Comment on: Restoring Full Employment in Japan

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Mr. Omori has presented two papers that are related but distinct. One discusses the labor market. The other discusses structural reform of the economy. Both offer many interesting insights for the non-specialist. I will comment briefly on these two parts. Then I will take up a point that, I believe, the paper passes over too quickly.

One of the many interesting parts of Omori’s discussion of the labor market is the evidence of changes that he presents. The pressure of market conditions works slowly on rigid institutional arrangements, but they erode gradually when costs increase. Among other things, we learn that (1) most new employees of foreign firms come from Japanese firms, (2) some Japanese firms have started to tie pay to productivity instead of seniority, and (3) the importance of the lifetime employment arrangement has diminished.

In his discussion of the policy implications of these changes, Omori recognizes that there are costs of change as well as benefits. Even when the social benefits exceed the cost, we want to recognize and compensate for private losses where feasible. Many workers had explicit or implicit contracts with their firms. If workers voluntarily quit to join foreign (or other) employers, social and private benefits do not differ. When lifetime contracts are broken by firms unilaterally, this is not so.

To the extent that foreign firms can identify worker productivity, they will choose to hire the most productive workers. By offering higher wages, they can attract such workers. If the most productive workers are more mobile than others, real wages will approach productivity. As long as foreign firms employ a relatively small share of the labor force, the problem is not consequential for other employers. As foreign firms expend their share of employment this
changes. It is not in Japanese firms' interest to lose their most productive workers and retain the less productive. The slower institutional change, the longer it takes to equate real wages to productivity.

Omori sees part of this problem, but he does not pursue it. It looks to me like an optimization problem. For society, as well as for individuals, there are costs of breaking contracts and other rapid changes in established employment relationships. These are costs of not changing, or changing very slowly also. This suggests the possibility of finding an optimal rate of labor market change.

Omori presents some useful proposals to return the economy to sustainable growth. I would like to see more separation of two types of changes. One is structural reform that brings long-run benefits by raising the growth path but has short-run costs. The other includes changes that bring the economy back to the current growth path. Clearly, the second set of changes should be done quickly. It would be helpful to analyze carefully how quickly the first set of changes should be implemented by working out the optimization problem.

**Japanese Problems**

To this gaijin, several facts about Japan stand out. First, Japan has a high saving rate that is substantially above its investment rate. It also has a rapidly aging population. Prior to the 1990s, households acquired houses and financial assets that appreciated, but these have now fallen in value. Meanwhile the government has run large deficits and accumulated debt to a degree that raises doubts about its ability to pay promised pensions and health benefits. This may explain why the saving rate has increased, a finding that Omori attributes to Ricardian behavior. The two interpretations are not in conflict.

In the past five years, the government has invested large parts of saving in social capital with little or no productivity. It would be far better to invest the excess saving in productive assets abroad. From a cyclical perspective, this would depreciate the yen, increasing exports and GDP. From a secular perspective, it would provide a stream of foreign income to pay for future pensions.

Second, Japan is undergoing deflation. Prices have fallen and, until recently, the yen remained overvalued. Both are signs of an excess demand for yen. Deflation occurs because the public wants to increase its real money balances more rapidly then the rate at which the Bank of
Japan creates (base) money. Further, the falling price level is the way the real exchange rate adjusts to the overvalued nominal exchange rate and the Bank of Japan's overly restrictive policy.

It is a mistake to argue that devaluation is costly to neighboring countries, as many on both sides of the Pacific have done. One way or another, the real exchange will adjust. If policy prevents a decline in the nominal exchange rate, prices must fall. Deflation and slow growth in Japan is no less costly to neighboring countries. And deflation usually takes longer than depreciation to adjust the exchange rate.

Third, there is the problem of bank insolvency or non-performing loans. This problem has two parts. One part consists of loans that must be written off eventually. The second part consists of loans that could be paid if the economy recovered cyclically and a stable price level replaced deflation. The division between the two is not constant. It depends on policy. Monetary expansion to end deflation and restore price stability would contribute to cyclical recovery and improved loan quality. Monetary expansion would also strengthen bank capital by raising equity prices. Rising equity and land prices would, thus, help many banks and financial institutions to become solvent.

Restructuring labor and product markets to improve long-term prospects would be less painful if it occurred at a time of cyclical recovery. This suggests a sequencing of reforms and changes: first, changes to promote cyclical recovery; second, changes to increase flexibility in labor and product markets and reduce impediments to efficient resource use. Tax and regulatory reform, better land use, and other structural changes including reform of pensions and government spending should be undertaken. The most pressing problems are to reduce the capital constraints in the banking system to increase the supply of loans and to raise the demand for loans by increasing private investment.

Demand for Investment and Monetary Policy

What can be done to restore growth and reduce unemployment? In an earlier paper Meltzer (2001), I estimated the demand for the percentage rate of change (or growth) of real, non-residential investment. I reproduce the estimates here. All variables are quarterly observations measured as relative rates of change from the previous year and expressed as annual
rates of change. I use year-to-year changes to avoid well-known seasonal problems in Japanese data.

Table 1 shows two estimates of an equation relating growth of real investment to the growth in real long-term interest rate on government bonds, real GDP, and the real trade-weighted exchange rate. I introduce the exchange rate to see if foreign interest rates or capital flows exert an independent effect. The first set of estimates uses overlapping four-quarter moving averages. The second uses only the four-quarter moving average for the fourth quarter. Both equations are estimated over a sample from 1975 to 1998. Since the variables are all measured as year-to-year annual rates of change, there is considerable serial correlation in the error terms in the full set of estimates. The coefficient on the AR(1) correction suggests the extent of serial correlation. The estimates for the fourth quarter give less weight to the AR(1) correction.

The fourth-quarter estimates suggest that growth of investment is elastic with respect to the rate of change of long-term interest rates. Both sets of estimates suggest strong response to GDP growth. The dramatic changes in the real exchange rate have neither a large nor a reliable effect, given growth of interest rates and GDP. The findings for investment growth are consistent with a neoclassical framework and the standard transmission process.

Estimates for the growth of investment are reassuring. Reducing the real long-term interest rate by ending deflation would raise growth of investment directly by 1 to 3%. In addition, the expansive monetary policy that ended deflation would also increase growth of output, adding to the growth of investment.

Monetary policy is measured best by growth of the monetary base. Like most central banks, the Bank of Japan sets an interest rate and takes the monetary base growth that the market wants. Base growth indicates whether the central bank’s interest rate has been set too high or too low. Deflating base growth by the rate of price change---growth of the real stock of base money---indicates whether the public has increased or reduced its desired real cash balances.

Chart 1 compares real base growth, measured year to year, and the real long-term interest rate. Several periods deserve comment.

Chart 1 here
First, in 1986-87, we see the effect of the Plaza and Louvre agreements. Real base growth soared as the Bank of Japan, under Ministry pressure, appreciated the exchange rate. At its maximum, base growth increased 250% more in 1986-1987 than earlier in the decade.

Second, the gradual decline in real base growth ended in 1990. The first of two very large contractions in base growth began in 1990. Following the first large contraction, the real base began to rise slowly and erratically to the end of 1994. In contrast, the expost, real long-term interest rate changes very little during the period in which real base first decelerates then accelerates.

The second large contraction in base growth starts in 2000, following the surge for potential Y2K problems. The Bank of Japan then permitted real base growth to fall, thereby contributing to the return to recession. Most of the decline comes from the decline in nominal base growth. The price level fell during much of the period, implying that the public wanted a larger real stock of money.

The vertical lines in Chart 1 setting off periods of expansion and contraction are judgments based on accelerations and decelerations of monthly values of real base growth. In Chart 2, vertical lines are drawn in the same place, but now the comparison is between real base growth and growth of real GDP. Accelerations and decelerations of output typically follow, by a few quarters, accelerations and decelerations of the real base. The main exception follows the collapse of export growth in 1997-98.

Chart 2 here

For the past several years, a major issue in Japan has been whether monetary policy is impotent when the short-term interest rate is close to zero. I have urged many times that there are other channels of monetary policy. When short-term rate is zero, Treasury bills and money are a composite good, but purchases of long-term bonds, foreign exchange or other assets can affect the economy.

Table 2 explores one of these channels. It shows that the rise or fall of the real exchange rate depends on the difference between growth of Japan's monetary base and the U.S. monetary base. Both bases are in real terms, deflated by respective consumer price indexes. Ideally, growth of the trade-weighted monetary base should replace the U.S. monetary base. Many of Japan's principal trading partners had exchange rates pegged to the U.S. dollar during much of the period considered, however.

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The results in Table 2 suggest that increases and decreases in the growth of Japan's monetary base, relative to growth of the U.S. monetary base, have relatively large, persistent effects on the rate of change of the exchange rate. Holding differences in interest rates and output constant, the rate of depreciation increases when the Japanese real base accelerates relative to the U.S. real base.

The table reports responses to differences in rates of changes of short-term interest rates in column (1) and long-term rates in columns (2) and (3). Responses to acceleration of the domestic interest rates relative to U.S. rates are not significant. This result may be due to neglect of simultaneity, or use of U.S. interest rates to proxy for world rates, or failure to distinguish anticipated and unanticipated changes. The data suggest that the relative growth rate of the base adequately summarizes the information in monetary action and that acceleration of deceleration of the base is unanticipated to a considerable extent at least as to timing.

Table 2 also relates rates of change of the trade-weighted real exchange rate to differences in rates of GDP growth between Japan and the United States. Properly, multi-country averages should replace U.S. rates of change on the right side of the estimation. An index of real growth for Japan's trading partners might strengthen the effect of differences in real growth rates.

Conclusion

Let me summarize. Japan has cyclical and secular problems. Work on each of these is desirable, but sequencing can increase the net benefit.

The sequence I propose is; first, solve the cyclical problem by increasing the growth rate of real base money relative to base growth in major trading partners. The evidence suggests that monetary expansion will depreciate the exchange rate, increase domestic output and investment. Once the economy recovers and employment increases, the second set of reforms—structural reforms of labor and product markets and the government budget—becomes less costly socially. As a result, they become easier to do politically.

Financial reform is an exception. Several Japanese banks have capital constraints. Removing these constraints by improving bank capital structure is important for recovery. These reforms should not wait. They should be part of a program of monetary and credit expansion.
Table 1

Real Nonresidential Investment in Japan
1975-1998

<table>
<thead>
<tr>
<th></th>
<th>Quarterly</th>
<th>Fourth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-1.13</td>
<td>-3.84</td>
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<tr>
<td></td>
<td>-0.42</td>
<td>-1.26</td>
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<td>Real long rate</td>
<td>-0.54</td>
<td>-1.43</td>
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<tr>
<td></td>
<td>-1.64</td>
<td>-2.24</td>
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<tr>
<td>Real GDP</td>
<td>1.61</td>
<td>3.45</td>
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<tr>
<td></td>
<td>6.51</td>
<td>6.14</td>
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<tr>
<td>Real GDP$_{t-1}$</td>
<td>0.66</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>2.78</td>
<td>2.17</td>
</tr>
<tr>
<td>Real exchange rate</td>
<td>-0.02</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>-0.73</td>
<td>-0.82</td>
</tr>
<tr>
<td>Real exchange rate$_{t-1}$</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0.81</td>
<td>0.03</td>
</tr>
<tr>
<td>AR(1)</td>
<td>0.90</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>18.01</td>
<td>2.67</td>
</tr>
<tr>
<td>$R^2$/DW</td>
<td>0.90/1.44</td>
<td>0.88/1.88</td>
</tr>
</tbody>
</table>

Note: All variables are annual growth rates of real values. $t$-statistics are below the coefficients.
### Table 2

Percent Changes in the Real Exchange Rate in Japan

1979-1998

<table>
<thead>
<tr>
<th></th>
<th>All Observations</th>
<th>Fourth Quarter Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.85 (0.98)</td>
<td>2.46 (0.82)</td>
</tr>
<tr>
<td>Diff. in base growth ($t$)</td>
<td>1.25 (2.95)</td>
<td>1.04 (1.97)</td>
</tr>
<tr>
<td>Diff. in base growth ($t-1$)</td>
<td>1.19 (2.78)</td>
<td>0.71 (0.98)</td>
</tr>
<tr>
<td>Diff. in real GDP growth ($t$)</td>
<td>0.13 (0.25)</td>
<td>-0.04 (0.06)</td>
</tr>
<tr>
<td>Diff. in real GDP growth ($t-1$)</td>
<td>0.20 (0.41)</td>
<td>0.68 (1.12)</td>
</tr>
<tr>
<td>Diff. in change in real interest rate</td>
<td>-0.34 (0.53)</td>
<td>0.49 (0.98)</td>
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<tr>
<td>AR(1)</td>
<td>0.82 (10.21)</td>
<td>0.68 (8.18)</td>
</tr>
<tr>
<td>$R^2$/DW</td>
<td>0.78/ 1.69</td>
<td>0.63/ 1.87</td>
</tr>
</tbody>
</table>

**Notes:**
1. All variables are quarterly values of year-to-year percentage changes. Differences are taken relative to the United States. $t$-statistics are in parentheses.
2. With respect to diff. in change in real interest rate, column (1) uses short-term rates; columns (2) and (3) use long-term rates. Columns (1) and (2) use overlapping four-quarter moving averages. Column (3) uses fourth-quarter annual moving averages only.
Chart 1

Measured year-over-year
Base deflated by CPI

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Real GDP Growth
Real Base Growth
Chart 2

Real Long-Term Interest Rate versus Real Base Growth, Japan,
January 1985-March 2001
Real interest rate calculated using year-over-year inflation, CPI
Real Base Growth calculated year-over-year using CPI as deflator; both NSA

Legend:
- Real 10-Year Interest Rate
- Real Base Growth
Bibliography
