2.3 | 2.4 | 2.7 | 2.4 | 2.3 | 3.1 | 2.2 |
| | Domestic demand | 1.3 | 2.1 | 2.0 | 3.5 | 0.7 | 2.6 | 2.0 |
| | External demand | 1.0 | 0.3 | 0.7 | -1.1 | 1.6 | 0.5 | 0.1 |
| | Current acct. balance | -0.1 | 0.5 | 0.7 | 0.5 | 0.6 | 0.6 | 0.8 |
| U.K. | Real GDP | 3.5 | 2.1 | 1.8 | 2.4 | 0.8 | 1.8 | 2.8 |
| | Domestic demand | 3.5 | 3.3 | 2.1 | 4.1 | 1.2 | 2.1 | 2.8 |
| | External demand | -0.4 | -1.2 | -0.2 | -1.7 | -0.4 | -0.3 | 0.0 |
| | Current acct. balance | 0.6 | -0.8 | -1.0 | -0.7 | -1.0 | -1.0 | -0.9 |

Figure 1 18-month Forecast for the U.S.



Source: Actual statistics are from the U.S. Dept. of Commerce.

2. Forecast Issues

(1) Have Business Cycles Disappeared?

While Japan's shaky financial system and other structural problems make it appear as if business cycles have disappeared, the economy's adjustment mechanism remains sound. Indeed, the present adjustment is speeding along faster than usual because managers and consumers are responding more quickly.

Theories regarding the disappearance of business cycles in the U.S. are not convincing for the following reasons.

1. Inventory cycles

Because advances in inventory management methods have enabled lower inventory levels, inventory fluctuations may have a smaller impact on the economy than before. But business cycles still cannot be ruled out as long as there is also the risk of unintended inventory buildup due to mistaken demand forecasts.

2. The new economy theory

Sustained high growth rates coupled with low inflation have inspired the idea that a "new economy" has emerged. But the evidence is inconclusive: (1) while investment in information

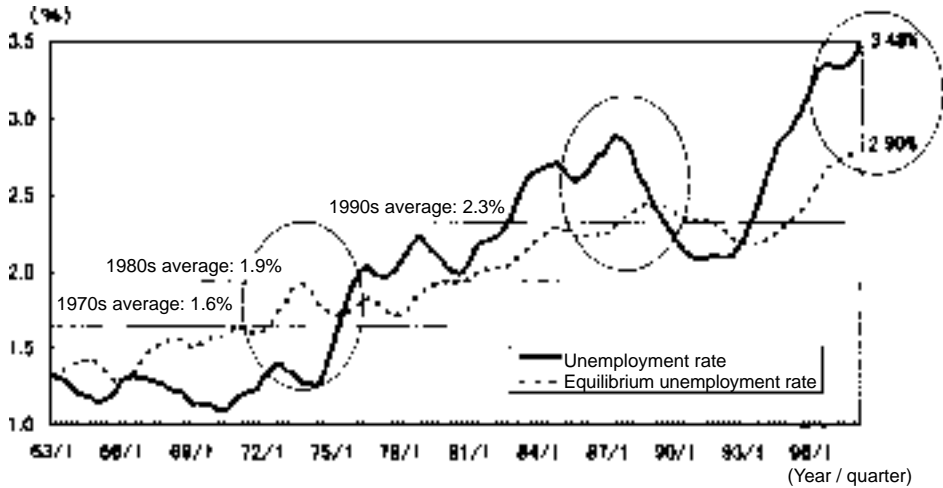
technology and innovations in management have indeed caused productivity growth, comparisons with past data cannot confirm that the productivity growth is significantly higher than before; and (2) strong growth and low inflation can be attributed in large part to preventive monetary tightening and successful fiscal budget balancing.

These arguments do not adequately address concerns of the re-emergence of accelerating inflation and recession in the future.

(2) Japan’s Unemployment Rate Converges with the U.S.

As of April, unemployment rates in Japan and the U.S. both stood in the low 4-percent range. However, significant structural differences need to be noted.

Figure 2 Structure of Unemployment



Notes: To estimate unemployment rates, we estimated the relationship between the unemployment rate (u) and vacancy rate (v) (job openings / employed workers) as $\ln(u) = \alpha + \beta \ln(v)$ and obtained $\alpha = 1.67775$ and $\beta = 0.69431$. Using β from above, we obtain the equilibrium unemployment rate (u*), which is the unemployment rate at which u and v are in equilibrium: $\ln(u^*) = (\ln(u) - \beta \ln(v)) / (1 - \beta)$. The equilibrium unemployment rate is then converted to include self-employed workers.

Japan’s 3.5 percent unemployment rate in the January-June 1998 quarter can be separated into a structural component of 2.9 percent and a cyclical component of 0.6 percent. The structural component has increased as the economy’s growth rate slows down. The cyclical component is comparable to levels reached in major recessions of the past.

But this does not include the underemployed workers being retained by companies. Against the backdrop of sluggish final demand and corporate restructuring, there is mounting pressure on companies to layoff excess workers. This gives the unemployment rate a rising undertone during our forecast period. We predict that the unemployment rate will peak at 4.7 percent in the January-March 1999 quarter. However, if all the latent unemployed workers were laid off, the unemployment rate will surge past U.S. and U.K. levels and reach 7-9 percent.

The strong expansion in the U.S. has caused its unemployment rate to drop to 4.3 percent in April-May 1998, the lowest level since February 1970. While lower oil and primary goods prices and a strong dollar have kept inflation in check, a 4.3 percent year-on-year increase in hourly wages indicates that inflationary pressures are growing.

While a declining unemployment rate implies both higher employment and income as well as mounting inflationary pressures, the labor force cannot continue to grow faster than the population for very long. The U.S. labor market is thus approaching the limits of job growth.

(3) Asia's Impact

Asia will impact the Japanese economy through the following four routes: (1) lower import prices due to plunging primary goods prices and depreciation of local currencies; (2) sharp drop in Japanese exports due to weakness in local economies; (3) foreign exchange losses by local Japanese companies and the emergence of problem loans; and (4) reduced imports due to Japan's recession (initial expectations were for higher imports due to currency depreciation).

Ironically, the impact of the economic turmoil will be more than offset by lower imports due to Japan's recession, and actually contribute 0.2 percentage point to GDP growth. The downward pressure on exports will abate from the summer of 1998. Imports will continue to slump due to the recession.

Due to a time lag in the price effect, Asia's impact on Japanese exports will peak in the summer.

Unless the yen's slide is stopped, domestic demand increased, and imports expanded, the risk of a secondary shock will remain present.

3. The 18-Month Forecast Using the STP Method

The procedure for the STP forecast is as follows: (1) a 6-month GDP forecast is made to take into account present conditions; (2) cyclical turning points are identified using the NBI (Nissay Business Index) and cyclical indicators (inventory, capital stock, durable consumer goods); and (3) a forecast line containing the turning point is determined and tested for conformity with macroeconomic models.

(1) Japan's Economy

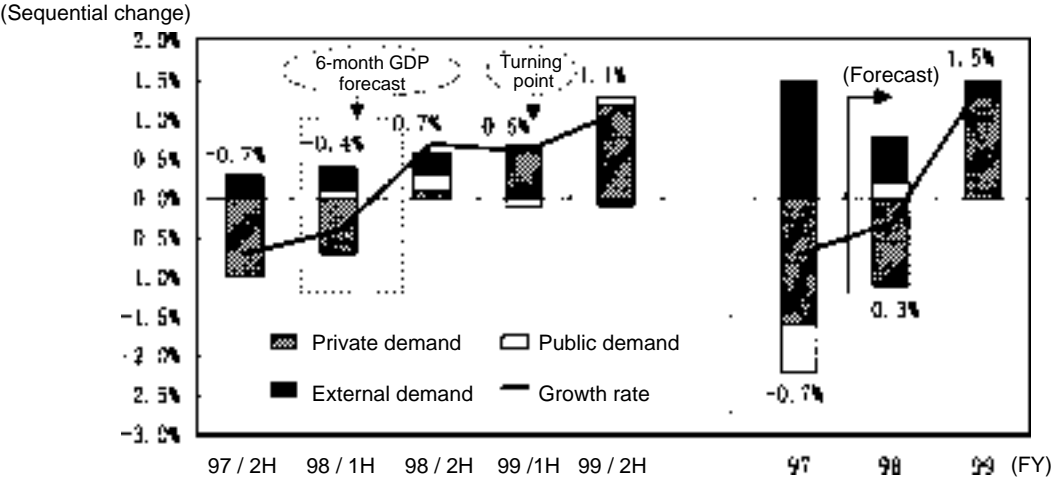
Conditions remain grim as the corporate sector reduces capital investment and makes other adjustments. GDP will achieve 0.2 percent growth in the April-June and July-September 1998 quarters (compared to -0.4 percent for the second half of fiscal 1997).

The turning point will occur in the April-June 1999 quarter. The NBI plunged to its lowest level in the present phase of -40 in February 1998 before improving to -13 in April. While the sharp contraction in economic activity since last autumn has abated, conditions will fluctuate but basically remain unchanged during fiscal 1998. The recession will bottom out in June 1999, when prospects brighten for inventory and capital stock adjustments.

The forecast scenario is as follows:

1. Fiscal 1998 will be an adjustment period while the economy moves toward autonomous recovery; the economy's real growth rate of -0.3 percent will be the second consecutive year of negative growth.
2. As companies make adjustments to consolidate their strength, the unemployment rate will peak at 4.7 percent in the January-March 1999 quarter.
3. Asia's weakness will be offset by strength in Europe and the U.S., thus preventing a major decline in exports. But sluggish private sector demand will suppress imports, bringing the current account surplus to 4.0 percent of nominal GDP.
4. In fiscal 1999, the economy's real growth rate will rise to 1.5 percent as the economy shifts from external demand and public sector demand in fiscal 1998 to growth led by private demand.

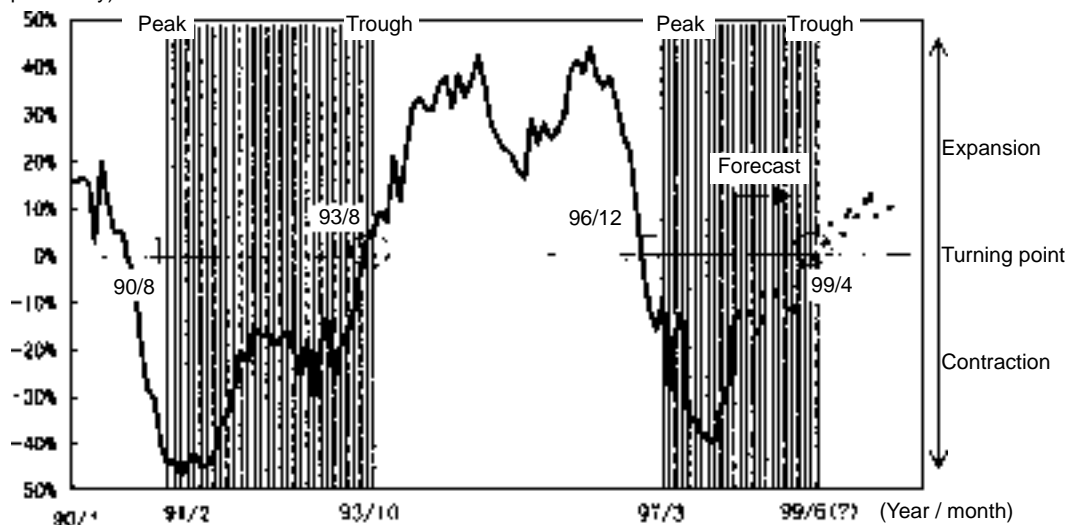
Figure 3 18-month STP Forecast



Source: EPA, Annual Report on National Accounts.

Figure 4 NBI Predicts Trough in June 1999

(Turning point probability)



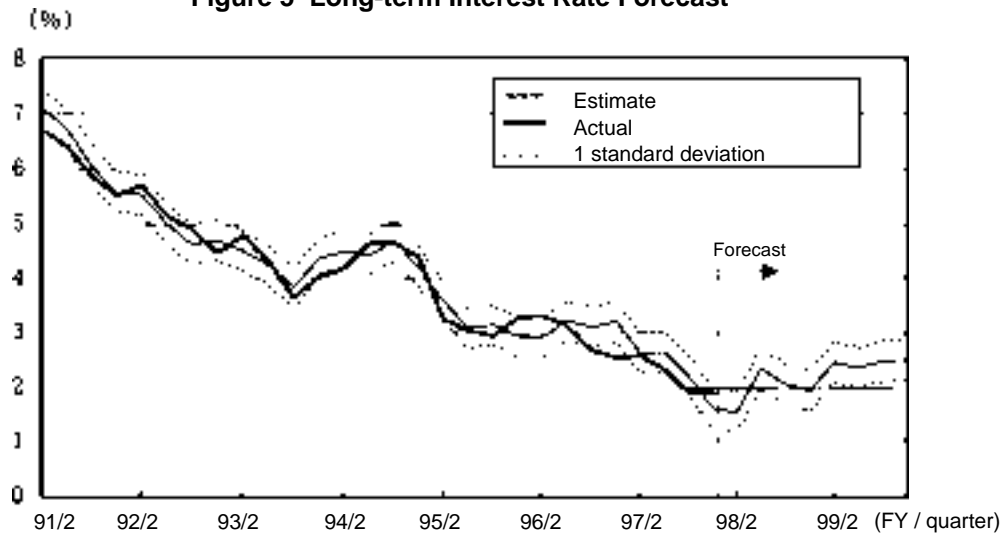
Notes: (1) Circles and squares signal start of contractions and expansions, respectively. Shaded areas denote recession.
 (2) NBI data series were revised in March 1997.

(2) Financial Markets

1. Long-term interest rates

Interest rates will remain at their present low levels in fiscal 1998 amid growing economic adjustments centered around the corporate sector. However, progress in inventory and capital stock adjustments will lay the groundwork for an autonomous recovery by the April-June 1999 quarter. Interest rates will then edge upward in response to the gradual improvement in fundamentals. However, because the recovery will be slowed by continuing structural adjustments, interest rates will settle at approximately 2 percent by the January-March 2000 quarter.

Figure 5 Long-term Interest Rate Forecast



Source: Estimate is obtained from BOJ, *White Paper on Finance*.

2. Exchange rate

While the four fundamentals affecting the exchange rate point in both directions, through the end of the fiscal year the yen should see a slight downward correction as inventory adjustments in the U.S. shrink the gap in U.S. and Japanese economic growth rates. In fiscal 1999, Japan's recovery and continued expansion in external surplus will be offset by a resurging U.S. economy, leaving the yen level.

4. A Takeoff Scenario

Japan's present financial crisis is not only a domestic problem, but sending repercussions throughout Asia totaling as much as six trillion yen annually. The banks cannot solve the bad loan problem on their own. Japan can learn from the experience of other countries—while sudden and drastic measures cause pain in the short term, in the long term the public stands to benefit from the resulting economic recovery.

| | |
|--|---------------|
| 1. Reduction in household asset income due to unsuccessful monetary policy and continued low interest rates (0.5% ODR cut) | ¥0.7 trillion |
| 2. Reduction in Japan's income due to Asian currency depreciation | ¥2.5 trillion |
| 3. Decline in Asia's exports due to drop in Japan's economic growth rate | ¥2.6 trillion |
| Total | ¥5.8 trillion |

Despite Japan's supposedly dim prospects, quantitative analysis reveals that the economy is capable of an autonomous recovery. Three issues need to be addressed to ensure such a recovery: (1) direct confrontation of the bad loan problem; (2) policies to promote employment in the medium term; and (3) clarification of a medium-term fiscal vision that integrates corporate and personal income tax revision (permanent tax cuts, review of effective tax rates and tax standards) and the review of public investment basic plans. Below we elaborate further on the first issue.

(1) Basic Approach to the Bad Loan Problem

The basic approach consists of four aspects: (1) reveal the full extent of the problem, and gain the confidence of financial markets; (2) protect depositors, companies that have outstanding loans, and the financial system; (3) completely dispose of the bad loans in the banking sector; and (4) free up the market for properties held as collateral.

(2) Specific Methods

1. Gaining the market's confidence

- Despite the adoption this fiscal year of strict SEC disclosure standards on a par with the U.S., market confidence remains elusive. What is needed is the disclosure of a self-assessment, which entails disclosure of amounts by classification as well as the condition of collateral (reserves).
- While the self assessment is based on MOF standards, interpretation of these standards varies considerably among financial institutions. Some observers have also noted differences in risk tolerance levels, which need to be aligned to some extent. To do so, the following steps are necessary:
 - 1) When the Financial Supervisory Agency issues rankings and strict spot checks, conduct a strict investigation of second category loans of financial institutions.
 - 2) Unify classification of companies and other borrowers who have taken loans from several banks.
 - 3) Outside auditors who conduct the self assessment should exchange information with each other.

Thorough implementation of these disclosure practices will allow the market mechanism to work in weeding out failures and promoting restructuring.

2. Establishing bridge banks

- Bridge banks have three functions;(1) to assume risk-free loans; (2) to assume risky loans; and (3) to recover bad loans.
- To assume risk-free and risky loans, bridge banks need the ability to conduct inspections and provide a fund pipeline to companies. To assume bad loans, they need strong powers to recover loans and conduct investigations.
- To clarify the cost of liquidating bad loans, a financing subsidiary must be set up. It would issue long-term bonds guaranteed by the government. This arrangement must be designed so as to clarify the size of the public's burden.
- In assuming risk-free and risky loans, the bridge bank must also absorb the employees of failed banks. Once business recovers, the bank is to be completely privatized by, for example, listing its stock on the market.

Table 3 Compulsory Loan Loss Reserve System

| | |
|--|---|
| Financial institutions that clear compulsory reserve requirement | Purchase loans in second category and below |
| Financial institutions unable to clear requirement | Order to suspend business Bankruptcy procedure (Banks in which reserve requirement would lead to excessive debt.) |

Table 4 Examples from Abroad

| | Mobilization period | Scheme | Public funds used / nominal GDP |
|---------------------|---------------------|---|---------------------------------|
| U.S. 2nd S&L crisis | 1989-93 | Established RTC | 1. 7% |
| U.K. 2nd lifeboat | 1991-93 | Guaranteed rescue loans from large banks to smaller banks | 0.02% |
| Finland | 1991-93 | Government bought preferred stock, invested in company that buys problem assets, and financed government guarantee fund to augment deposit insurance. | 15% |
| Sweden | 1991-92 | Government acquired bank stocks using general revenue, and guaranteed stock issues and loans. Invested in institution that purchases bad loans. | 4% |

3. Establishing a financing subsidiary

- The bridge bank must avoid becoming dependent on fiscal investments and loans, which have unclear financing costs and are mismatched with the liabilities, and must practice complete transparency.

4. Compulsory reserve requirement (end of fiscal 2000)

- In addition to application of prompt corrective actions, compulsory reserve requirements must be introduced.
- Starting with a 3-year suspension of compulsory reserve requirements, the aim is for a 100 percent reserve ratio for category 3 and below, 20 percent for category 2.
- After three years, banks must pass two standards—the prompt correction actions and compulsory reserve standards.
- Banks that fail to meet reserve levels are to be shut down and enter bankruptcy procedures. The banks that pass requirements are to sell category 2 loans and below to the bridge bank at market prices.
- The above measures will enable the banking sector to become completely purged of bad loans by the end of fiscal 2000.
- The scope of tax exemption must be expanded to provide incentives to build up loan loss reserves.
- Financial institutions that cannot help but post massive losses can apply for additional equity capital if they present a business restructuring plan.

5. Infrastructure measures to promote liquidation of properties held as collateral

- The bankruptcy law must be reviewed to achieve fairness, simplicity, speed, and reduced cost, and auction procedures must be accelerated.
- While not a complete solution to the bad loan problem, a real estate securitization market should be set up that also enables the use of personal financial assets.

18-month Economic Forecast for Japan

| | | | | | 6-month GDP forecast | | Turning point | | | | | | |
|---------------------------------|--|--------------|----------------|----------------|----------------------|-------|---------------|--------|--------|-------|--------|----------|-------------------|
| | | FY 97 actual | FY 98 forecast | FY 99 forecast | 98/4-6 | 7-9 | 10-12 | 99/1-3 | 4-6 | 7-9 | 10-12 | 2000/1-3 | Previous forecast |
| | | (Unit: %) | | | | | | | | | | | FY 98 |
| Real GDP | | -0.7 | -0.3 | 1.5 | 0.2 | 0.2 | 0.4 | 0.3 | 0.2 | 0.5 | 0.6 | 0.7 | 0.7 |
| | | | | | 0.8 | 1.0 | 1.6 | 1.2 | 0.7 | 1.9 | 2.3 | 2.7 | |
| | | | | | -0.7 | -1.3 | -0.5 | 1.2 | 1.2 | 1.4 | 1.4 | 1.9 | |
| Contribution of domestic demand | | (-2.2) | (-0.9) | (1.3) | (-0.2) | (0.2) | (0.2) | (0.2) | (0.1) | (0.5) | (0.6) | (0.8) | (0.6) |
| Private sector demand | | (-1.6) | (-1.1) | (1.3) | (-0.3) | (0.1) | (0.0) | (0.2) | (0.3) | (0.3) | (0.6) | (0.9) | (0.4) |
| Public sector demand | | (-0.6) | (0.2) | (0.0) | (0.1) | (0.1) | (0.2) | (-0.0) | (-0.2) | (0.1) | (0.1) | (-0.1) | (0.2) |
| Contribution of external demand | | (1.5) | (0.6) | (0.2) | (0.4) | (0.1) | (0.2) | (0.1) | (0.0) | (0.0) | (-0.1) | (-0.1) | (0.1) |
| Final private consumption | | -1.2 | 0.9 | 1.6 | 0.2 | 0.7 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 | 0.6 | 1.4 |
| Private residential investment | | -21.1 | -8.3 | 1.6 | -4.3 | -0.6 | 0.4 | 0.2 | 0.5 | 0.6 | 0.6 | 0.7 | -5.0 |
| Private capital investment | | 0.7 | -7.2 | 1.8 | -1.8 | -1.9 | -0.7 | -0.4 | 0.5 | 0.7 | 1.8 | 3.1 | -1.0 |
| Public fixed capital formation | | -7.2 | 1.0 | -1.5 | 2.0 | 0.9 | 1.0 | -1.0 | -1.1 | 0.6 | -1.1 | -0.7 | 0.8 |
| Exports | | 9.2 | -3.8 | 2.6 | -2.4 | -0.3 | 0.8 | 1.0 | 0.7 | 0.6 | 0.5 | 0.3 | 1.6 |
| Imports | | -2.9 | -9.6 | 1.5 | -6.5 | -1.1 | -0.9 | 0.2 | 0.5 | 0.7 | 1.4 | 1.6 | 1.3 |
| Nominal GDP | | 0.3 | -0.3 | 1.3 | 0.2 | -0.2 | -0.1 | 0.1 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 |

Notes: (1) For Real GDP, top figure is sequential change, middle figure is annualized sequential change, and bottom figure is yoy change.

(2) Forecast assumes ¥138/\$ exchange rate and \$13.60/barrel crude oil price for FY 1998, and ¥133 and \$13.30/barrel for FY 1999; ODR to stay at 0.5%; public investment will not be augmented by additional economic packages in FY 1998, and will see negative yoy change for FY 1999 due to Financial Reform Law.

Major economic indexes

| | | | | | | | (Unit: %) Previous forecast | | | | | | |
|---------------------------------------|--|-------|-------|-------|--------|-------|-----------------------------|--------|-------|-------|-------|----------|-------|
| | | FY 97 | FY 98 | FY 99 | 98/4-6 | 7-9 | 10-12 | 99/1-3 | 4-6 | 7-9 | 10-12 | 2000/1-3 | FY 98 |
| Industrial production (seq. change) | | 1.2 | -5.5 | 1.1 | -3.8 | 0.7 | -0.3 | -0.1 | 0.5 | 0.3 | 0.4 | 0.7 | -3.9 |
| Overall wholesale prices (yoy change) | | 1.2 | -0.6 | -0.5 | -1.6 | -0.7 | -0.4 | 0.4 | -0.3 | -0.6 | -0.7 | -0.3 | -1.8 |
| Consumer prices (yoy change) | | 2.1 | -0.3 | -0.0 | 0.3 | -0.2 | -0.6 | -0.7 | -0.4 | 0.1 | 0.1 | 0.2 | -0.2 |
| Current account balance (¥tril.) | | 13.3 | 18.6 | 19.8 | 17.7 | 18.4 | 18.6 | 19.6 | 19.9 | 20.3 | 19.6 | 19.4 | 14.4 |
| (ratio to nominal GDP) | | (2.6) | (3.7) | (3.9) | (3.5) | (3.7) | (3.7) | (3.9) | (3.9) | (4.0) | (3.8) | (3.8) | (2.8) |
| Unemployment rate | | 3.5 | 4.4 | 4.4 | 4.1 | 4.4 | 4.5 | 4.7 | 4.7 | 4.4 | 4.2 | 4.2 | 3.9 |
| Housing starts (million units) | | 1.34 | 1.28 | 1.30 | 1.28 | 1.27 | 1.28 | 1.28 | 1.29 | 1.30 | 1.30 | 1.31 | 1.28 |