Has the Economy Already Peaked Out?
— Debate Reveals Differences in Approach

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Despite anecdotal evidence to the contrary, the data on production and business results confirm that Japan's economy bottomed out in April 1999 and began recovering.

But in 2001, signs of an economic downturn are quickly mounting — the stock market's retreat, downturn in exports due to the cooling U.S. economy, and the government's downward revisions of business conditions.

As of early March, views on the economy are divided as follows: (1) the economy is already in recession, (2) the economy may enter a recession, but is currently expanding, and (3) the economy is expanding and will continue to do so despite minor glitches.

Meanwhile, the Bank of Japan's decision in late February to implement further monetary easing has strengthened the view that the economy is already in recession.

This paper examines the debate on the economy's current condition. We first examine the argument for recession, distinguishing between two positions — whether the peak occurred in August or in the October-December quarter. The two positions on recovery are combined into one argument.

1. The Recession Argument

Bolstered by the release of weak production data in January, the argument for recession is based on the deterioration of the following three factors.

(1) Business Sentiment

Consistent with the perceived bipolar nature of the economic recovery, business sentiment surveys have shown marked improvement among large companies (particularly manufacturing), but little change among small and mid-sized companies (particularly non-manufacturing).

According to the BOJ *Tankan Survey* for December, the business conditions diffusion index (DI; per-

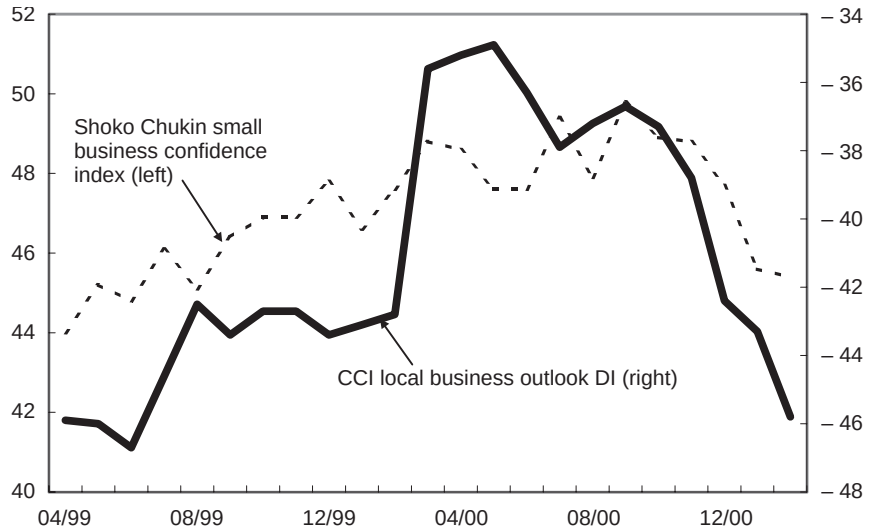
centage of companies who say business is favorable minus those who say the opposite) for large companies was 2, unchanged from the previous survey in September, while the expected DI for the future fell to zero. Thus the index, which has steadily improved since December 1998 appears to heading downward again.

This was followed by the *Business and Investment Survey of Incorporated Enterprises* (Cabinet Office), which found that the business survey index (BSI) for large companies (capitalized at 1 billion yen or more) in all industries plunged from 18 in the July-September quarter to 1 in the October-December quarter, while the expected level for the January-March 2001 quarter was -6. The survey, conducted on December 25, indicates that business sentiment at yearend was deteriorating at an accelerating rate.

Meanwhile, almost all surveys of small and mid-sized companies indicate that business sentiment has not improved significantly. While some surveys showed business sentiment deteriorating as early as last summer, more recently available monthly data portrays the rapid deterioration in business sentiment from late last year to early this year.[1]

Since business sentiment coincides with or slightly leads economic cycles, the fact that it had already deteriorated among companies of all sizes suggests that the recovery ended during 2000.

Figure 1 Deteriorating Business Sentiment Among Small And Mid-Sized Firms



Sources: Shoko Chukin Bank, *Business Survey Index for Small and Medium-Sized Businesses;* Chamber of Commerce and Industry, *Local Business Outlook (LOBO)*.

(2) Leading Indicator for Capital Investment Worsens

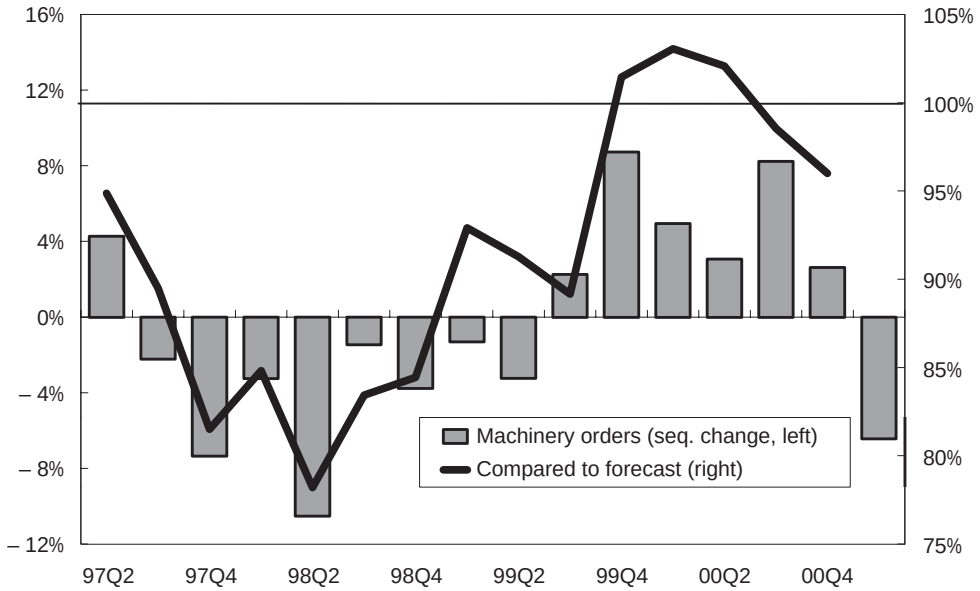
Machinery orders (private demand excluding ships and electric power) — a leading indicator for busi-

ness fixed investment — maintained positive sequential growth through Q4 2000. However, the next-quarter growth rate forecast began underestimating actual growth rates in the third quarter, and even turned negative for Q1 2001.

Particularly noticeable has been the slowdown in electronics and communications equipment, which had been driving investment spending. Considering the semiconductor inventory buildup and sharp decline in production, orders for electronics and communications equipment are not likely to recover in the near future.

Judging from this leading indicator, while capital investment growth should continue into early 2001, it no longer has the momentum to lead the economy.

Figure 2 Slowdown in Machinery Orders



Note: Machinery orders growth rate for Q1 2001 is forecast by companies surveyed.
Source: Cabinet Office, *Orders Received for Machinery*.

(3) Income and Employment Uncertainty

The consumer confidence index (seasonally adjusted), compiled quarterly by the Cabinet Office, had been rising since September 1998. However, sequential improvements began shrinking in September 2000, and in December the components for income growth and employment environment worsened for the first time in the present expansion.

With regard to incomes, according to the *Monthly Labor Survey* (MHLW), while last year's summer bonuses rose from the previous year, winter bonuses declined. Growth in non-scheduled hours worked

in manufacturing has been declining on a sequential basis since November 2000, indicating that the growth trend in employee earnings has started to change.

Furthermore, despite the likelihood of a second straight year of double-digit growth in corporate business results for fiscal 2000, the 2001 spring labor agreement is likely to equal the record low wage increase of last year.

New job openings, which grew over 20 percent year-on-year during 2000, and the effective ratio of job openings to seekers, which has been improving from its low of 0.46 in May 1999, have been erratic since January 2001. The job market thus appears to be affected by the deterioration in business confidence.

Personal consumption seems to have bottomed out in late 2000. However, with the cloudy outlook for household income and the work environment, hopes are fading that consumption can lead the economy.

The preceding argument that the economy is already in recession can be separated into two positions depending on when the economy peaked — in August or in the fourth quarter of 2000. Differences between these two views reveal basic differences in the way economic conditions are judged.

2. The August Peak Argument

The argument for an August peak rests mainly on the fact that the industrial production index (METI) peaked in August.

The argument emphasizes production activity on the basis that the shortest type of economic cycle — the three -to-five year inventory (Kitchin) cycle — is caused by changes in inventory investment.

Since the industrial production index has coincided closely with business cycles in the past, it is heavily relied on in actually identifying business cycles. This experiential rule lends strength to the August recession argument.

According to the argument, the information technology industries, who had driven the economy and depended heavily on exports to the U.S., were hurt by the U.S. downturn, thus pulling the economy into recession.

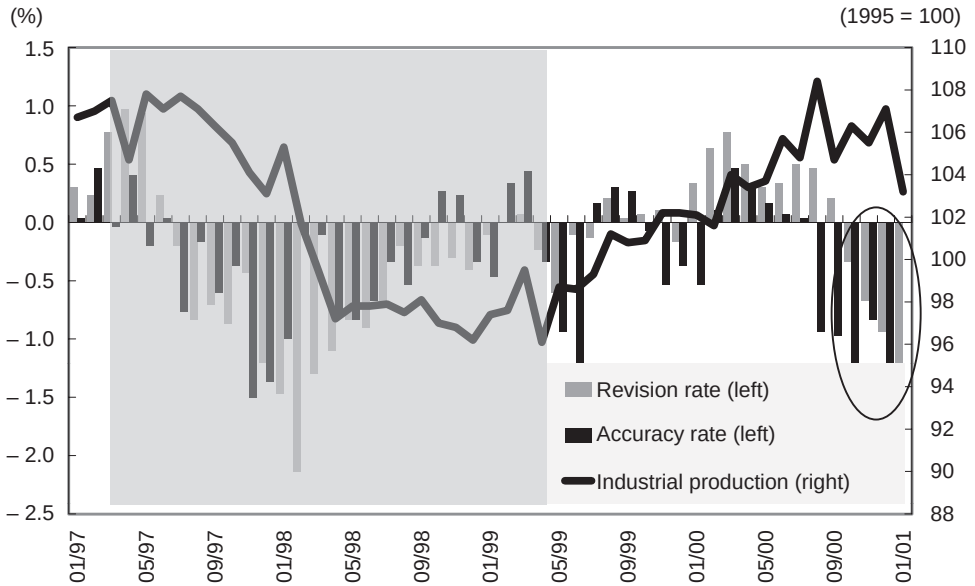
In addition to the industrial production index, statistical data supporting this argument include the following.

1. According to the *Preliminary Report on Indices of Industrial Production, Producer's Shipments and Producer's Inventory* (METI), since last July, the one-month manufacturing production forecasts have consistently overestimated actual results, while the two-month forecasts have consistently been revised downward.[2]

2. The sequential growth rate for real GDP turned negative in the July-September quarter, falling 2.4 percent.

3. Of the coincident series monitored by the Economic Data Examination Committee (Cabinet Office) to determine reference dates, six of the eleven series — production, raw materials consumption, large-scale electric power consumption, capacity utilization, department store sales, and sales of small and mid-sized companies — are likely to have peaked in August.

Figure 3 Manufacturing Production Forecast — Accuracy and Revision Rates



Notes: Accuracy rate compares actual result with month-earlier forecast; revision rate compares 2-month forecast to 1-month forecast. Both are 3-month moving averages. Shadowed area represents recession.
Source: METI, *Preliminary Report on Indices of Industrial Production, Producer's Shipments and Producer's Inventory*.

3. The Q4 Peak Argument

Like the August peak argument, this argument holds that the U.S. slowdown dampened exports. However, the Q4 argument holds that from a wider perspective, a peak in the industrial production index does not necessarily coincide with the economy's peak.

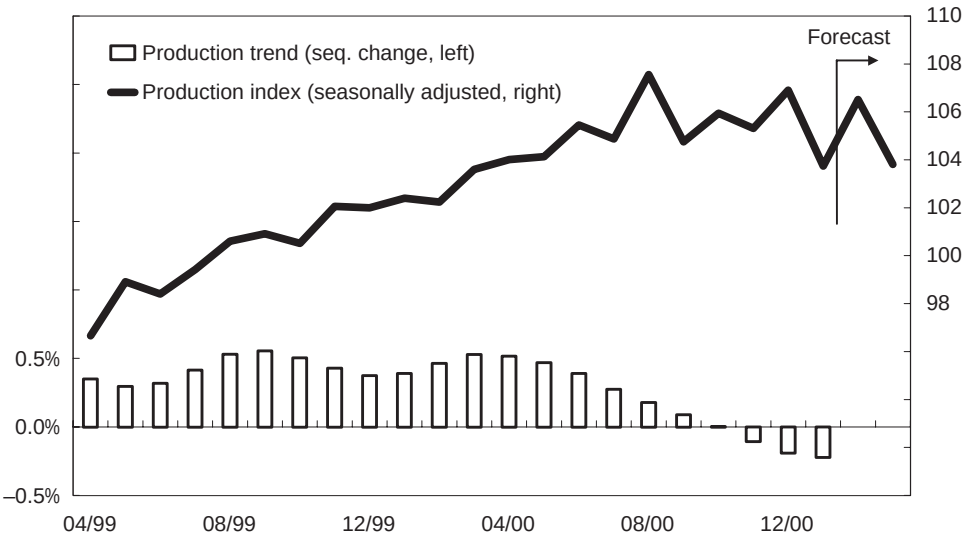
In other words, while production activity may be an important factor in causing fluctuations along the trend line, it does not necessarily coincide with the activity of the overall economy, and thus cannot be used to accurately pinpoint the timing of the peak.

(1) Industrial Production Index Remained High During 2000

The Q4 peak argument challenges the primary basis of the August peak argument, claiming that the industrial production index did not peak in August, but remained high for the rest of the year.

Moreover, it contends that when the production index for the past fiscal year is seasonally adjusted and revised in April, values for August 2000 are likely to be revised downward, further eroding the basis of the August peak argument.

Figure 4 Industrial Production Index



Sources: METI, *Economy, Trade & Industrial Statistics Monthly*. Seasonal adjustment of January 2001 preliminary report, trend calculation, and forecast from February 2001 forward are by NLI Research Institute.

(2) Sustained Growth in Capital Investment

Although sequential real GDP growth was negative in the July-September quarter, the main contributor to the negative growth was a sharp drop in public fixed capital formation.

Meanwhile, business fixed investment — a major cause of business cycles — apparently remained firm throughout 2000, as (1) while falling sequentially in the April-June quarter, it turned around in the July-September quarter, and (2) the index of capital goods shipments, which closely coincides with business fixed investment, continued to grow until the end of the year.

Moreover, judging from the fact that orders received for machinery — a leading indicator for business fixed investment — continued to grow sequentially through the October-December quarter, and the fact that planned investment during fiscal 2000 stayed above actual investment in the *Nikkei Shimbun's* semiannual investment survey in February 2001, investment spending is also likely to have grown in the first quarter of 2001.

If business fixed investment remained steady through the fourth quarter, it is unlikely that a recession had begun in September. A view more consistent with the high industrial production index and overall activity of the economy is that the recovery lasted through 2000.

4. The Recovery Argument

The argument that the recovery has carried over into 2001 is based on the following five factors.

(1) Sustained Growth in IT Industries

The economic recovery that began in April 1999 has been powered by IT-related industries.

In the U.S., information technology is being credited with boosting labor productivity significantly and producing the longest expansion in history. This has led to the notion that Japan too can revive its recession prone economy of the 1990s by harnessing information technology.

In particular, because low productivity has been identified as a major problem for Japan's economy in the 1990s, productivity growth through IT investment is regarded as crucial for corporate survival.

Given the strong need for sustained IT investment regardless of business conditions, IT-related industries will continue to grow and drive the economy in the future.

According to the *Specified Service Industry Dynamic Statistics* survey (METI), the information services industry continues to enjoy strong revenue growth, and the industry predicts further growth ahead.

(2) Low Dependence of Production on External Demand

The recession argument holds that the recession was triggered by a slowdown in exports, which caused industrial production to decline. However, the overall export ratio of industrial shipments is only slightly above 10 percent; it is only about 20 percent even for the electrical machinery industry. This means that an export slowdown is unlikely to cause a significant drag on production activity.

The slower growth in production activity anticipated for the January-March 2001 quarter can be attributed to the transitory impact of the year-on-year decline in export volume. There are no major factors causing a slowdown in domestic shipments, which comprise the majority of production activity. Thus once the growth plateau has been passed, the industrial production index is likely to resume a rising trend line.

Figure 5 Export Ratio of Producer's Shipments

	Shipments	Exports	Imports	Export ratio
All industries	10000.0	1198.1	8801.9	12.0%
Electrical equipment	1984.8	400.9	1583.9	20.2%
Transport equipment	1584.1	299.8	1284.3	18.9%
Precision machinery	80.5	34.8	45.7	43.2%
Other	4434.6	308.1	4126.5	6.9%

Note: Unit is per mil unless otherwise noted.
Source: METI, *Analysis of Mining and Manufacturing Industrial Production Activities*.

(3) Business Fixed Investment Growth to Continue in 1H 2001

Machinery orders, which are a leading indicator of business fixed investment, continued to grow through the fourth quarter of 2000. Considering that machinery orders lead investment by two to three quarters, investment is predicted to continue growing and driving the economy until about the April-June 2001 quarter.

(4) Consumption to Continue Moderate Growth

Various surveys confirm that consumer confidence continues to improve. Moreover, according to a survey by the Ministry of Health, Labor and Welfare (MHLW), winter 2000 bonuses at large listed companies turned upward from the previous year, indicating that incomes continue to improve in correlation with corporate business results.

As a result, consumption activity finally appears to have started bottoming out from late 2000 into 2001, and will continue to improve at a moderate pace.

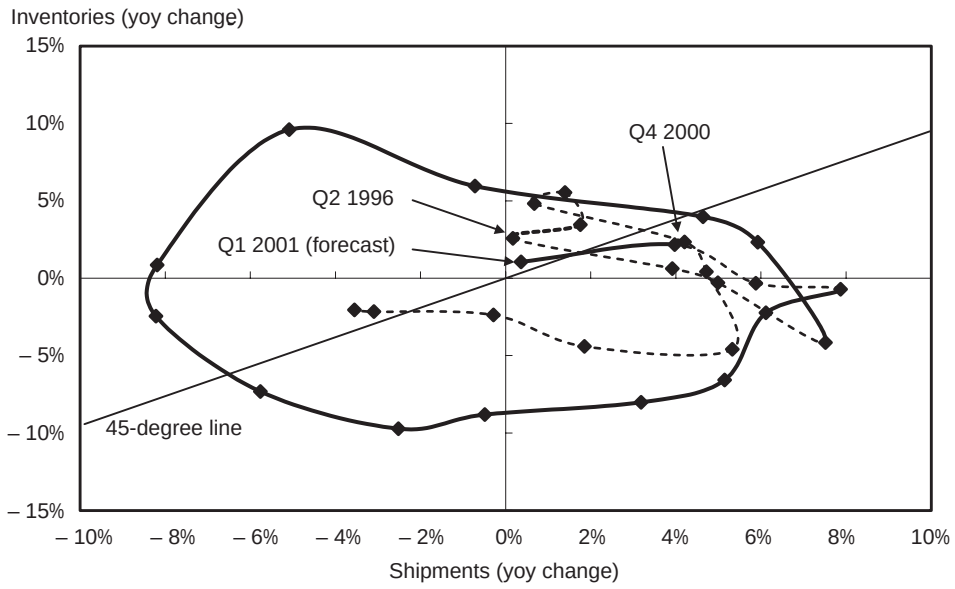
(5) Inventory Adjustment to be Mild

The product inventory cycle (year-on-year change) indicates the possibility of an unplanned inventory accumulation phase beginning in the January-March 2001 quarter. However, it should be noted that in the previous inventory adjustment phase, production activity was reinvigorated by continued growth in business fixed investment even after inventories began rising. This suggests that an inventory adjust-

ment in early 2001 could be averted again by the growth anticipated in both investment and personal consumption.

Moreover, even if an inventory adjustment phase should begin, the low inventory levels preclude a severe adjustment leading to recession.

Figure 6 Product Inventory Cycle



Note: Dotted line indicates previous cycle.
Source: METI, *Economy, Trade & Industrial Statistics Monthly*.

5. Conclusion

The debate over the economy's present condition reveals different approaches to the determination of cyclical turning points.[3]

Officially, turning points are determined using the following procedure: (1) peaks and troughs in individual economic indicators (coincident series) are identified using the Bry-Boschan method, (2) a historical diffusion index is composed, and (3) the Cabinet Office's Economic Data Examination Committee determines reference dates after also considering other factors such as major economic indicators and expert opinions.

While the technical details of the process are omitted here, in practice the determination of reference dates occurs at least a full year after the fact.

The outcome of the above debate will thus have to wait. What is clear, however, is that knowing the economy's current condition will reveal much about its future direction.

If past recessions are any guide, once the economy enters a recession, it can last from a minimum of nine months to a maximum of 36 months. Since economic cycles significantly affect the performance of companies and financial markets, it is all the more important to find out how where the economy now stands.

Notes

1. Shoko Chukin Bank, *Business Survey Index for Small and Medium-Sized Businesses*, and Chamber of Commerce and Industry, *Local Business Outlook (LOBO) Survey*.

2. Accuracy rate compares the production forecast for the following month and the actual result. Revision rate is the proportion by which the two-month forecast is revised in the one-month forecast. If both figures remain negative, actual amounts are falling short of planned amounts, which means that plans are consistently being revised downward. This situation is common in contractions.

3. For current data, see NLI Research Institute's *Weekly Economist Letter* published every Friday (also available at http://www.nli-research.co.jp/)