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Issue 2
Essential Economic Analysis for Strategic Thinkers

What if Japan adopted a sensible macroeconomic policy?

Key points

- **A sensible macro policy could lead to recovery.**
- **It would allow breathing space to implement structural reform and boost productivity and growth.**
- **Growth could be 5 per cent higher in 2004 and 22 per cent higher than otherwise by 2010.**
- **A depreciation of the yen is an essential part of any Japanese recovery.**
- **South East Asia stands to gain the most from Japan's recovery; Europe and the US stand to gain the least due to competing effects of goods trade and financial flows.**
- **South East Asian markets would rise substantially if Japan undertakes sensible policy.**

Japanese economic growth in the December quarter last year was –1.2 per cent. It was the third consecutive quarter of negative growth and marked a decade of low growth and deflation. The problems are well known: rising unemployment, rising bankruptcies, dysfunctional banks saddled with a large proportion of non-performing loans and a severe downturn in business investment. Since the asset bubble burst at the end of the 1980s, consumer demand has remained weak.

The macroeconomic response to these events has been to ease monetary and fiscal policy. Official interest rates have been set at near zero levels and the government has eased fiscal policy. The fiscal balance moved from a surplus of close to 2 per cent of GDP in 1991 to a deficit of over 6 per cent of GDP (chart 1). Public sector debt on a gross basis is projected to rise by the OECD to over 150 per cent of GDP by 2003 (chart 2).

The cause of Japan's woes

There is a wide debate on the cause of the growth slowdown in Japan[1]. Explanations range from the collapse of the banking system, and hence the impotence of traditional monetary policy causing a 'liquidity trap', to the lack of structural reforms and low productivity. But the drop in demand once the bubble burst and the hoarding of workers and under-utilization of capital for a sustained period can explain an important part of the productivity decline.

Poor macroeconomic policy over the last decade is also partly to blame[2]. The late 1980s bubble was largely caused by over-stimulatory macro policy following the mid-1980s slowdown — itself the result of the appreciation of the yen in the months prior to the Plaza Accord in 1985. Tighter monetary policy to correct this over-stimulation at the end of the 1980s burst the asset bubble and consumer demand collapsed. Subsequent attempts at stimulatory macro policy, however, have appeared not to

[1] For example, see Boltho, A and Corbett, J 2000, 'The assessment: Japan's stagnation — can policy revive the economy', *Oxford Review of Economic Policy*, vol. 16, no. 2.

[2] See McKibbin, W and Callen, T 2001, 'The impact of Japan on the Asia-Pacific region', paper presented at the conference on *Economic Interdependence Shaping Asia-Pacific in the 21st Century*, Tokyo, 22–23 March.

ECONOMIC SCENARIOS
A joint product of the
Centre for International Economics and
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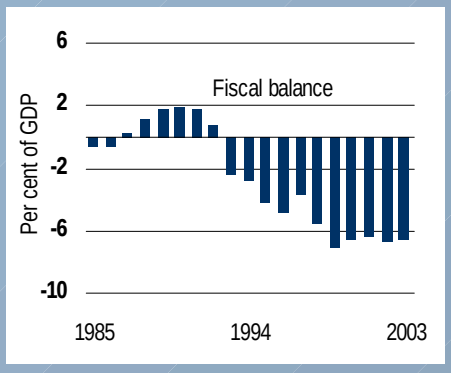
Using these scenarios

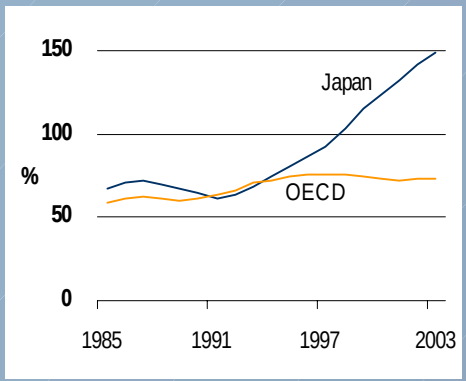
Nobody can foretell the future. If they could, they wouldn't tell you about it. These scenarios are not predictions or forecasts. To make profitable investments from this information you also need to decide how likely the events portrayed here are, and what is already priced in the markets. The value of this material is in the insights it offers into the economic effects of various possible events.

1 **Japanese fiscal position worsens**



Source: OECD.

2 **Government gross debt/GDP (percentage of nominal GDP)**



Source: OECD projection.

work. Some argue that this is because banks are unable to lend due to weak balance sheets and a lack of profitable investment opportunities. Given these factors, traditional monetary policy of lower official interest rates has not worked. However, despite low nominal interest rates, deflation in the economy has left real interest rates too high to lead to recovery. And the 'pump priming' of government spending has in many cases led to an asset transfer to vested interests rather than traditional Keynesian spending. Funds that were spent on demand stimulus were wasted on unnecessary construction. All the additional funding required to finance the fiscal deficits simply crowded out private spending through changes in asset prices. Overall demand in the economy therefore remained weak.

The fall in consumer demand is a contributing factor to the decline in measured total factor productivity. Labour hoarding and excess capacity during the 1990s means that success in rekindling demand should see measured productivity improve and further boost growth. This component is incorporated in the model used here. But there is another possible boost to productivity.

Productivity has been low over the last decade due to the lack of structural reform of the Japanese economy. High formal and informal protection for some key sectors in banking and finance, and agriculture especially, has limited competition and innovation.

Prime Minister Koizumi was elected on a promise of reform. But resistance to change from factions within the ruling LDP has slowed change. Mr Koizumi's strength was his popularity. This has slumped following the dismissal of his popular foreign minister, Makiko Tanaka, and the continuing dismal performance of the economy. An improvement in economic growth could lift Mr Koizumi's popularity, lift producer sentiment and allow further reform in the economy, and so lift productivity.

Could Japan adopt other fiscal and monetary policies that would lead to a pick up in demand and hence recovery? And what if a recovery improved the political prospects of badly needed economic reform? These are the scenarios addressed in this issue.

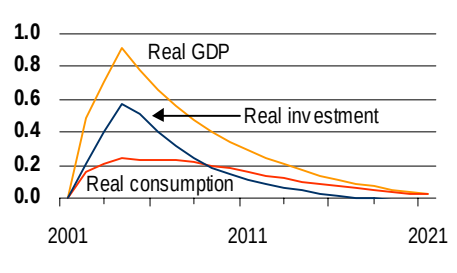
The economics of 'sensible' policy

Monetary policy

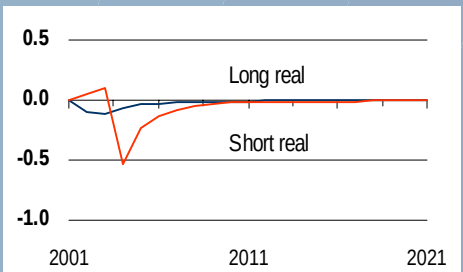
Traditional monetary policy of low official (nominal) interest rates has apparently not worked. Banks have been unable to lend and firms unwilling to borrow at current real interest rates, which are still too high due to deflation. Deflation has simply made debt servicing more difficult and has made traditional monetary policy ineffectual as nominal interest rates cannot fall below zero, leaving real interest rates too high. One option is for the Bank of Japan to announce an explicit inflation target to lower real interest rates. To be credible, the Bank of Japan could begin immediately to increase the money supply by direct purchase of a range of assets (including foreign exchange) to expand the central bank's balance sheet.

SCENARIO 1: ADOPTING A 3 PER CENT CREDIBLE INFLATION TARGET

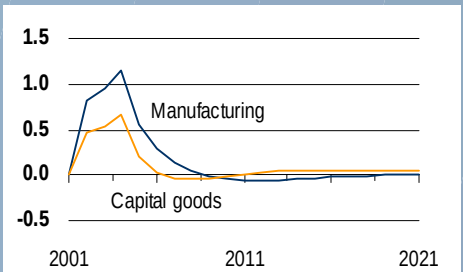
3 **Real GDP, consumption and investment (per cent of GDP deviation from baseline)**



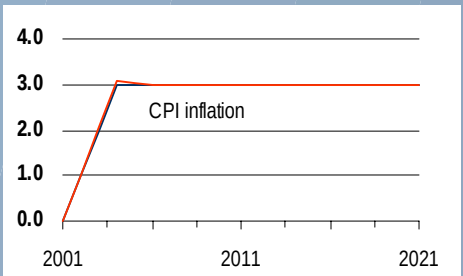
4 **Interest rates (percentage point deviation)**



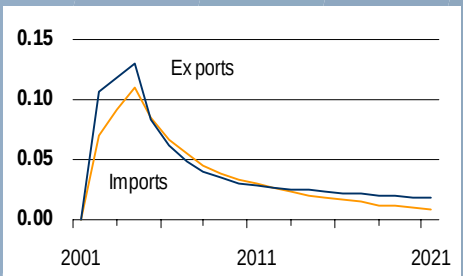
5 **Tobin's q (percentage point deviation)**



6 **Inflation (percentage point deviation)**



7 **Exports, imports (per cent of GDP deviation)**



By hitting an explicit inflation target, expectations would change and actual inflation would be higher. The yen would be expected to depreciate in nominal and real terms, and stimulate net exports. With a lift in real activity and easing of the debt burden once deflation disappears, there will be a lift in production, consumption and investment. As Japan's prospects improve, there are two effects on neighbouring countries — one positive, one negative. *A priori* it is not possible to say what the net effect might be. The positive effect is obvious — extra real activity flowing from Japan to its neighbours. The negative effect on neighbours is the reallocation of global funds to Japan once its prospects improve.

To assess what happens requires use of a quantitative framework that integrates both trade and financial flows, as in the model used here (for more information on the model, please visit our website).

Fiscal policy

The policy of fiscal stimulus has not worked for the reasons cited earlier. But what would happen if there was fiscal consolidation? Reducing government spending reduces the Keynesian stimulus to the economy. But more than this happens: less spending means lower taxes in the future and expectations of this changes consumer behaviour. Lower future tax liabilities have a positive effect on consumption. Less government borrowing lowers long term interest rates, which increases private investment, and depreciates the yen, which stimulates net exports.

How the balance of the loss of government demand in the short run versus favourable effects from expectations of lower taxes in the future and lower long term real interest rates turns out requires a quantitative assessment. Lower long term interest rates affect the yen and have repercussions for third countries around the world.

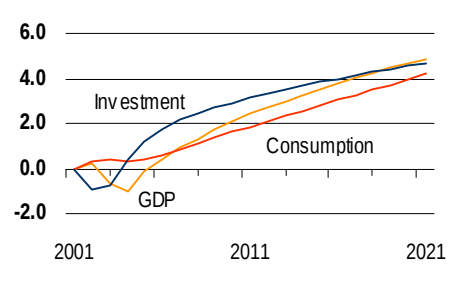
Productivity

Output can only grow if there is growth of the labour force, growth in the stock of capital, productivity growth or more efficient use of existing resources. Japan's labour force is declining and much capital investment has been wasted. One area targeted for reform is the postal savings system — a publicly owned savings system that undermines private sector competitors. Together with the fiscal 'pump priming', much investment has been wasted on concreting-in river banks and building unnecessary roads and bridges.

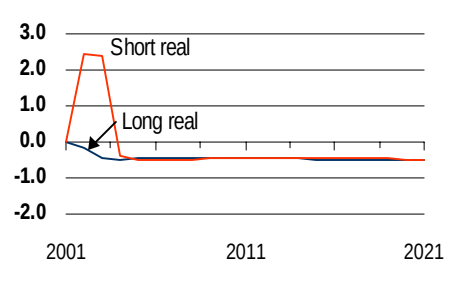
Reform of fiscal spending and the financial system could see a shake out of the capital producing sector and a lift in its productivity. A boost in productivity of the capital producing sector would increase the return on capital, encouraging investment and capital inflow (or, at least, less outflow). A more competitive economy and capital inflow would appreciate the yen. Whether or not this force offsets the depreciating forces from monetary expansion and fiscal consolidation also requires a quantitative assessment.

SCENARIO 2: PHASED IN FISCAL CONSOLIDATION

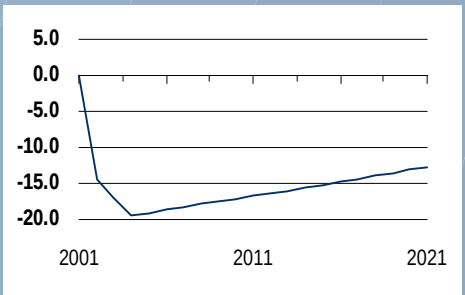
8 **Real GDP, consumption and investment (per cent of GDP deviation from baseline)**



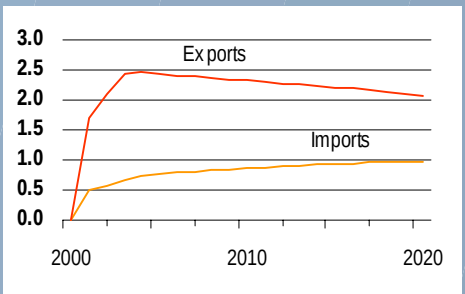
9 **Interest rates (percentage point deviation)**



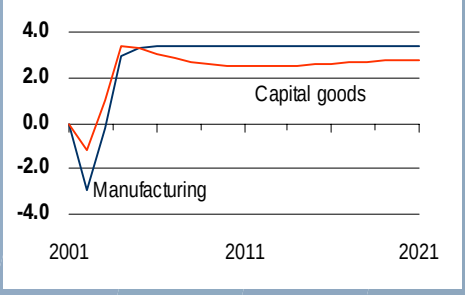
10 **Japanese yen (percentage deviation)**



11 **Exports, imports (per cent of GDP deviation)**



12 **Tobin's q (percentage point deviation)**



The scenarios and results

Scenario 1: Monetary policy — adopting a credible 3 per cent inflation target

In this scenario, the Bank of Japan adopts an explicit inflation target and uses an expansion of the money supply as the instrument to achieve that target. Manipulation of the money supply by the Bank of Japan would have to incorporate feedback rules to ensure the inflation target was achieved, but the key thing here is the achievement of a credible inflation target. The targets chosen for this scenario are 1 per cent in 2002, 2 per cent in 2003 and 3 per cent from 2004 on.

This scenario is stimulative to the economy (see charts page 3). Real GDP rises to a peak of 0.9 per cent above baseline in the third year of the policy and falls thereafter, but remains positive for a decade. The (assumed credible) inflation target lowers real interests rates and stimulates the stock market through higher expected real activity and the stimulus to investment. Tobin's *q* rises and consumption lifts through a rise in real wealth.

The investment stimulus temporarily raises output capacity and the lagged response of nominal wages embedded in the model causes real wages to fall, which lasts several years. (Note that by reversing the above story the damaging impact of the current deflation — the opposite of what is simulated here — can be seen.)

Inflation ends up 3 per cent above baseline as this is the credible target and there is a steady nominal devaluation of the yen against the US dollar that mirrors this rise in inflation. There is a slight real depreciation of the yen as well, but this is small — just over 1 per cent in the first two years. The small real depreciation, is a stimulus to exports. Imports also rise above baseline with the lift in real consumption.

Scenario 2: Fiscal consolidation phased in over 3 years

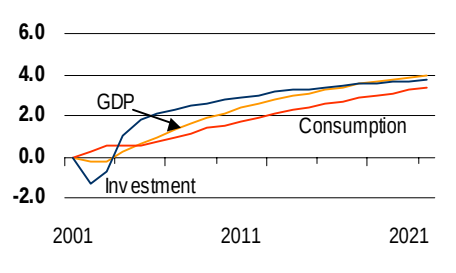
Fiscal policy has been one of substantial stimulus, but little increase in real activity has followed. Stimulus now only creates expectations of future taxes and crowds out private expenditure through changes in the real exchange rate and real interest rates. The scenario considered here is therefore a phased-in credible fiscal consolidation. The scenario is a reduction in government spending by 1.7 per cent of GDP in year 1, 3.4 per cent of GDP in year 2 and 5.1 per cent of GDP from year 3 onwards.

Fiscal consolidation means less current and future borrowing by government. This causes long term real interest rates to fall. Lower expected real interest rates depreciate the yen by around 15 per cent in the first year and 20 per cent in the third year after consolidation (see charts on this page). A lower yen stimulates exports, which rise by 2.5 per cent of GDP above baseline in the third year after consolidation. The net result is an improvement in the trade balance.

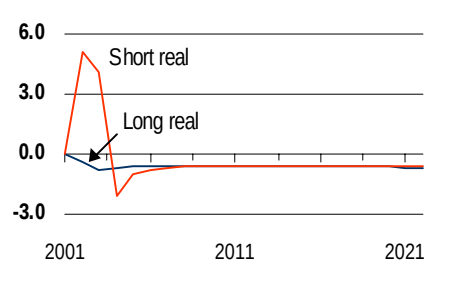
The anticipated lower future tax obligations resulting from fiscal consolidation cause households to increase consumption. The interesting point from the quantification of this scenario is that the rise in

SCENARIO 3: COMBINED FISCAL CONSOLIDATION & INFLATION TARGET

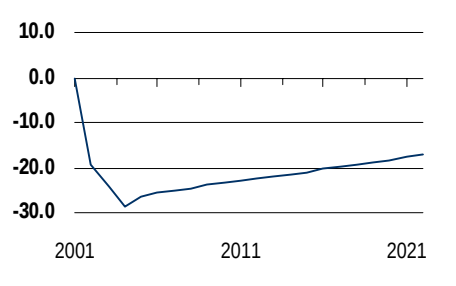
13 **Real GDP, consumption and investment (per cent of GDP deviation from baseline)**



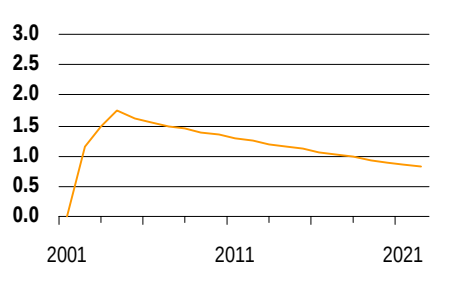
14 **Interest rates (percentage point deviation)**



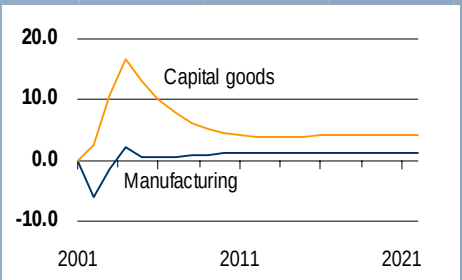
15 **Japanese yen (percentage deviation)**



16 **Trade balance (per cent of GDP deviation)**



17 **Tobin's q (percentage point deviation)**



consumption and net exports *more than offsets* the decline in government expenditure and the initial decline in private investment (due to initially lower expected growth) and *real GDP rises*. The financing gains are larger than the fiscal cuts in the first year.

In the second and third years, however, as the spending cuts rise, the financing gains are less than the decline in government expenditure, causing real GDP to fall by up to 1 per cent below baseline in the third year after consolidation begins. By the fifth year, however, real GDP again moves above baseline as the positive impact of the full effect of the decline in real interest rates and real exchange rate on consumption, net exports and investment is fully felt.

Scenario 3: Combined fiscal consolidation and inflation target

Of course, there is the opportunity for the government to use a combination of both fiscal and monetary policy to help restore growth. Here a combination of scenarios 1 and 2 is considered. The result of this scenario is not just the addition of the first two results since, under the feedback rule to hit the credible inflation target, the monetary stimulus is now different because inflation will change as a result of fiscal policy.

The results from a combination of the two earlier policies are shown in the charts on this page. The feedback rule on monetary policy, to hit the announced 3 per cent inflation target, implies that the monetary stimulus now takes into account the impact of fiscal consolidation on inflation. Thus monetary policy stimulus is larger than in scenario 1. The main feature of these results is that the short term boost to real GDP growth from monetary policy is sufficient to offset the small decline in GDP growth two and three years out from the commencement of fiscal consolidation. Judicious use of macroeconomic policy through a change in the policy mix can avoid any initial loss in GDP growth resulting from the fiscal consolidation. In later years the gains from fiscal consolidation dominate and GDP growth could be over 2 per cent above baseline a decade out.

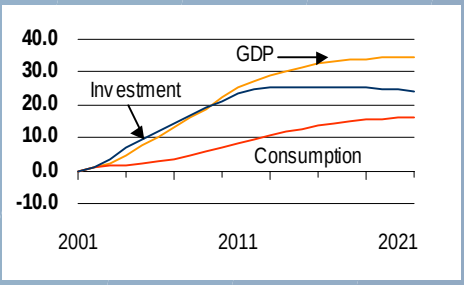
Another result is the reinforcing effect of the inflation target and fiscal consolidation on the Japanese yen. Higher inflation (as per the target) and lower real interest rates (from fiscal consolidation) both serve to weaken the yen, the major effect coming from the fiscal consolidation. The result is a real depreciation of the yen of nearly 30 per cent below baseline two years out from the introduction of the macroeconomic policy.

Scenario 4: Productivity gain from commensurate structural reform

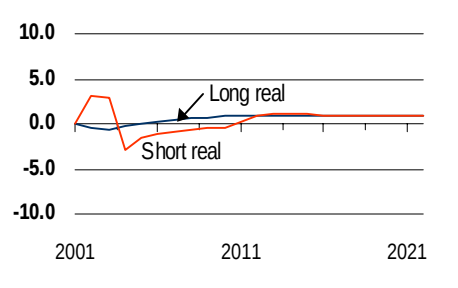
It is reasonable to assume that economic recovery and fiscal consolidation will lead to a shake out in the capital producing sectors — which, combined with improved business sentiment and the rising political popularity of Mr Koizumi, might allow a faster pace of economic reform. This reform is assumed to boost productivity growth in the capital producing sector (this is, lower the economy wide cost of capital) so that the extra recovery allows yet more reform — in effect a 'virtuous cycle'.

SCENARIO 4: PRODUCTIVITY GAIN FROM COMMENSURATE STRUCTURAL REFORM

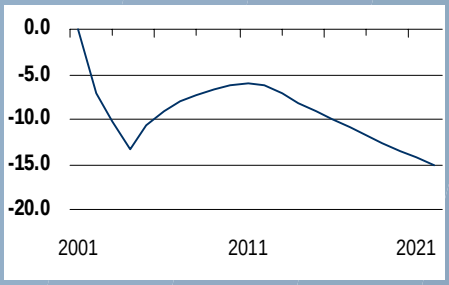
18 **Real GDP, consumption and investment (per cent of GDP deviation from baseline)**



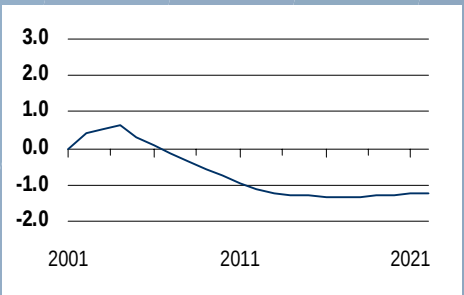
19 **Interest rates (percentage point deviation)**



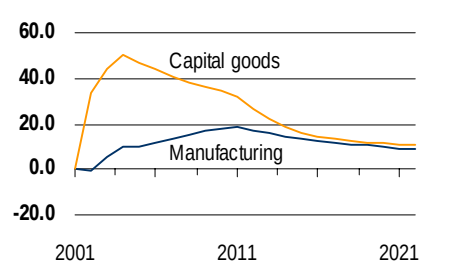
20 **Japanese yen (percentage deviation)**



21 **Trade balance (per cent of GDP deviation)**



22 **Tobin's q (percentage point deviation)**



Total factor productivity growth in the capital producing sector is assumed to rise by 3 per cent per year for a decade and then remains 30 per cent higher in levels.

Note that some endogenous productivity growth is built into the model as the economy recovers since unemployment will respond with a lag to the recovery in the Japanese economy.

A sensible macroeconomic policy could lead to additional reform in the economy and lift the productivity return to capital (see charts on this page).

The Japanese economy has been typified by very low returns to capital. This situation is a result of an inefficient capital market as a consequence of regulation, history and culture. The postal savings system (that Prime Minister Koizumi wants to privatize) is unique to Japan. Reform of banks, capital markets and other governance reforms sees productivity in the capital producing sector rise and with it the return on capital lifts to rates typically found in other western economies.

The effect of the productivity boost to capital intensive industries is to reduce the cost of capital in Japan and encourage more investment at home (and less capital outflow).

There is still an initial improvement in the trade balance over baseline since the effect of fiscal consolidation and inflation targeting dominates the effect of less capital outflow from Japan. In later years there is a slight deterioration in the trade balance as the capital movements (as a result of the productivity in the capital goods sector) dominate.

The effects on the yen are now interesting as several forces are at work. There is an initial depreciation of the yen from the combined fiscal consolidation and inflation targeting, but the depreciation is now less because of the higher returns to capital, smaller capital outflow and hence tendency to appreciate the yen. By 2004 the real exchange rate against the US dollar is 13 per cent lower, but then it starts to appreciate and is 6 per cent below baseline by 2011. With the higher productivity to the capital producing sector, there is a dramatic lift in Tobin's *q* in the sector to nearly 50 per cent above baseline by 2004.

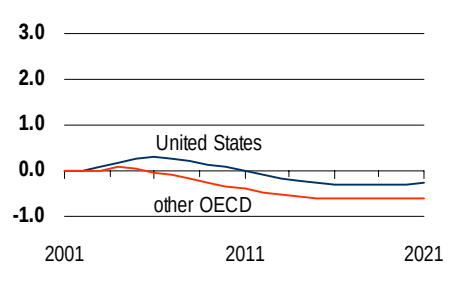
Putting it all together

The Japanese economy does not have to experience a major economic crisis. There is enough room for policymakers to maneuver to bring about recovery. A sensible change in the macroeconomic policy mix, based on the adoption of a credible inflation target (of 3 per cent) and phased in fiscal consolidation allows recovery. On top of that, macroeconomic recovery makes it easier to implement structural reform and lift productivity — the main source of long run growth. Japan could significantly improve its economic performance if it chose to implement a more sensible macroeconomic policy and commensurate structural reform.

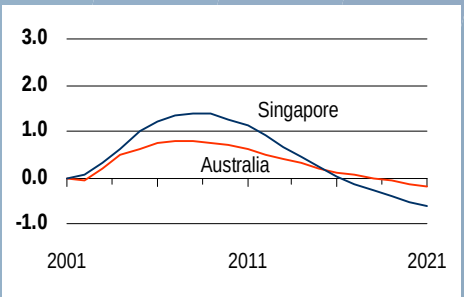
Altogether, under plausible assumptions we find that real GDP could be over 30 per cent higher than otherwise two decades from now. The stockmarket — as reflected by the change in Tobin's *q* — could be up to 50 per cent higher than baseline by 2004 in the case of capital goods and

EFFECTS ON THIRD COUNTRIES:
COMBINED FISCAL CONSOLIDATION & INFLATION TARGET WITH PRODUCTIVITY
(Percentage deviation from baseline)

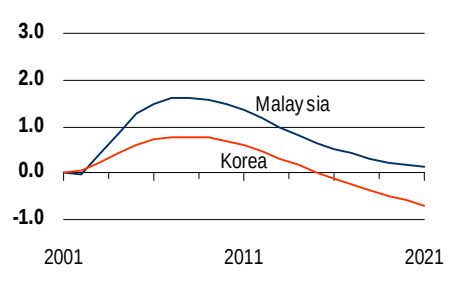
23 **United States and other OECD**



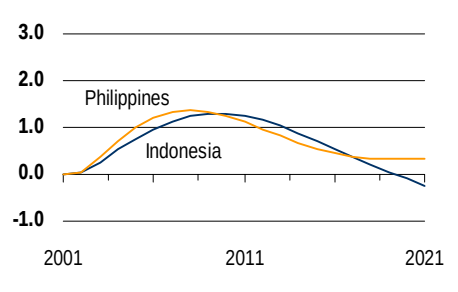
24 **Australia and Singapore**



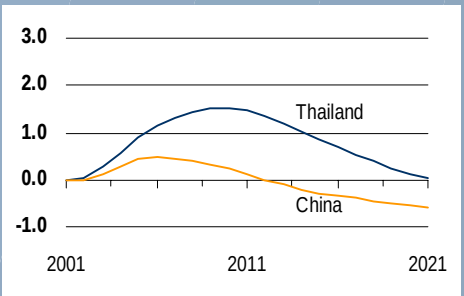
25 **Malaysia and Korea**



26 **Philippines and Indonesia**



27 **China and Thailand**



nearly 20 per cent higher by 2011 in the case of the manufacturing sector. The point is, there is a credible and not unreasonable scenario whereby Japan is vastly more prosperous in future.

Effects on third countries

Japan is the world's second largest economy. Its potential recovery has a major effect on third countries. But there are both positive and negative effects to take account of. The positive effects are the extra growth in Japan and the knock-on effect to other countries in the world.

A bigger and more prosperous Japan is a bigger market. But a more prosperous Japan with higher returns to capital means more investment in Japan and less abroad. Those countries that supply the investments (or no longer receive Japanese investments) will not fare as well as before in terms of measured production, but will produce higher incomes for owners of capital.

Do the positive effects outweigh the negative effects? In the case of Asian markets, the answer seems that Japan's recovery could lift growth by between 1 and 2 per cent per year above baseline (see charts on this page). The trade linkages with the Asian markets are important enough to outweigh any capital movement effects.

In the case of the USA and 'other OECD' (which is principally Europe and Canada), the beneficial effect is smaller relative to the negative effect from capital movements, and economic growth could be over 0.6 per cent below baseline beyond 2015.

The same mechanisms are working with the USA, but the linkages between the two economies are greater than between Japan and Europe, so the positive effect from Japan's potential recovery has a larger impact than the effect of capital movements.

The Asian economies of Malaysia, Singapore, Thailand, the Philippines and Indonesia typically experience extra GDP growth of around 1.5 per cent of GDP above baseline a decade out, while the net effect on Australia, Korea and China is less.

Implications

The implication from the above scenarios is that Japan could potentially recover quite strongly and favourably affect South-East Asian economies. The inflation target, fiscal consolidation and productivity gain in the capital producing sector are all feasible.

Stock prices for capital goods (as reflected by Tobin's *q*) could rise by 50 per cent above what it might otherwise be by 2004 and less than half that for the manufacturing sector by 2011. Not all other countries do well out of these developments; the main net gainers are South-East Asian economies.

Japanese policy makers have enough room to maneuver to bring about recovery.

How likely is Japan to introduce a sensible macro policy and how much of the information contained here is *already* priced into the market?

To some extent Japan has already changed course. The Bank of Japan has been purchasing a range of assets directly and there was a realization that monetary policy could be expansionary through the foreign exchange purchases earlier this year. But they have not announced the pursuit of a credible inflation target.

Less progress has been made on fiscal consolidation and vested interest coalitions within the ruling LDP have watered down proposals to cut back on wasteful construction projects. There is little evidence that other structural reform aimed at lifting productivity is being implemented despite continued rhetoric by Prime Minister Koizumi on the need for reform.

Successful macroeconomic policy could give Mr Koizumi the breathing space to show his policies are working and push on with reform without the high adjustment costs from undertaking reform in the midst of a crisis. Structural reform would lead to productivity gains, which is where the prospects for long run growth ultimately lie

Perhaps the biggest impediment to introducing a sensible macroeconomic policy is the lack of widespread belief of the advantages this might bring and how damaging the alternatives are. The fact the government has not already implemented the policies analysed here suggests the market or other policymakers do not fully appreciate the potential gains to the economy.

If sensible policies were introduced, the Japanese stockmarket would be undervalued despite the rise since February this year.

Entrenched political interests have determined the current policy, but restoring economic growth makes even better politics. Wider appreciation of alternative policies presented here will undoubtedly permeate thinking over time, especially as the failure of current policies persists. If so, the Japanese stockmarket is still undervalued despite the rise since February this year. If Japan did recover strongly along the lines suggested here, it would imply South-East Asian markets were undervalued too.